Coachella Valley Trails Development Project
Riverside County, California

Environmental Assessment/ Mitigated Negative Declaration

CEQA Lead Agency:

Coachella Valley Mountains Conservancy
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Palm Desert, CA 92260

NEPA Lead Agency:

Bureau of Land Management
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Technical Support Provided by:

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August 2016

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1. Introduction

This Environmental Assessment/Mitigated Negative Declaration (EA/MND) has been prepared on behalf of the Coachella Valley Mountains Conservancy (CVMC) and the Bureau of Land Management (BLM) to assess the environmental impacts associated with the Coachella Valley Trails Development Project (proposed Project). The proposed Project consists of the establishment or improvement of three trailhead sites, each with an associated non-motorized recreation trail. The three trails would be mostly on conservation land previously acquired in accordance with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), as administered by the Coachella Valley Conservation Commission (CVCC). Some portions of the proposed trails and trailheads are also on public land administered by the BLM.

This joint EA/MND was prepared for compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), respectively. The CVMC is the Project's CEQA Lead Agency, and the BLM is the NEPA Lead Agency. This document includes evaluation of context and intensity of direct, indirect, and cumulative effects pursuant to NEPA and the significance of impacts pursuant to CEQA. The Initial Study Checklist for the Project is provided in Appendix 1 of this EA/MND.

1.1 Project Summary

The proposed Project is described in detail in Section 2 (Proposed Action and Alternatives). The following summarizes basic Project information.

Project Proponent: Coachella Valley Mountains Conservancy

BLM Office: Palm Springs – South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262

Project Location: The Project locations are described in Section 2 (Proposed Action and Alternatives). The following identifies the USGS 7.5-minute quads for each Project component.

Corkill Trail and Trailhead: Seven Palms Valley

Pushawalla Trail and Trailhead: Keys View, Malapai Hill, West Berdoo Canyon

Golf Center Parkway Trailhead and East Indio Hills Trail: West Berdoo Canyon, Indio

1.2 Discretionary Actions and Regulatory Permits

Table 1-1 identifies anticipated approvals and permits that may be required for implementation of the proposed Project. Additional authorizations may be required.

Table 1-1. Anticipated Permits, Approvals, and Authorizations

Agency	Permit/Approval	Description
Bureau of Land Management (BLM)	Authorization for trail development	NEPA Lead Agency; approval for a ROW for the trails and trailhead on BLM lands
	Section 106 of the National Historic Preservation Act	The BLM consults with the California State Historic Preservation Officer and Tribal Historic Preservation Officer when projects are subject to review under Section 106 of the NHPA. This act requires federal agencies to take into account the effects of their actions on properties listed on or eligible for the National Register of Historic Places.
	Cultural Resource Use Permit	Permit obtained by the cultural resources contractor to authorize the cultural resource field inventory
	Fieldwork Authorization	Use authorization obtained by the cultural resource contractor prior to beginning work under a Cultural Resource Use Permit.
United States Fish and Wildlife Service (USFWS)	Federal Endangered Species Act compliance	BLM will engage in Section 7 consultation with the USFWS which includes preparation of a biological Assessment by the BLM and a Biological Opinion or letter of concurrence by USFWS
U.S. Army Corps of Engineers (USACE)	Section 404 Permit	Protects Waters of the US, including tributaries and riparian areas.
Coachella Valley Mountains Conservancy (CVMC)	Project Approval	CEQA Lead Agency and Project proponent
California Regional Water Quality Control Board – Colorado River Region	General Construction Permit and 401 Permit	The CVMC is required to submit a Notice of Intent to the Regional Water Quality Control Board (RWQCB), Colorado River Basin Region, for coverage under the General Construction Permit if Project disturbance would be over 1 acre. The Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented throughout the entire Project. The SWPPP would contain the elements required by the General Construction Permit and illustrate the protective measures that would be taken during construction to control stormwater runoff and erosion and siltation on-site.
California Department of Fish and Wildlife (CDFW)	California Endangered Species Act	Participation in the CVMSHCP will satisfy the requirements of the California Endangered Species Act
	Streambed Alteration Agreement	Requires California Department of Fish and Wildlife to review project impacts to "waters of the state" (bed, banks, channel, or associated riparian areas of a river, stream, or lake), including impacts to wildlife and vegetation from sediments, diversions, and other disturbances.
State Historic Preservation Office (SHPO)	The BLM consults with the State Historic Preservation Officer, seeking concurrence on project effects and the resolution of adverse effects on historic properties.	The BLM consults with the State Historic Preservation Officer in compliance with Section 106 of the National Historic Preservation Act in accordance with a State Protocol Agreement.

Table 1-1. Anticipated Permits, Approvals, and Authorizations

Agency	Permit/Approval	Description
Coachella Valley Conservation Commission (CVCC)	Coachella Valley Multiple Species Habitat Conservation Plan Compliance	CVMC is a participant under the CVMSHCP, and is required to follow a standardized set of minimization and avoidance measures in addition to the payment of mitigation and administrative fees. Certain projects are required to implement additional measures, as determined by USFWS and CDFW due to the projects' location and anticipated level of impact.
County of Riverside	Construction Permits	Ensures Project construction complies with all County regulations and ordinances
City of Indio	Grading Permit	For Golf Center Parkway Trailhead.
California Native American Tribes	The CVMC consults with California Native American Tribes about potential tribal cultural resources in the project area, the potential significance of project impacts, the development of project alternatives and the type of environmental document that should be prepared.	The CVMC consults with California Native American Tribes in compliance with AB 52.

1.3 Conformance with Land Use Plans, Laws, Regulations, and Policies

In accordance with Title 43 Code of Federal Regulations 1610.5-3, the proposed Project and alternatives are in conformance with the following approved land use plans: *California Desert Conservation Area Plan (1980) as amended, CDCA Plan Amendment for the Coachella Valley* (2002), and *Coachella Canal Area Resource Management Plan* (2006). Although the proposed trails are not mentioned specifically in these plans, each plan includes objectives to provide public recreational opportunities while protecting natural and cultural resources. The proposed Project would meet these objectives.

1.3.1 US Fish and Wildlife Service Consultation

The U.S. Fish and Wildlife Service (USFWS) issued a section 10(a)(1)(B) incidental take permit (TE104604-0) for the CVMSHCP permittees, which would cover actions on CVMSHCP lands for the proposed Project. The BLM informally consulted the USFWS regarding the portions of the Project on BLM lands, which are outside of the jurisdiction of the CVMSHCP. The BLM requested concurrence from the USFWS on a determination of may affect, but not likely to adversely affect for Mojave desert tortoise, Coachella Valley milk-vetch, and Coachella Valley fringe-toed lizard.

1.3.2 Cultural Resources Review

Federal Requirements

Under the Federal Land Policy and Management Act of 1976 (FLPMA), the BLM is charged with managing public lands in a manner that will "protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values". Section 106 of the National Historic Preservation Act, as implemented at 36 CFR Part 800, requires federal agencies to take into account the effects of their undertakings on historic properties. The Revised State Protocol

Agreement (2007) between the California State Director of the BLM and the California and Nevada State Historic Preservation Officers (SHPOs), defines the roles and relationships between the SHPOs' offices and the BLM under the National Programmatic Agreement. The State protocol is intended to insure that the California BLM operates "efficiently and effectively in accordance with the intent and requirements of the NHPA." The protocol streamlines the Section 106 process by not requiring case by case consultation with the SHPO on most individual undertakings.

State Requirements

AB 52 establishes a formal role for California Native American tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential tribal cultural resources in the project area, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared.

- A "Native American tribe located in California that is on the contact list maintained Native American Heritage Commission" (NAHC). This definition does not distinguish between federally recognized and non-federally recognized tribal groups, and is therefore more inclusive than the federal definition of "Indian tribe" (PRC § 21073).
- To qualify as a tribal cultural resource, it must either be 1) listed on or eligible for listing on the California Register of Historical Resources or a local historic register or, 2) or is a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a Tribal Cultural Resource (PRC § 21074). Tribal Cultural Resources include "non-unique archaeological resources" that, instead of being important for "scientific" value as a resource, can also be significant because of the sacred and/or cultural tribal value of the resource. Tribal representatives are considered experts appropriate for providing substantial evidence regarding the locations, types, and significance of tribal cultural resources within their traditionally and cultural affiliated geographic area (PRC § 21080.3.1(a)).
- Consultation in the context of AB 52 is the meaningful and timely process of seeking, discussing, and carefully considering the views of others. Meaningful consultation usually consists of face-to-face meetings conducted in such a way that recognizes the cultural values of all parties involved and makes a concerted effort to reach an agreement. Consultation should recognize the tribe's potential need for confidentiality regarding places that hold traditional tribal significance. Consultation with tribes is considered the best way for lead agencies to determine if a project could result in significant environmental impacts to tribal cultural resources (PRC § 21080.3.1(a); GC § 65352.4).

A project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (PRC § 21084.2).

1.3.3 Coachella Valley Multiple Species Habitat Conservation Plan

Construction of trail facilities is a covered activity/conditionally compatible public access uses under the CVMSHCP provided they are consistent with the species conservation goals and objectives for the designated conservation areas and consistent with the guidelines for trails and public access. The proposed Project has been designed to comply with applicable requirements in the CVMSHCP.

1.4 CEQA Environmental Determination

Based on the analysis in this EA/MND and the CEQA Initial Study Checklist in Appendix 1, the CVMC has determined that all Project-related environmental impacts could be reduced to a less-than-significant level under CEQA with the incorporation of mitigation measures included in this document. Therefore, adoption of a Mitigated Negative Declaration (MND) will satisfy the requirements of CEQA.

Table 1-2 lists the mitigation measures that are included as part of the Project to reduce or avoid potentially significant environmental effects (CEQA Guidelines Section 15071).

Table 1-2. Mitigation Measures

Issue Area	Mitigation Measure
Biological Resources	BIO-1: CVMSHCP Compliance. All applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction and O&M activities on federal lands. For O&M activities the CVMC shall ensure that personnel are instructed to be alert for listed wildlife species. If a desert tortoise or Coachella Valley fringe-toed lizard is spotted, activities adjacent to its location will be halted and the animal will be allowed to move away from the activity area. In addition, consistent with Section 7.3.4.2 of the CNMSHCP, trails and facilities will be designed to be consistent with CVMSHCP Conservation Goals and Objectives, to avoid or minimize impacts to habitat occupied by Covered Species, and to discourage intrusion into environmentally sensitive areas. Interpretive facilities, access control, and signage will encourage proper resource usage, and adverse effects of passive recreation, such as trampling vegetation and erosion, will be minimized.
	BIO-2: Limit Disturbance Areas. At all work areas, mechanical disturbance of previously undisturbed habitats (including soils) will be limited to the minimum area necessary. Project disturbance areas will be sited on previously disturbed areas to the extent feasible.
	BIO-3: Assign Project Biologist. The CVMC will assign one or more acceptable biologists (according to CVMSHCP requirements) to conduct pre-construction surveys and construction monitoring as described in Mitigation Measures BIO-4 and BIO-5. An "acceptable biologist" means a biologist whose name is on a list, maintained by the Coachella Valley Conservation Commission (CVCC), of biologists who are acceptable to CVCC, CDFW, and USFWS for purposes of conducting surveys for Covered Species.
	BIO-4: Preconstruction Surveys. An acceptable biologist (according to CVMSHCP requirements) will conduct pre-activity clearance surveys for desert tortoise and their burrows, burrowing owls (year-round), nesting birds (at trail and trailhead sites where construction or maintenance activities are scheduled from January 1 to August 31), Coachella Valley fringe-toed lizards, Coachella Valley milk-vetch, and other special-status species. Construction or maintenance activities outside of the breeding season for nesting birds would not require nesting bird surveys. Surveys for desert tortoise, burrowing owl, LeConte's thrasher, and crissal thrasher will be conducted according to the avoidance and minimization measures in Section 4.4 of the CVMSHCP. Pre-activity surveys will be conducted no more than 7 days in advance of any ground- or vegetation-disturbing activities in any location. For construction or maintenance activities planned between February 15 and November 15 at the Corkill Trail and Trailhead, all work sites will be surveyed by an acceptable biologist prior to any ground disturbing activities to avoid take of Coachella Valley fringe-toed lizards.
	BIO-5: Construction Monitoring. An acceptable biologist (according to CVMSHCP requirements) will monitor construction and maintenance activities, provide worker education programs, and supervise or perform other related actions. The Biological Monitor will be authorized to temporarily halt construction or maintenance activities if needed to prevent potential harm to these and any other special-status species. Project activities may not disturb an active bird nest. If an active bird nest is located on or adjacent to the work site, a Biological Monitor will designate and flag an appropriate buffer area around the nest where construction or maintenance activities will not be permitted. The buffer area will be based on the bird species and nature of the construction activity. The work supervisor will coordinate with the Biological Monitor on planned or ongoing construction or maintenance activities and any specific pre-activity surveys or monitoring requirements for each activity in those areas.

Table 1-2. Mitigation Measures

Issue Area	Mitigation Measure
	BIO-6: Special-Status Species Avoidance and Minimization Measures. The acceptable biologist (according to CVMSHCP requirements) and all workers shall regularly observe the work areas for Coachella Valley milk-vetch, desert tortoise, and the Coachella Valley fringe-toed lizards, and burrowing owl. The Project will adhere to avoidance and minimization measures for sensitive species as described in Section 4.4 of the CVMSHCP. For desert tortoise, installing exclusionary fencing per CVMSHCP guidelines for trailhead or trail construction would be infeasible. Instead, if a desert tortoise or fringe-toed lizard is observed, it will be left to move away from the work site on its own. Burrowing owl measures include establishing appropriate buffers, depending on the season, where no construction or maintenance activities may occur; and coordinating with Wildlife Agencies on appropriate eviction/passive relocation procedures. If any Coachella Valley milk-vetch are found within the disturbance area, and cannot be avoided, the biological monitor will collect and distribute its seed pods, as per the USFWS's guidance, to outside of the disturbance area as feasible.
	BIO-7: Worker Training. Employees will be trained to ensure that all workers on site (including contractors) are aware of all applicable mitigation measures for biological resources. Specifically, workers will be required to (1) limit all activities to approved work areas; (2) report any desert tortoise, Coachella Valley fringe-toed lizard, burrowing owl, or other special-status species, or bird nest observation in the work areas and access routes to the supervisor or Biological Monitor; (3) avoid contact with any wildlife that may approach a work area, and be aware of potential venomous reptile bites from carelessness or unnecessary harassment; (4) pick up and properly dispose of any food, trash, or construction refuse; and (5) report any spilled materials (oil, fuel, solvent, engine coolant, raw concrete, or other material potentially hazardous to wildlife) to the supervisor or on-site Biological Monitor. During the training, the instructor will briefly discuss special-status species that may occur in the work areas, their habitats, and requirements to avoid or minimize impacts. In addition, all workers will be informed of civil and criminal penalties for violations of the federal ESA, CESA, the Migratory Bird Treaty Act, relevant sections of the California Fish and Game Code, and the Bald and Golden Eagle Protection Act.
	BIO-8: Wildlife Avoidance. Workers will not be permitted to feed, harm, approach, harass, or handle wildlife at any time, except to move animals out of harm's way, and only as directed by a supervisor. Listed species will not be handled; if a desert tortoise or Coachella Valley fringe-toed lizard enters a work area, it will not be disturbed and will be allowed to leave on its own. This condition will not exempt workers, including the Biological Monitor, from any safety policies with regard to venomous reptiles.
	BIO-9: Trash, Refuse, Concrete, and Other Construction Materials. All trash and food materials will be properly contained within vehicles or closed refuse bins while on any site, and will be regularly removed from the site (at least on a weekly basis) for proper disposal. All refuse from construction or maintenance activities will be removed from each work site upon completion of work. No raw cement, concrete or washings thereof, asphalt, paint, oil, solvents, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, shall be disposed of on-site or allowed to spill onto soil. Cleanup of any spilled material shall begin immediately.
	BIO-10: Minimize Standing Water. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards, to prevent the formation of puddles, which could attract wildlife to construction sites.
	BIO-11: Water Storage. All water containers (i.e., tanks or trailers) will be securely covered to prevent wildlife from entering the containers and becoming trapped.
	BIO-12: Speed Limit. To minimize potential impacts to special-status wildlife, no vehicles will be permitted to exceed 15 mph while traveling on dirt access roads, and vehicle use will be limited to the access routes and parking/trailhead areas. There will be no off-road vehicle use.
	BIO-13: Streambed Avoidance. A qualified biologist or hydrologist will identify the jurisdictional boundaries of the unnamed wash adjacent to the proposed Corkill Trailhead site, and ensure that the boundaries of work areas are clearly marked outside the jurisdictional area. No work activities will be authorized outside the flagged work area boundaries.

Table 1-2. Mitigation Measures

Issue Area	Mitigation Measure
	BIO-14: Operations Monitoring. The CVMC, in coordination with the BLM and USFWS, will identify a series of "photo points" on each trail, trailhead, and parking area, for long-term photo documentation of trail condition and resource damage (if any). The photo points will be located at representative sites likely to sustain high use (e.g., parking areas), likely to support listed species (e.g., habitat identified in the attached figures) or vulnerable to resource damage (e.g., steep trail segments). Each photo point will be visited and photographed at least annually. Based on the documentation, CVMC will determine and implement appropriate follow-up action (e.g., trash cleanup, trail or kiosk maintenance, or new signage). In addition, CVMC will provide annual documentation to the BLM and USFWS of the photo-point monitoring and follow-up measures.
Cultural Resources and Tribal Cultural Resources	CR-1: Monitor Sensitive Areas for Cultural Resources. The area surrounding the Golf Center Parkway Trailhead is highly sensitive for subsurface cultural resources due to the proximity of the prehistoric shoreline of Lake Cahuilla and the large number of previously identified sites nearby. A qualified archaeological monitor must be present for any grading work required at this trailhead. In the event that unanticipated discoveries are made, Mitigation Measure CR-2 will be implemented.
	CR-2: Assess and Treat Incidental Discovery of Cultural Resources. In the event that unanticipated cultural resources are encountered during ground disturbance, actions must be taken to assess their importance and, if necessary, protect them from any further potential adverse effects. This will include stoppage of all construction within 50 ft. of the discovery and a qualified archaeologist notified. If this is on BLM property, this archaeologist will be the appropriate BLM field station archaeologist. Work may continue only after the resources are recorded and evaluated by a cultural resources specialist who meets or exceeds the Secretary of the Interior Professional Qualification Standards in archaeology and the necessary mitigation is implemented.

Table 1-2. Mitigation Measures

Issue Area	Mitigation Measure
	CR-3: Assess and Treat Inadvertent Discovery of Human Remains. All human remains discovered are to be treated with respect and dignity following the guidance put forward in BLM Instruction Memorandum No. CA-2010-024. Upon discovery of human remains, all work within 50 ft. of the discovery area must cease immediately, nothing is to be disturbed, and the area must be secured. The Riverside County Coroner's Office must be called. The Coroner has 2 working days to examine the remains after notification. The appropriate land manager/owner of the site is to be called and informed of the discovery. If the remains are located on federal lands, federal land managers, federal law enforcement and the federal archaeologist must be informed as well, due to complementary jurisdiction issues. It is very important that the suspected remains, and the area around them, are undisturbed and the proper authorities called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are archaeological/historic or of modern origin and if there are any criminal or jurisdictional questions. If the remains are determined to be archaeological/historic in origin, the requirements change depending on whether the discovery site is located on federally or non-federally owned/managed lands. • Remains discovered on federally owned/managed lands: If the Coroner has determined the remains are archaeological or historic, these materials are by definition archaeological resources, and the appropriate federal laws apply. The local Field Office Archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA to determine the disposition of the materials. If the remains are determined to be Native American, the steps as outlined in NAGPRA, 43 CFR 10.6 (Inadvertent discoveries) must be followed. • Remains discovered on non-Federally owned/managed lands: California state law has additional requirements that apply to non-federal lands. After the Coroner has determined the remains on non-federally owned/managed lands are archaeological/historic, the Coroner will make recommendations concerning the treatment and disposition of the remains to the person responsible for the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American he/she shall contact the NAHC by telephone within 24 hours. The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48 hours to make recommendations to the land owner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the land owner shall reinter the remains in an area of the property secure from further disturbance. If the land owner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC.
Paleontological Resources	PAL-1: Conduct a Pre-activity Field Survey of Areas with Class 5 Fossil Yield Potential. As per BLM guidance (BLM, 2008) it will be necessary to conduct a pre-activity field survey of the areas directly and indirectly impacted in areas that have been determined to have a Class 5 (very high potential) sensitivity for paleontological resources. This field survey must be conducted by a qualified paleontologist, who is required to submit a report of findings after completion of the field survey. In addition to standard reporting information, the report should contain the qualified paleontologist recommendations for further mitigation, and this recommendation should be considered when determining the need for and type of on-site monitoring or locality avoidance.

Table 1-2. Mitigation Measures

Issue Area	Mitigation Measure
	PAL-2: Evaluate Inadvertent Discovery of Paleontological Resources. If significant paleontological resources are discovered during surface disturbing actions or at any other time, CVMC or any of its agents must: (a) stop work immediately at that site; (b) contact the appropriate BLM representative, typically the Project inspector or Authorized Officer, as soon as possible; and (c) make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Work may not resume at that location until approved by the official BLM representative. In some cases, further activity at that site may be delayed until the discovered fossils are recovered, or until the Project is modified to avoid impacting the find. Upon completion of the assessment, a report documenting methods, findings, and recommendations will be prepared according to BLM guidelines and submitted to the BLM, CVMC, and Los Angeles Museum of Natural History. If paleontological materials are recovered, they would be stored at a paleontological repository that meets federal DM-411 curation standards.
Recreation	REC-1: Prevent Unauthorized Recreation Activities. Where feasible, the CVMC will block access to the trails that allow for unauthorized OHV use to occur. Measures to block access shall include fencing, gates, or natural barriers using either rock or vegetation.

2. Proposed Action and Alternatives

2.1 Introduction

The Coachella Valley Trails Development Project (proposed Project) consists of the establishment or improvement of three trailhead sites, each with an associated non-motorized recreation trail. The three trails would be mostly on conservation land previously acquired in accordance with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), as administered by the Coachella Valley Conservation Commission (CVCC). Some portions of the proposed trails and trailheads are also on public land administered by the federal Bureau of Land Management (BLM) and various state and local agencies, and on several privately owned parcels; specific land ownership and jurisdiction is discussed in the following sections.

This joint Environmental Assessment (EA)/Mitigated Negative Declaration (MND) and Initial Study (IS) was prepared for compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), respectively. The CVMC is the Project's CEQA Lead Agency, and the BLM is the NEPA Lead Agency.

2.2 Project Location

The three trails that comprise the proposed Project would be located in the northern Coachella Valley in Riverside County, California (Figure 2-1). The westernmost trail (Corkill Trail) would be approximately 5 miles southeast of the City of Desert Hot Springs. The central trail (Pushawalla Trail) would originate in the community of Indio Hills and end at the Joshua Tree National Park boundary. The southernmost trail (East Indio Hills Trail) would be just northeast of the City of Indio.

2.3 Objectives / Purpose and Need

The first objective of the proposed Project is to provide increased access to low-impact, non-motorized, mixed-use outdoor recreation in natural open space lands for the Coachella Valley and surrounding areas. Populations in these areas are expanding rapidly and include underserved communities with ethnic minority groups. Presently this area is lacking in established low-impact recreational opportunities, and the primary objective/purpose of this Project is to provide that service to the community. The Project would provide recreational opportunities for hikers, mountain bikers, and equestrians.

The second objective of the Project is to reduce the use of informal footpaths affecting sensitive habitats by designating trails in the area. By increasing appropriate usage and visibility, the Project is expected to reduce unauthorized off-highway vehicle (OHV) use, illegal dumping, and vandalism at the three Project sites.

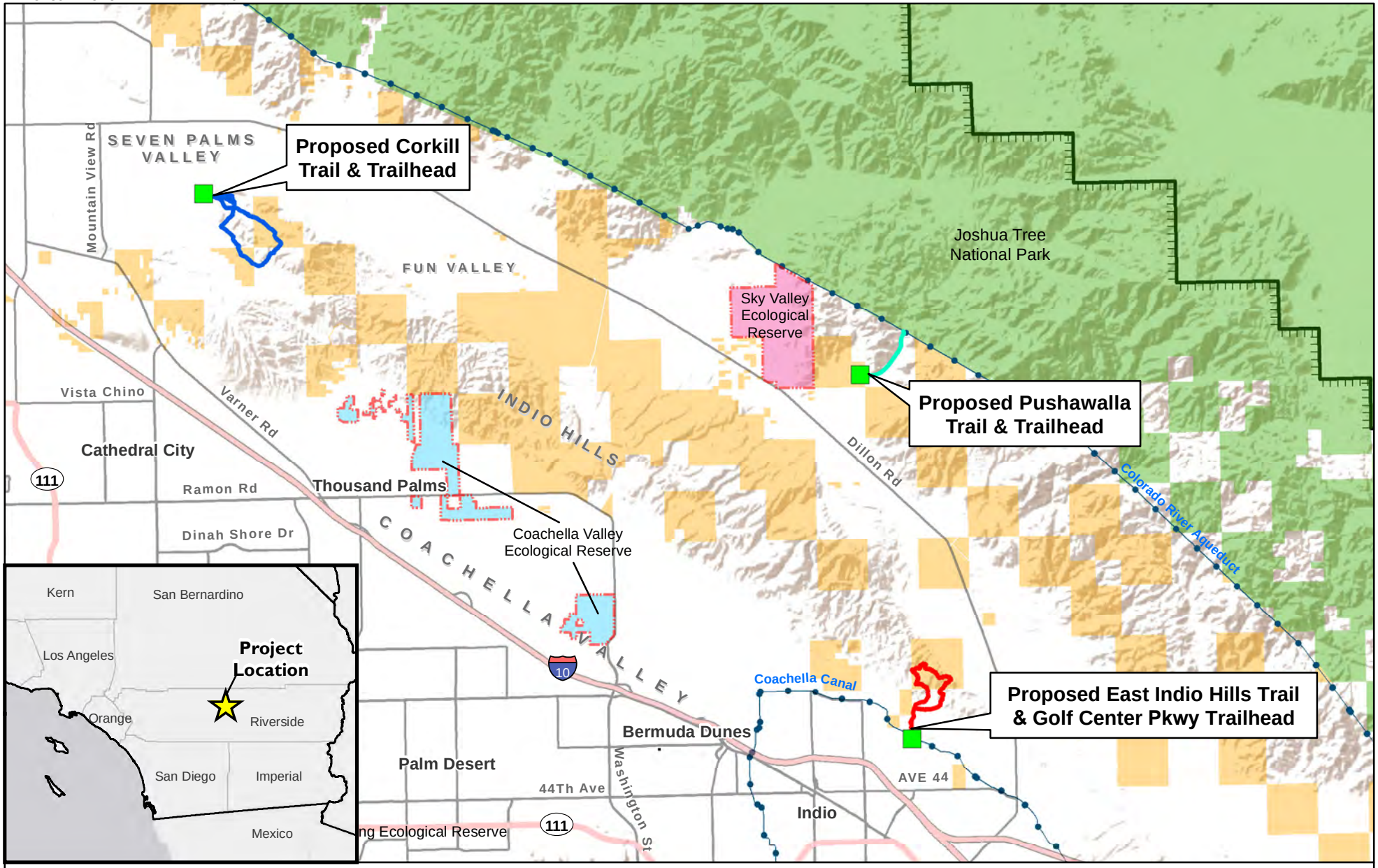


Figure 2-1

Project Location

2.4 Proposed Action

The CVMC, a California state agency established in 1991, proposes to develop a series of recreational trails in the Coachella Valley area of Riverside County through the CVMC Trails Development Project. This Project consists of three separate trails and associated trailhead and parking areas. The proposed trails and trailheads are the Corkill Trailhead and Corkill Trail, the Pushawalla Trailhead and Pushawalla Trail, and the Golf Center Parkway Trailhead and East Indio Hills Trail (Figure 2-1). These Project components are described in the following sections, and constitute the whole of the Proposed Action.

Construction activities vary slightly among the Project components, and therefore are described individually below. Prior to trail work, construction personnel would clean all tools (including wheel barrow and 4-wheel-drive vehicle) in order to reduce the risk of invasive plant introduction within or around the project areas. Following construction, CVMC, in coordination BLM staff and other local groups and volunteers would monitor the proposed Project areas, including trailheads, in the first growing season. Any new invasive plant populations observed would be removed and legally disposed of off-site. Operation and maintenance of the Project would include regular inspections and repair as needed, particularly after storms, when surface runoff could erode trails, trailheads, or parking areas. Section 2.5 describes operation and maintenance activities in detail.

Portions of some of the proposed trails are located in remote areas, where informal footpaths are used by the public. These areas show evidence of vandalism to natural features and illegal dumping; the establishment of formal trail alignments is expected to increase foot traffic and public visibility in these areas and discourage such undesirable activities. The establishment of formal trails is also expected to decrease use of other informal footpaths now located throughout the area, and minimize or reverse damage to the natural environment caused by use of these informal pathways. Information to be provided at the trailheads includes contact numbers for reporting illegal dumping, OHV use, and other unauthorized activities.

The proposed trailheads and trail alignments would be on both private and public land, under several different jurisdictions. Project implementation would conform to any easements, Memorandums of Understanding (MOUs), or other applicable land use agreements.

Project construction would be subject to the avoidance and minimization measures described in Section 4.4 of the CVMSHCP, which requires surveys for species for which there is modeled habitat in the Project area. See Section 3.4, Biological Resources, for further information on surveys that would be carried out before construction at each Project location.

2.4.1 Corkill Trailhead

The Corkill Trailhead site is located at the west end of the Indio Hills, just south of the community of Desert Edge, near the junction of Corkill Road and 20th Street. Access to the proposed trailhead site is via Corkill Road, and the nearest major cross street is Dillon Road, located approximately 1.5 miles north of the proposed trailhead site. Access from 20th Street is not currently feasible due to erosion damage, steep embankments where 20th Street meets Corkill Road, and primitive road conditions on 20th Street that are only passable by four-wheel-drive vehicle. South of Dillon Road, Corkill Road is paved to within 0.5 mile of the proposed trailhead site. There are several residences on the west side of the street, and the road is passable by two-wheel-drive vehicles to the driveway of the last private residence, after

which point the substrate becomes too soft for safe access by two-wheel-drive vehicles. Figure 2-2 identifies the proposed Corkill Trailhead site.

The final 0.10 mile of Corkill Road north of the proposed trailhead site is very sandy where a wide ephemeral wash crosses the road. Corkill Road would be improved along this section to provide access for two-wheel-drive vehicles. The improvements would include grading and the placement of 0.75-inch rock or another stabilizing material. Drainage would also be improved to direct runoff from the roadway and avoid potential erosion-related damage.

The proposed Corkill Trailhead site would be situated just south of the wash crossing at Corkill Road, and would be approximately 50 feet by 75 feet (3,750 square feet, or 0.09 acre) in size. This area would provide parking for approximately 10 to 12 vehicles, or one truck and horse trailer and 5 to 6 vehicles. The trailhead site is owned by the CVCC. It is within unincorporated Riverside County and within the boundaries of the Coachella Valley MSHCP, in the Edom Hill Conservation Area. CVMSHCP requirements are addressed in Section 3.4, Biological Resources.

Construction

Construction of the Corkill Trailhead would include the following activities:

- **Grading.** The proposed trailhead site is slightly sloped from the north to the south, and would be graded to provide a level or nearly level site. Road grading would also occur along the last 0.1 mile of Corkill Road to provide access for two-wheel-drive vehicles.
- **Ground Cover.** The site would be cleared of existing vegetation (scattered creosote scrub), and surfaced with 0.75-inch rock or a similar material to provide and maintain stable access for two-wheel-drive vehicles.
- **Flood Protection.** A small berm may be built on the north side of the trailhead to direct sheet flow around the site during flash flood events. This berm would be created using excess material obtained from grading the site.
- **Informational Kiosk.** A visitor information kiosk would be installed, and would include a map of the designated trails in the area, trail names, applicable regulations, contact information to report unauthorized activity, and information about sensitive resources in the area, with an emphasis on sand dune ecosystems including the Coachella Valley fringe-toed lizard. The informational kiosk would also include a notification identifying areas where equestrian and/or mountain bike use is not advised; these areas could include sandy or steep locations.
- **Perimeter Fencing.** A low post and beam barricade would be constructed around the perimeter of the proposed trailhead and parking area to delineate its boundaries and discourage off-road vehicle use.
- **Signage.** Signs indicating that OHV use is prohibited and that sensitive habitat occurs in the area would be installed in the trailhead. A sign with trail names and distances would also be installed.
- **Traffic Control.** A stop sign would be installed at the intersection of the trailhead access driveway with Corkill Road.

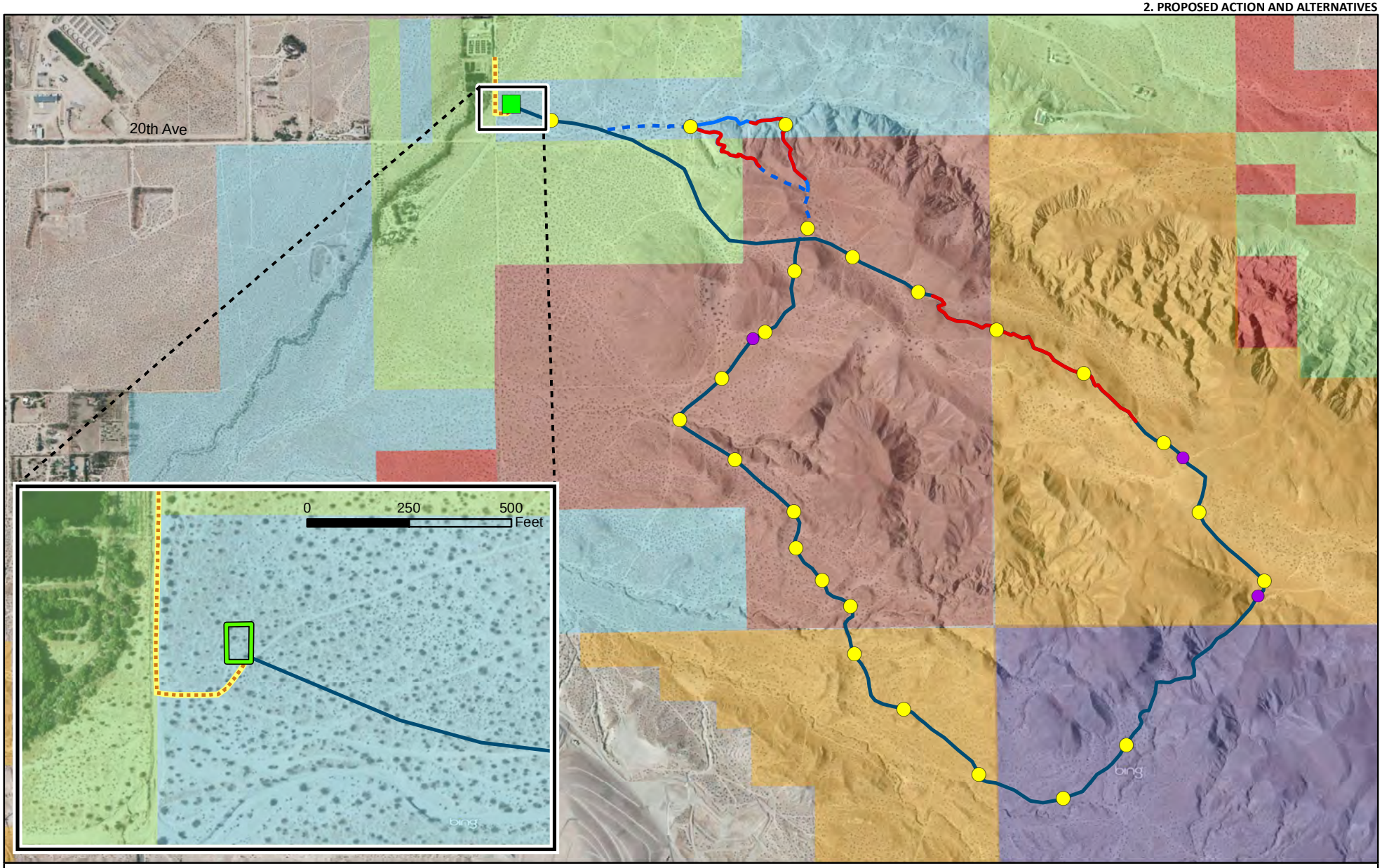


Figure 2-2

Corkill Trailhead and Trail

2.4.2 Corkill Trail

The proposed Corkill Trail would be an approximately 4.5-mile loop which initiates and ends at the proposed Corkill Trailhead, described above. Figure 2-2 identifies the proposed Corkill Trail route. Most of the proposed Corkhill Trail would follow existing routes, or incorporate existing informal trail routes by improving trail marking and delineation. The Corkill Trail would be open to non-motorized recreation only (hiking, mountain biking, and equestrian use).

An 81-acre private parcel (APN 659-150-009) is located near the beginning of the proposed Corkill Trail, and an undeveloped portion of that property may be traversed by the trail alignment, pending the negotiation of an easement with the property owner. The proposed trail alignment therefore includes two options that are analyzed in this document. Option 1 would cross the northeast corner of the private parcel, where terrain slopes gently, and Option 2 would avoid the private parcel by routing through the surrounding terrain, which is generally steep and eroded (Figure 2-2).

Due to a network of existing undesignated trails throughout the area, the majority of work that would be required to establish the proposed Corkill Trail would be limited to the placement of trail markers (typically made of carsonite or a comparable material) along the proposed trail alignment. These markers would indicate the intended trail alignment, and discourage trail users from purposefully or accidentally wandering off the designated trail. Improvements may also include the placement of rocks between the trail-marker stakes, for enhanced delineation of the intended trail. Figure 2-2 identifies the proposed Corkill Trail route and proposed improvement areas.

In addition to the 81-acre private parcel mentioned above, the proposed Corkill Trail also traverses land owned or managed by the CVMC, the Center for Natural Lands Management, and the BLM. This trail is located within the boundaries of the CVMSHCP in the Edom Hill Conservation Area, and multiple covered species may be present along the trail alignment (addressed in the Biological Resources analysis).

Construction

The majority of work involved in establishing the proposed Corkill Trail would be the placement of markers along the trail alignment to delineate existing footpaths. Some new trail construction would be necessary along approximately 0.7 mile of the 4.5-mile loop, and would include a newly constructed trail tread (widening or out-sloping and reinforcing) in a rocky area where the terrain is steep and an existing trail is not obvious. All work, including trail construction, would be completed by volunteers, California Conservation Corp (CCC) members, or inmate crews using hand tools. A person with trail building experience would supervise the work in the field.

2.4.3 Pushawalla Trailhead

The proposed Pushawalla Trailhead site is located approximately 1.5 miles north of Dillon Road on BLM land. The dirt road which provides access to the site off Dillon Road is labeled on maps as Perkins Road; however, the intersection is unmarked. Approximately 1.1 miles north from the Dillon Road intersection, an unmarked dirt road intersects Perkins Road from the east. The trailhead site is adjacent to the unmarked road, about 0.5 mile east of Perkins Road Figure 2-3 identifies the location of the Pushawalla Trailhead. (Hund, 2014)

The proposed trailhead site would be 1.4 miles south of the Joshua Tree National Park boundary, approximately at the point where the existing dirt road becomes impassable to two-wheel-drive vehicles. The trailhead site is near the convergence of several canyons, including Pushawalla Canyon. The topography at this location would be likely to protect the trailhead site from flash flood events.

The proposed trailhead site would be approximately 50 feet by 75 feet in size (3,750 square feet, or 0.09 acre). This area would provide parking for approximately 10 to 12 vehicles, or one truck and horse trailer and 5 to 6 vehicles.

Construction

Construction of the Pushawalla Trailhead would include the following activities:

- **Grading.** The proposed trailhead site is located a few feet above the grade of the existing access road, on slightly sloping land, and would be graded to provide a level surface. In addition, minor grading and compacting of approximately the last 100 feet of the existing access road to the trailhead site would be required in order to provide access for two-wheel-drive vehicles. A driveway would be created to connect the proposed trailhead to the road.
- **Ground Cover.** The proposed trailhead site would be cleared of existing vegetation (sparse creosote scrub), but would not be surfaced because the existing substrate is sufficiently solid. The portion of access road that would be graded to allow two-wheel-drive access may be covered with crushed rock or gravel.
- **Flood Protection.** Excess material from grading the trailhead site would be used to construct a berm on the north and east sides of the trailhead to divert surface flows from rainstorms away from the parking area.
- **Informational Kiosk.** A visitor information kiosk would be placed at the beginning of the trail on the edge of the trailhead parking area. The kiosk would include a map of the designated trails in the area, applicable regulations and contact information to report unauthorized activity, notification that the Pushawalla Trail is open to hiking and equestrian use only, and information about sensitive resources including desert tortoise and the nearby Joshua Tree National Park.
- **Perimeter Fencing.** Perimeter fencing is not proposed for this trailhead site.
- **Signage.** Directional and informational signs would be placed at the junction of the intersection of the dirt roads.
- **Traffic Control.** A stop sign would be placed at the exit to the trailhead.

The proposed Pushawalla Trailhead is on public land under the BLM's jurisdiction. The dirt road providing access to Joshua Tree National Park crosses a section of private land; however, the Metropolitan Water District of Southern California (MWD) has a right-of-way across it, and the public may also have access rights. Farther up the alluvial fan, near where Pushawalla Canyon enters the Little San Bernardino Mountains, the land is owned or managed by the Friends of the Desert Mountains and the National Park Service.

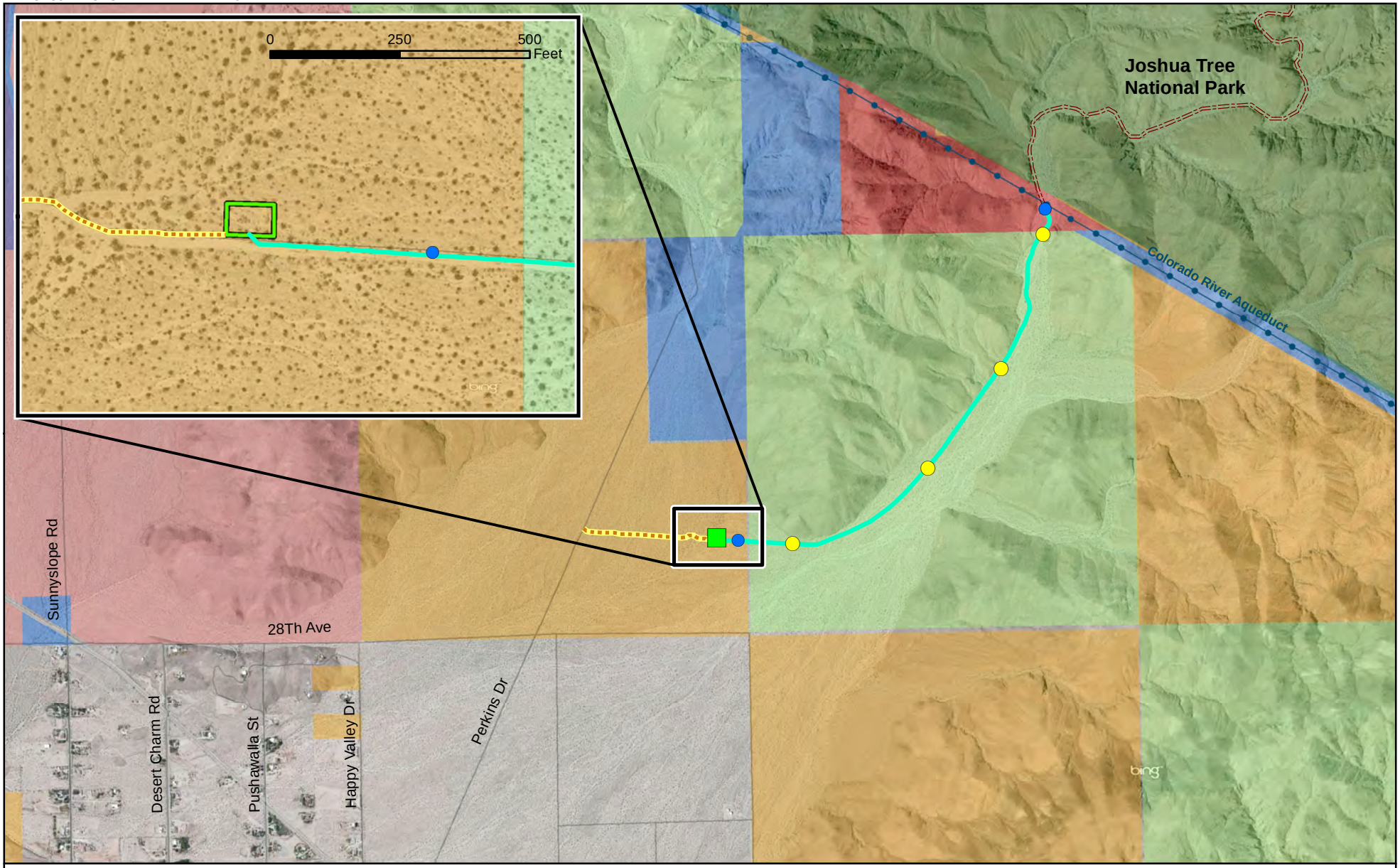


Figure 2-3

Pushawalla Trailhead and Trail

This proposed trailhead site is also located within the boundaries of the Coachella Valley MSHCP, in the Indio Hills/Joshua Tree National Park Linkage Conservation Area. Provisions of the CVMSHCP do not apply to this trailhead site because it is on federally administered BLM land; however, NEPA and the federal Endangered Species Act (ESA) do apply, and potential impacts to species and other resources are considered in this document.

2.4.4 Pushawalla Trail

The proposed Pushawalla Trail is an existing dirt road that extends for 1.4 miles from the approximate location of the proposed Pushawalla Trailhead to the boundary of National Park Service (NPS) land at Joshua Tree National Park (JTNP) (Figure 2-3). At the point where the existing dirt road reaches NPS land, it becomes an existing trail corridor that links to the Joshua Tree National Park's Geology Tour Road. The Pushawalla Trail under the proposed Project would end at the boundary of JTNP, and no Project facilities or other actions are proposed on NPS lands. The proposed Pushawalla Trail alignment is fairly remote and probably receives less foot traffic than the other trails included under this Project. The Pushawalla Trail would be open to hiking and equestrian use. This trail would connect to an existing unpaved trail corridor inside Joshua Tree National Park, and mountain bikes are prohibited on unpaved trails in the Park. Signs at the trailhead and at the boundary to Joshua Tree National Park (at the terminus of the Pushawalla Trail) would inform the public regarding the restrictions on mountain biking.

Construction

The existing dirt road and topography provide clear direction as to the trail alignment. Improvements to the trail are not proposed, with the exception of trail markers and the signage to be installed at the proposed Pushawalla Trailhead and Park boundary (Figure 2-3).

2.4.5 Golf Center Parkway Trailhead

The proposed Golf Center Parkway Trailhead is located at the northern terminus of Golf Center Parkway in the City of Indio, adjacent to a designated park site which is currently undeveloped (Figure 2-4). Golf Center Parkway is a paved road, and provides direct access to the trailhead site. Golf Center Parkway makes an abrupt turn to the west at this point, which would also provide future access to the adjacent park site; therefore, the CVMC would consult with the City of Indio's traffic engineer on the specifics of situating the ingress and egress to the Golf Center Parkway Trailhead.

The proposed trailhead site would be approximately 50 feet by 75 feet in size (3,750 square feet, or 0.09 acre), to provide parking for approximately 10 to 12 vehicles or one truck and horse trailer and 5 to 6 vehicles.

The proposed Golf Center Parkway Trailhead is on land owned and administered by the City of Indio or the Indio Water Authority. An MOU with the City would be needed to delineate respective roles and responsibilities of participating entities, with regard to establishing and maintaining the proposed trailhead. This site is located adjacent to the East Indio Hills Conservation Area under the Coachella Valley MSHCP.

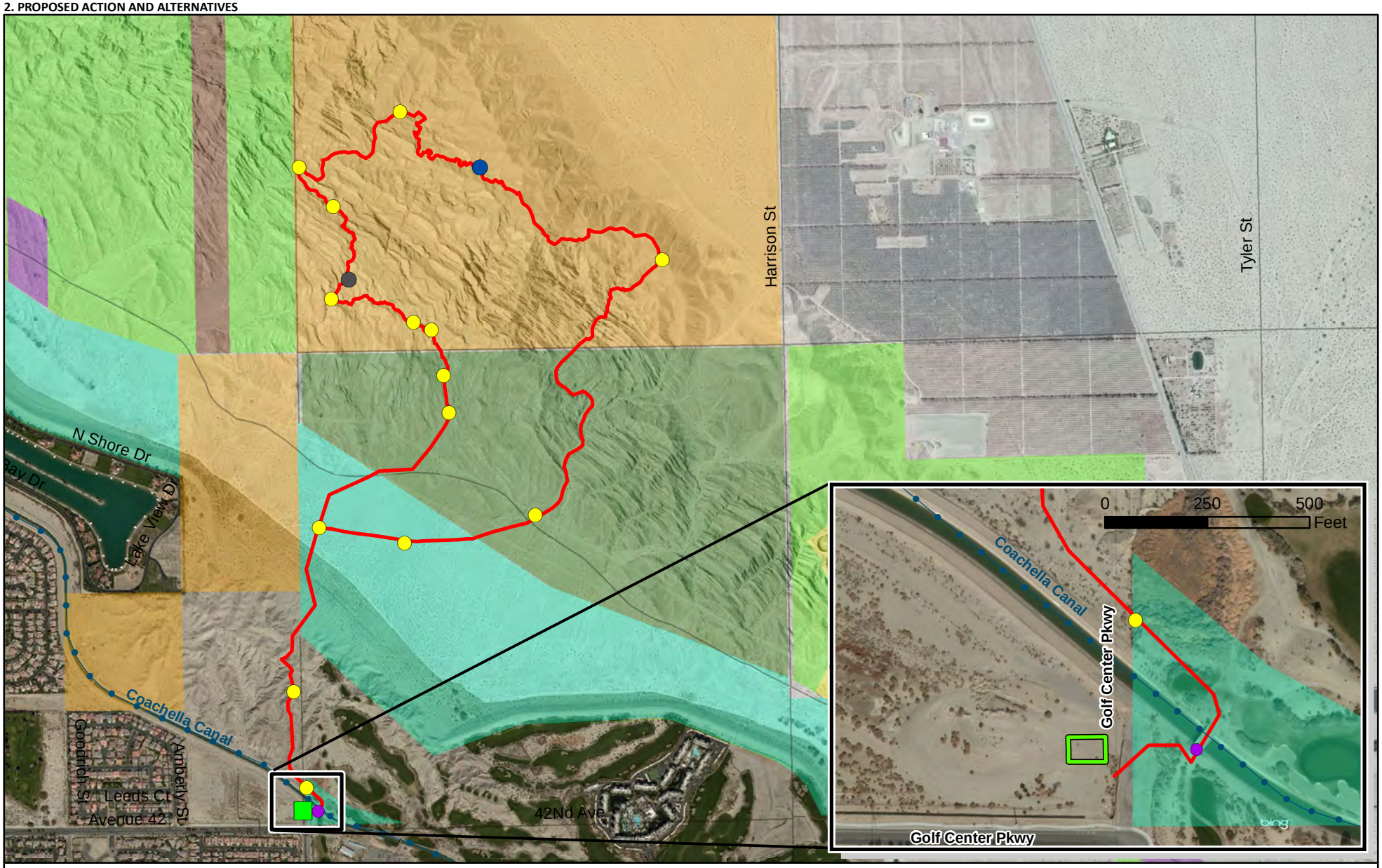


Figure 2-4

Golf Center Pkwy Trailhead and East Indio Hills Trail

Construction

Construction of the Golf Center Parkway Trailhead would include the following activities:

- **Grading.** The site is level and would need only minor grading and compaction.
- **Ground Cover.** The trailhead site is covered with rough rock and gravel, which may need to be replaced or reinforced to compensate for generally soft substrate in the area. Final surfacing would include a layer of crushed rock or gravel.
- **Flood Protection.** An existing berm is situated along the northern site boundary, where it abuts the Coachella Canal (a drainage and irrigation canal). No additional flood protection is proposed or considered necessary for this site.
- **Informational Kiosk.** A visitor information kiosk would be placed at the beginning of the trail on the edge of the parking lot. The kiosk would include a map of the designated trails in the area, applicable regulations and contact information to report unauthorized activity, and information about sensitive resources in the area. The informational kiosk would also include a notification identifying areas where equestrian and/or mountain bike use is not advised; these areas could include sandy or steep locations and narrow slot canyons.
- **Perimeter Fencing.** The site is bounded by chain link fencing on two sides (west and east); no additional fencing is proposed.
- **Signage.** A sign with trail names and distances would be installed at the beginning of the East Indio Hills trail (described below).
- **Traffic Control.** A stop sign would be installed at the trailhead exit.

2.4.6 East Indio Hills Trail

The proposed East Indio Hills Trail would be a 4.5-mile-long loop trail that begins and ends at the Golf Center Parkway Trailhead. Much of the proposed trail alignment is situated within slot canyons and along ridgelines, both in the small range of hills just north of the trailhead and on the spine of the Indio Hills. The majority of this alignment has an existing trail tread created by recreational use, with evidence of wildlife use (Hund, 2014). Figure 2-4 identifies the proposed East Indio Hills Trail route.

The Golf Club at Terra Lago, a private golf course, is located to the east of the proposed Golf Center Parkway Trailhead on the opposite side of the Coachella Canal (Figure 2-4). There is a bridge over the Coachella Canal used by golf carts and golf course maintenance vehicles, and is also planned to be used for access between the Golf Center Parkway Trailhead and the East Indio Hills Trail. From the bridge crossing, the trail would turn to the west to avoid the golf course grounds, then to the north, into the hills.

The East Indio Hills Trail would be open to hiking, mountain biking, and equestrian use. Portions of the proposed trail alignment are narrow and steep, and would be inadvisable for equestrian use; these areas would be identified at the informational kiosk at the trailhead. Several areas would also require improvements to the trail tread, including installation of steps or switchbacks in steep areas (Figure 2-4).

The proposed East Indio Hills Trail traverses lands administered by the BLM, the City of Indio, and the Coachella Valley Water District. The trail is also located within the Coachella Valley MSHCP area, in the East Indio Hills Conservation Area.

Construction

Implementation of the East Indio Hills Trail would include placement of trail markers at intervals to help users find and stay on the trail, and minor improvements such as widening and out-sloping or slope stabilization efforts. Additional construction would be required in the western and northern portions of the trail (Figure 2-4). The trail climbs up through slot canyons in sandstone hills and then follows a ridgeline, and several areas are steep or narrow. Five gentle switchbacks would be constructed in the northern portion of the route to provide safe access over an approximately 150-foot steep incline. The trail would be approximately 2 feet wide through the switchbacks. At another location along the west side of the route, approximately 21 steps would be required to access a 60-foot steep incline. The steps would be constructed in 3 sets of 7 steps each. The steps would be "timber box steps" vertically anchored to the hillside with rebar; these steps would also act as a retaining wall to prevent erosion of the slope. Figure 2-5 provides a conceptual drawing of the proposed steps.

Additional trail improvement work would include moving large boulders to raise the level of natural steps in three locations in the slot canyons. In two of these three locations, the trail passes through narrow crevices; these crevices would be widened by up to three inches using hand tools to provide safe and easier access.

All trail work would be conducted with hand tools; materials would be delivered by 4-wheel-drive vehicle (e.g., pickup truck) via existing dirt access roads and then would be carried by hand or by wheel barrow to the work areas. As with the Corkill Trail, all work would be completed by volunteers, CCC members, or inmate crews. A person with trail building expertise would be retained to design and supervise trail improvement activities. Figure 2-4 identifies areas that would require trail improvements as well as proposed trail marker and signage locations.

2.4.7 Disturbance Acreage

Table 2-1 summarizes the estimated disturbance associated with each Project component. The Project is estimated to permanently impact approximately 8.8 acres in total (Table 2-1). However, this estimate is conservative because most of the trail routes are existing footpaths that would need minimal work (primarily installation of trail markers at locations where other footpaths intersect the proposed routes). Therefore, the acreage of disturbance analyzed in this EA/MND is a worst-case scenario.

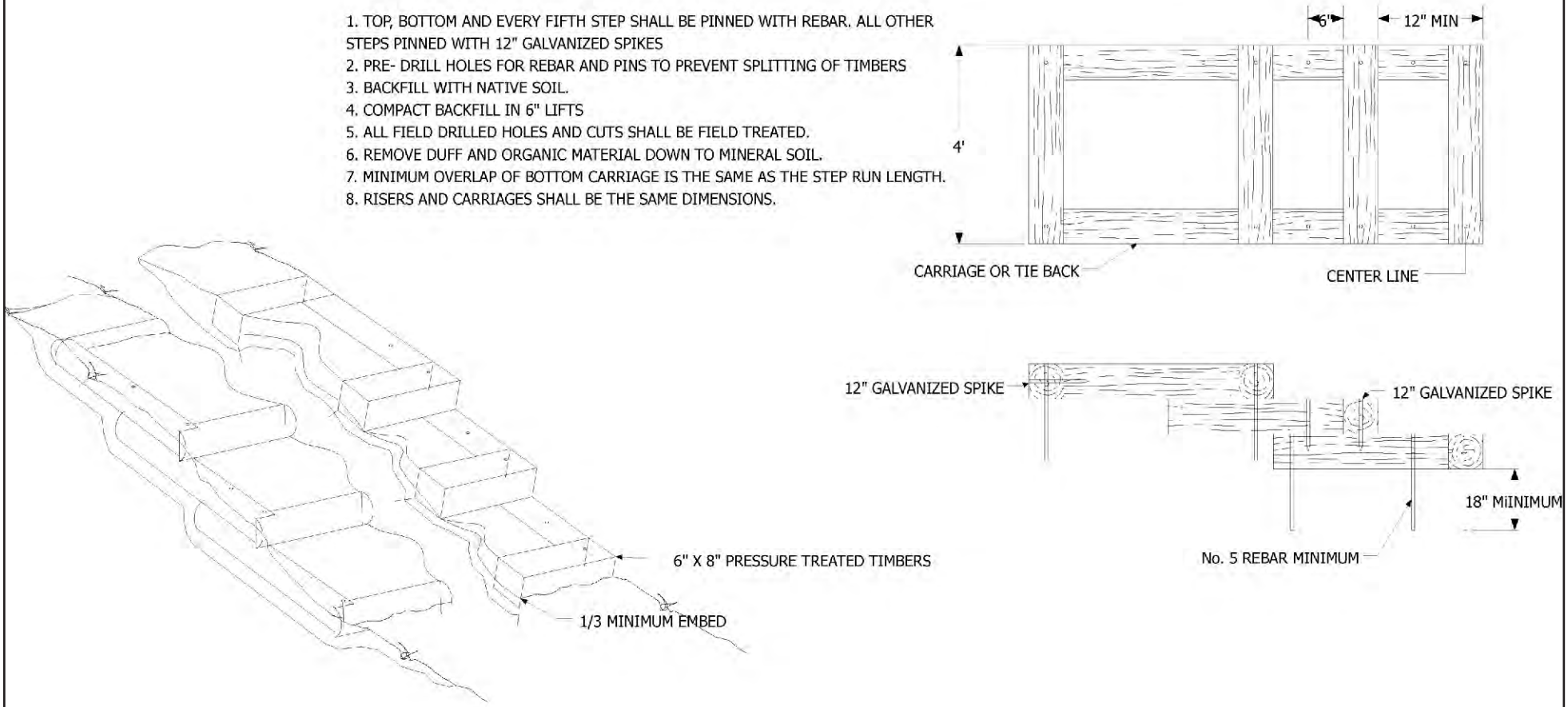
Table 2-1. Ground Disturbance (Acres)

Activity	Corkill	Pushawalla	Golf Center Pkwy/ East Indio Hills
Trailhead Construction	0.09	0.09	0.09
Trail Improvements[1]	3.87	1.00	3.30
Road Improvements for Trailhead Access	0.30	0.06	--
Total Estimated Disturbance	4.26	1.15	3.39

1 – The acreage of disturbance for trail improvements was conservatively estimated as a 6-foot wide buffer along the proposed trail centerline, as this is the area that could be subject to disturbance. The majority of trail work would be limited to placement of trail markers, and soil and rock movement to improve existing trail treads where needed or to clearly delineate the route in areas where the trail is not obvious. Therefore, the acreage of disturbance reported overestimates the actual ground disturbance that would be required.

NOTES:

1. TOP, BOTTOM AND EVERY FIFTH STEP SHALL BE PINNED WITH REBAR. ALL OTHER STEPS PINNED WITH 12" GALVANIZED SPIKES
2. PRE- DRILL HOLES FOR REBAR AND PINS TO PREVENT SPLITTING OF TIMBERS
3. BACKFILL WITH NATIVE SOIL.
4. COMPACT BACKFILL IN 6" LIFTS
5. ALL FIELD DRILLED HOLES AND CUTS SHALL BE FIELD TREATED.
6. REMOVE DUFF AND ORGANIC MATERIAL DOWN TO MINERAL SOIL.
7. MINIMUM OVERLAP OF BOTTOM CARRIAGE IS THE SAME AS THE STEP RUN LENGTH.
8. RISERS AND CARRIAGES SHALL BE THE SAME DIMENSIONS.



Source: Bellfree Contractors, Inc., Feb. 2015.

Figure 2-5

Timber Box Steps

2.5 Operation & Maintenance

Operation and maintenance (O&M) activities would include routine trail inspections and patrols to identify any maintenance needs and unauthorized uses. Inspections would also be conducted following major storms, to assess any damage and to temporarily close trails and trailheads, if needed, until repair activities are complete. Routine trail maintenance and emergency repairs would be conducted with hand tools, similar to the construction phase. Signs and trail markers would be repaired or replaced as needed.

Trailhead parking areas would be re-graded as needed to maintain a level surface accessible to 2-wheel drive vehicles and repair any erosion that may occur after storms.

O&M activities would also include removing any weeds along the trails and at the trailheads. Weed removal would be done by hand, and no herbicide use is proposed.

2.6 Alternatives

The following sections provide an overview of alternatives to the proposed Project that are considered in this document for the purposes of the NEPA-required Environmental Assessment.

2.6.1 Alternative 1 – Pushawalla

Under the Pushawalla Alternative, the only components of the Project that would be implemented would be the Pushawalla Trailhead and the Pushawalla Trail, described in Sections 2.4.3 and 2.4.4. No other proposed Project components would be implemented under this alternative.

2.6.2 Alternative 2 – Pushawalla and East Indio Hills

Under the Pushawalla and East Indio Alternative, the proposed Corkill Trailhead and Corkill Trail would not be established, but all other aspects of the proposed Project would be implemented, including the Pushawalla Trailhead, the Pushawalla Trail, the Golf Center Parkway Trailhead, and the East Indio Hills Trail.

2.6.3 Alternative 3 – No Action

Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing recreational use of informal trails and footpaths in the area would continue, including hiking, mountain biking, and equestrian use.

3. Environmental Setting, Analysis, and Mitigation Measures

3.1 Introduction to Environmental Analysis

3.1.1 Resources Analyzed

This chapter describes the affected environment (existing setting or baseline conditions) and analyzes the potential environmental consequences (impacts or effects) that would occur as a result of implementing the proposed Project. Direct, indirect, and cumulative effects are analyzed for each resource topic carried forward. Potential impacts are described in terms of type, context, duration, and intensity.

The potential effects are examined as they relate to the following nine resource areas:

3.2 Air Quality

3.3 Greenhouse Gas Emissions

3.4 Biological Resources

3.5 Cultural Resources

3.6 Environmental Justice

3.7 Hydrology and Water Quality

3.8 Land Use and BLM Lands and Realty

3.9 Recreation

3.10 Traffic and Transportation

3.1.2 Resources Not Evaluated

The Lead Agencies take a "hard look" at all potential impacts by considering the direct, indirect, and cumulative effects of the proposed Project on the environment, along with connected and cumulative actions. In those cases where impacts are either not anticipated or are expected to be negligible, the issues and impact topics are dismissed from detailed analysis. As described in National Environmental Policy Act (NEPA) regulations, NEPA analysis should focus on issues that are truly significant to the action in question, rather than amassing needless detail (Council on Environmental Quality [CEQ] NEPA regulations, 40 CFR 1500.1 (b)). This section identifies the impact topics dismissed from detailed analysis in this EA/MND. The rationale for the dismissal of certain disciplines is discussed under each issue area analysis in the Initial Study Checklist (Appendix A). Generally, issues and impact topics are dismissed from detailed analysis for one or more of the following reasons:

- The resource does not exist in the analysis area;
- The resource would not be affected by the proposal, or the likelihood of impacts are not reasonably expected (i.e., no measurable effects); or
- There would be minor effects from the proposal, and there is little controversy on the subject or reasons to otherwise include the topic.

Because the Coachella Valley Trails Development Project includes existing trail routes with little to no improvement required in most areas, and the activities associated with improving the existing trails and creating the trailhead areas are limited in time and scope, the proposed Project would have little or no adverse effect on the following resources in the study area. These issue areas have not been carried forward for full analysis.

- Aesthetics,
- Agriculture and Forestry Resources,
- Geology and Soils,
- Hazards and Hazardous Materials,
- Mineral Resources,
- Noise,
- Population and Housing,
- Public Services, and
- Utilities and Service Systems.

3.1.3 CEQA Significance Criteria and Significance Determinations

For the purposes of California Environmental Quality Act (CEQA) compliance, a determination has been made regarding the significance of each adverse impact identified for the proposed Project. The CEQA Lead Agency is responsible for determining whether an impact is significant and is required to adopt feasible mitigation measures to minimize or avoid each significant impact. A series of criteria, identified in the "CEQA Significance Criteria" section for each resource/issue area, are used to help the CEQA Lead Agency gauge the significance of each impact.

In order to provide a systematic evaluation of potential environmental impacts, a classification system has been applied to the impacts of the proposed Project. These classifications indicate whether an identified impact is significant and whether mitigation measures can reduce the severity of the impact to a level that is not significant. The following classifications were uniformly applied to each adverse impact:

- **Class I: Significant impact; cannot be mitigated to a level that is not significant.** Class I impacts are significant adverse effects that cannot be mitigated below a level of significance through the application of feasible mitigation measures. Class I impacts are significant and unavoidable. There would be no Class I impacts for the proposed Project; therefore, an Environmental Impact Report (EIR) is not required.
- **Class II: Significant impact; can be mitigated to a level that is not significant.** A Class II impact is a significant adverse effect that can be reduced to a less-than-significant level through the application of feasible mitigation measures presented in this EA/MND.
- **Class III: Adverse; less than significant.** A Class III impact is a minor change or effect on the environment that does not meet or exceed the criteria established to gauge significance. Under CEQA, no mitigation is required for Class III impacts although mitigation can be applied to lessen the severity of an impact, if needed, pursuant to NEPA.
- **Class IV: Beneficial impact.** Class IV impacts represent beneficial effects that would result from Project implementation.

In cases where there is a potential for a certain type of impact, but no such impact would occur for the proposed Project, the reasons for no occurrence of an impact are described and no impact classification is assigned. Most resources for which there would be no impact have not been carried forward for analysis in this EA/MND; see Appendix A (Initial Study) for the justification for each "no impact" determination.

A significant impact is defined by CEQA as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (State CEQA Guidelines §15382). Significance criteria serve as a benchmark for determining if a project action will result in a significant adverse environmental impact when evaluated against the baseline. Although guidance provided by CEQA is used to help determine the significance of impacts, the determination of impact significance is based on the independent judgment of the CEQA Lead Agency.

3.2 Air Quality

3.2.1 Environmental Setting

Air pollutants are defined as two general types: (1) "criteria" pollutants, representing pollutants for which national and state health- and welfare-based ambient air quality standards have been established; and (2) toxic air contaminants (TACs), which may lead to serious illness or increased mortality even when present at relatively low concentrations. Generally, TACs do not have ambient air quality standards. The three TACs that do have ambient air quality standards (lead, vinyl chloride, and hydrogen sulfide) are pollutants that would not be emitted by the Project and are therefore not relevant to the Project.

Climate and Meteorology

The proposed Project is located in the Coachella Valley (Valley) area of Riverside County, within the designated Salton Sea Air Basin (SSAB), under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Valley is characterized as a desert with hot summers, mild winters, and very little annual rainfall. A monthly climate summary for the City of Indio was selected to characterize the study area, as described below in Table 3.2-1.

Table 3.2-1. Indio Monthly Average Temperatures and Precipitation

Month	Temperature (°F)		Precipitation (inches)
	Maximum	Minimum	
January	71	45	0.78
February	76	47	0.68
March	81	52	0.47
April	87	59	0.06
May	94	65	0.06
June	103	73	0.01
July	107	78	0.10
August	106	78	0.20
September	102	72	0.21
October	92	62	0.12
November	80	48	0.18
December	72	41	0.28

Source: Intellicast, 2015

Winds across the Project area are an important meteorological parameter as they control both the initial rate of dilution and the direction of pollutants. The prevailing wind direction in the Project area is from the northwest to the southeast.

Criteria Pollutants

Air Quality Standards and Attainment Status. The United States Environmental Protection Agency (USEPA), California Air Resources Board (CARB), and local air districts classify an area as attainment, unclassified, or nonattainment depending on whether or not the monitored ambient air quality data shows compliance, insufficient data available, or non-compliance with the ambient air quality standards, respectively. The primary National Ambient Air Quality Standards (NAAQS) and primary California Ambient Air Quality Standards (CAAQS) relevant to the Project are provided below in Table 3.2-2.

Table 3.2-2. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	Health Effects
Ozone (O_3)	1-hour	0.09 ppm	--	Breathing difficulties, lung tissue damage
	8-hour	0.070 ppm	0.075 ppm	
Respirable Particulate Matter (PM10)	24-hour	50 µg/m	150 µg/m	Increased respiratory disease, lung damage, cancer, premature death
	Annual	20 µg/m	--	
Fine Particulate Matter (PM2.5)	24-hour	--	35 µg/m	Increased respiratory disease, lung damage, cancer, premature death
	Annual [1]	12 µg/m	12 µg/m	
Carbon monoxide (CO)	1-hour	20 ppm	35 ppm	Chest pain in heart patients, headaches, reduced mental alertness
	8-hour	9.0 ppm	9 ppm	
Nitrogen dioxide (NO_2)	1-hour	0.18 ppm	0.100 ppm [2]	Lung irritation and damage
	Annual	0.030 ppm	0.053 ppm	
Sulfur dioxide (SO_2)	1-hour	0.25 ppm	0.075 ppm [2]	Increases lung disease and breathing problems for asthmatics
	3-hour	--	0.5 ppm	
	24-hour	0.04 ppm	--	

Source: CARB, 2015a; CARB, 2001
Notes:
ppm = parts per million; µg/m^3 = micrograms per cubic meter; "--" = no standards
[1] The federal standard shown is the primary standard, the secondary standard is 15 µg/m3.
[2] The new federal 1-hour NO2 and SO2 standards are based on the 98th and 99th percentile of daily hourly maximum values, respectively.

As previously mentioned, the Project is located within the SSAB; Table 3.2-3 summarizes the federal and state attainment statuses of criteria pollutants for the SSAB, based on the NAAQS and CAAQS.

Table 3.2-3. Attainment Status for the Salton Sea Air Basin

Pollutant	Attainment Status [1]	
	State	National
Ozone (O_3)	Nonattainment	Nonattainment
PM10	Nonattainment	Nonattainment
PM2.5	Attainment	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

Source: CARB, 2015b

Notes: [1] Attainment = unclassified (Some criteria pollutants do not have unclassified attainment status, in which case they are called "attainment." Unclassified pollutants are typically considered to be in attainment.)

Existing Air Quality

The nearest ambient air quality monitoring station to the Project area is the Indio-Jackson Street monitoring station, which measures ozone, PM10, and PM2.5. Annual maximum concentrations for NOx are available for the entire Salton Sea Air Basin. The most recent year (2014) of maximum ambient monitored concentrations of these criteria pollutants are provided below in Table 3.2-4.

Table 3.2-4. Air Quality Monitoring Summary 2014

Pollutant	Averaging Time	Monitoring Station	Maximum Concentration (ppm or µg/m^3) [1]
O_3	1-hour	Indio	0.091
	8-hour	Indio	0.096
PM10	24-hour	Indio	322.3
PM2.5	24-hour	Indio	16.8
NO_2	1-hour	Salton Sea Air Basin	0.094

Source: CARB 2015c

ppm = parts per million; µg/m^3 = micrograms per cubic meter; "—" = no data

1 - Gaseous pollutant (ozone and NO_2) concentrations are shown in ppm and particulate (PM10 and PM2.5) concentrations are shown in µg/m^3

The table above shows, by comparison with Table 3.2-2, that exceedance of federal and state ozone and PM10 standards are occurring near the Project study area.

Sensitive Receptors

The impact of air emissions on sensitive members of the population is a special concern. Sensitive receptor groups include children and infants, pregnant women, the elderly, and the acutely and chronically ill. Sensitive receptor locations typically include residences, schools, daycare centers, playgrounds, and medical facilities.

Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

A land use survey was conducted to identify sensitive receptors (e.g., local residences, schools, hospitals, churches, recreational facilities) in the general vicinity of the Project sites. The trails travel through undeveloped areas with trailheads located where only a few rural residences have been identified. The closest residences are more than 50 meters from the Golf Center Parkway Trailhead. The distances to

the nearest residences to the Corkill and Pushawalla trailheads are more than 200 meters and 1,500 meters, respectively.

3.2.2 Applicable Regulations, Plans, and Standards

The Project would include stationary construction-related emissions only. Therefore, there are very few direct air quality regulations that specifically regulate the Project's air quality emission sources. The regulations that do apply, such as fugitive dust regulations and rules for portable equipment, tend to be general and allow multiple means of achieving compliance. Descriptions of the specific and general regulations that apply to the Project are provided below.

Federal Regulations

The federal Clean Air Act (CAA) of 1963 and its subsequent amendments form the basis for the nation's air pollution control effort. The USEPA is responsible for implementing most aspects of the CAA. Basic elements of the CAA include the NAAQS for major air pollutants, hazardous air pollutant standards, attainment plans, motor vehicle emission standards, stationary source emission standards, and permits.

The CAA delegates enforcement of federal standards to the states. In California, the CARB is responsible for enforcing air pollution regulations. In the northern SSAB, the SCAQMD has this responsibility.

General Conformity

Per Section 176(c) of the Clean Air Act Amendments (CAAA) of 1990, the alternatives "conform" with the State Implementation Plan based on the General Conformity requirements (40 CFR Part 93 et seq; March 2010). Conformity is applicable in areas that are in non-attainment of the NAAQS. Conformity is defined as compliance with the State Implementation Plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards, and that the activities will not:

- Cause or contribute to any new violation of any standard,
- Interfere with provisions in the applicable State Implementation Plan for maintenance of any standard,
- Increase the frequency or severity of any violation of any standard in any area; or
- Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

However, if the total direct and indirect emissions from the recommended Project alternative are below the General Conformity Rule applicability emission trigger levels, and where no "regionally significant" emissions would occur, the Project would be exempt from performing a comprehensive Air Quality Conformity Analysis and Determination, and would be considered to be in conformity with the State Implementation Plan. A "regionally significant" action would occur only where the direct and indirect emissions of any pollutant represent ten percent or more of a non-attainment area's emissions inventory for that pollutant (See 40 CFR §93.152). If an Air Quality Conformity Analysis and Determination is necessary, it must be certified prior to the Project's Record of Decision (ROD).

The Project area is classified as severe non-attainment of the federal ozone ambient air quality standard and moderate non-attainment of the federal PM10 ambient air quality standard. The general conformity

emissions applicability thresholds for these non-attainment classifications are 25 tons per year of ozone precursor emissions (NOx and VOCs), and 100 tons per year of PM10 emissions.

Emission Standards for Non-Road Diesel Engines

The USEPA has established a series of cleaner emission standards for new off-road diesel engines culminating in the Tier 4 Final Rule of June 2004. The Tier 1, Tier 2, Tier 3, and Tier 4 standards require compliance with progressively more stringent emission standards. Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in from 2001 to 2006, and the Tier 3 standards were phased in from 2006 to 2008.

The Tier 4 standards complement the latest 2007 and later on-road, heavy-duty engine standards by requiring 90 percent reductions in diesel particulate matter (DPM) and NO_x when compared against current emission levels. The Tier 4 standards are currently being phased in, starting with smaller engines in 2008 until all but the very largest diesel engines meet NO_x and PM standards in 2015.

State Regulations

California Clean Air Act

In California, the CARB is designated as the responsible agency for all air quality regulations. The CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for implementing the requirements of the federal CAA, regulating emissions from motor vehicles and consumer products, and implementing the California Clean Air Act of 1988 (CCAA). The CCAA outlines a program to attain the CAAQS for ozone, NO_2, SO_2, and CO by the earliest practical date. Since the CAAQS are often more stringent than the NAAQS, attainment of the CAAQS will require more emission reductions than what is required to demonstrate attainment of the NAAQS. Similar to the federal requirements, the State requirements and compliance dates are based on the severity of the ambient air quality standard violation within a region. Additional information regarding the CAAQS standards that are relevant to the Project is provided Section 3.2.1.

Local Regulations

As previously noted, the Project is located within SCAQMD jurisdiction, and the SCAQMD is responsible for planning, implementing, and enforcing federal and State ambient standards within this portion of the SSAB. The regulations of this agency are primarily focused on stationary emission sources; therefore, most of the local agency regulations are not relevant to this Project.

The SCAQMD has regulations for visible emissions, nuisance emissions, and fugitive dust emissions with which the Project's construction will need to comply. The specific regulations are as follows:

- SCAQMD Rule 401 – Visible Emissions,
- SCAQMD Rule 402 – Nuisance,
- SCAQMD Rule 403 – Fugitive Dust, and
- SCAQMD Rule 403.1 – Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources.

These rules limit the visible dust emissions from construction sites, prohibit emissions that can cause a public nuisance, and require the prevention and reduction of fugitive dust emissions to the extent possible.

3.2.3 CEQA Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, air quality impacts would be considered significant if the proposed Project would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a 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).
- Expose sensitive receptors to substantial pollutant concentrations.

All other CEQA significance criteria from Appendix G for air quality have been found to have no impact (refer to Appendix A). Therefore, those items are not evaluated.

3.2.4 Environmental Impacts and Mitigation Measures

Impact AQ-1: The Project could conflict with or obstruct implementation of the applicable air quality plan.

The Project would produce limited emissions of nonattainment pollutants primarily from diesel-powered sources during temporary construction. The 2007 AQMP proposes emission reduction measures that are designed to bring the SCAB into attainment of the NAAQS and CAAQS. The attainment strategies in this plan include mobile source control measures and clean fuel programs that are enforced at the federal and State levels on engine manufacturers and petroleum refiners and retailers.

The SCAQMD adopts AQMP control measures into the SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the SCAB. The Project would comply with these regulatory requirements. Therefore, the proposed Project's emissions sources would meet or exceed the emissions control forecasts for all approved AQMP control measures.

Since the 2007 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. As a result, construction of the proposed Project would conform to the applicable AQMP.

Impact AQ-2: The Project could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

The proposed Project's air pollutant emissions would be well below the magnitude that would cause an air quality standard violation or contribute substantially to an existing or projected air quality standard violation. Please see the emissions analysis provided below under Impact AQ-3.

Impact AQ-3: The Project could result in a 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).

Air pollutant emissions from the proposed construction and operation activities were calculated using the most current SCAQMD website and USEPA emission factors and methods, then compared to the applicable SCAQMD daily thresholds for construction to determine their significance.

Construction Emissions

The Project's construction would involve surface grading for the new trailhead parking areas and adding an aggregate base. Additional access road grading would also be required at two of the trailhead locations. Construction emissions would result from the use of construction equipment and trips generated by construction workers and heavy haul trucks, and from earth-moving activities that would cause fugitive dust emissions. Construction activities would generate emissions of criteria air pollutants VOCs, NO_x, CO, PM10, PM2.5, and sulfur oxides.

It is assumed construction activities that generate air emissions are comprised of two days of construction, the first of which would remove vegetation, level the site and remove surface soils to allow the placement of a 6 inch layer of aggregate base (gravel). The second day of construction would be the application and compaction of this aggregate base at the trailheads, additional access road grading, and sign and kiosk placement activities. The specific construction equipment and material hauling required for each day would be as follows:

First Day of Construction

- D7 Dozer, 305 hp – 6 hours of operation
- Loader, 145 hp – 6 hour of operation
- Grader, 140 hp – 4 hours of operation
- 9 truckloads of excavated soil would be exported
- One on-road water truck would be used water site and access roads
- CalEEMod default employee trips
- All trip distances increased to 30 miles due to remoteness of Project sites

Second Day of Construction

- Grader, 140 hp – 8 hours of operation (half of time would be for grading access road)
- Roller Compactor, 80 hp – 4 hours of operation
- Loader, 145 hp – 4 hours of operation
- Backhoe, 97 hp – 6 hours of operation
- 9 truckloads of aggregate would be imported
- One on-road water truck would be used to water site and access roads

- CalEEMod default employee trips
- All trip distances increased to 30 miles due to remoteness of Project sites

No construction equipment or vehicle emissions mitigation was assumed in the emissions estimate, which was performed using CalEEMod assuming construction in spring of 2016. Fugitive dust emissions reduction measures, in the form of watering the site and unpaved access roads and reduced vehicle speeds on unpaved roads, was assumed to comply with SCAQMD Rule 403.1. Table 3.2-5 provides the maximum daily emission estimates for construction of the Project.

Table 3.2-5. Maximum Daily Construction Emissions (lbs/day)

	VOC	CO	NO_x	SO_x	PM10	PM2.5
First Day of Construction	1.75	12.69	20.61	0.02	10.46	1.83
Second Day of Construction	1.80	12.65	18.29	0.02	10.52	2.12
SCAQMD Regional Significance Thresholds	75	550	100	150	150	55
Exceed Thresholds?	NO	NO	NO	NO	NO	NO

Source: AEG, 2015; SCAQMD 2015a and 2015b

As shown in Table 3.2-5, construction of the Project would not result in emissions of criteria pollutants that exceed regional emissions significance thresholds established by the SCAQMD.

Operational Emissions

The Project does not include any permanent stationary emission sources. With respect to mobile operations-related emissions, vehicles accessing the proposed trails are expected to come from within the local area. These recreationalists are assumed to already make vehicle trips to access similar designated or undesignated trails in the area. Therefore, any new trips to the proposed facilities are considered to offset existing trips. No new mobile emissions would occur from recreationists accessing the new trailheads. A small amount of routine trail maintenance would be performed with hand tools which would require occasional vehicle access to the trailheads, but no major maintenance events that would require off-road construction equipment would be regularly scheduled. Therefore, normal operation emissions would be negligible.

General Conformity

For the Project area, the federal non-attainment pollutants are ozone and PM10. Therefore, only the general conformity limits related to ozone precursor (NO_x and VOC) and PM10 emissions are evaluated. The Project would require only a couple of days of construction work at each trailhead, where the Project total emissions can be evaluated by conservatively assuming the worst case emissions presented above in Table 3.2-5 would occur for each of the three trailheads. As can be seen those emissions would be well below the General Conformity applicability thresholds, so additional Project analysis for General Conformity is not required.

Impact AQ-4: The Project could expose sensitive receptors to substantial pollutant concentrations.

A review of satellite imagery shows the nearest sensitive receptors to most of the work areas are a few scattered residential homes. The trailhead with the closest residences is the Golf Center Parkway Trailhead where a residential development is located more than 50 meters from that trailhead. Residences are located over 200 meters from the Corkill Road Trailhead and more than 1,500 meters

from the Pushawalla Trailhead. SCAQMD evaluates substantial pollutant concentrations of criteria pollutants (specifically NO_x, CO, PM10, and PM2.5) by assessing the localized maximum daily Project emissions against Localized Significance Thresholds (LSTs) that they have developed for different Source Receptor Areas (SRAs) within their jurisdiction. This Project is within SRA 30 – Coachella Valley. The LST thresholds for NO_x and CO emission are higher than the regional thresholds, and the Project would not exceed those regional thresholds so the NO_x and CO LST thresholds would not be exceeded and are not evaluated further. Table 3.2-6 presents the maximum daily onsite emissions of PM10 and PM2.5 compared to their LST thresholds.

Table 3.2-6. Maximum Daily Onsite Construction Emissions (lbs/day)

	PM10	PM2.5
First Day of Construction	0.85	0.75
Second Day of Construction	1.08	0.93
SCAQMD LST Significance Thresholds	13	5
Exceed Thresholds?	NO	NO

Source: AEG, 2015; SCAQMD 2015a and 2015b

Notes: The Project is located in SCAQMD LST Source Receptor Area Zone 30 and assumes a one-acre disturbance area with the nearest residential areas being 50 meters away.

As Table 3.2-6 shows, the calculated on-site emissions of PM10 and PM2.5 are below the appropriate SCAQMD LSTs. In fact, the total calculated on-site and off-site emissions as shown in Table 3.2-5 are below the PM10 and PM2.5 SCAQMD LSTs.

Due to the very short duration of construction emissions, and the limited amount of fugitive dust and diesel particulate matter emissions, the only air toxics emissions source of note from the Project, there is a low potential for fugitive dust (including valley fever spores) or DPM emissions to impact sensitive receptors during construction. DPM emissions are not of a magnitude and duration to create significant air toxic risks to the nearest receptors.

3.2.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact AQ-1**: The proposed Project would not conflict with or obstruct implementation of any applicable air quality plans. Less than significant impacts would occur (Class III).
- **Impact AQ-2:** The proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Less than significant impacts would occur (Class III).
- **Impact AQ-3**: The proposed Project would not exceed regional or localized emissions significance thresholds established by the SCAQMD or result in a 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. Less than significant impacts would occur (Class III).

- **Impact AQ-4**: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Less than significant impacts would occur (Class III).

3.2.6 Alternatives Analysis

3.2.6.1 Alternative 1 - Pushawalla

This alternative would have marginally reduced total direct air pollutant emissions in comparison with the proposed Project. Additionally, the Pushawalla Trailhead is located over 1.5 kilometers (1 mile) from residences, much farther than the other two trailheads, so the localized impacts would be reduced. However the worst-case daily regional emissions impacts would be the same.

3.2.6.2 Alternative 2 – Pushawalla and East Indio Hills

This alternative would have marginally reduced total direct air pollutant emissions in comparison with the proposed Project. However the worst-case daily regional and localized emissions impacts would be the same.

3.2.6.3 Alternative 3 – No Action

This alternative would have no direct air pollutant emissions or associated regional or localized impacts.

3.2.7 Cumulative Analysis

The proposed Project's emissions are well below SCAQMD significance thresholds and the Project sites are fairly remote, so the proposed Project is not expected to create or substantially contribute to cumulatively considerable air quality impacts.

3.3 Greenhouse Gas Emissions

3.3.1 Environmental Setting

Greenhouse gases are gases that trap heat in the atmosphere and are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include CO_2, methane (CH_4), and nitrous oxide (N_2O). The accumulation of GHGs in the atmosphere regulates the earth's temperature. GHGs have varying amounts of global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. By convention, CO_2 is assigned a GWP of 1. In comparison, CH_4 has a GWP of 25, which means that it has a global warming effect 25 times greater than CO_2 on an equal-mass basis. To account for their GWP, GHG emissions are often reported as CO_2e (CO_2 equivalent). The CO_2e for a source is calculated by multiplying each GHG emission by its GWP, and then adding the results together to produce a single, combined emission rate representing all GHGs.

3.3.2 Applicable Regulations, Plans, and Standards

Federal Regulations

Department of the Interior (DOI), Bureau of Land Management

The Secretary of the Interior published Order No. 3289, *Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources*, in 2009. This order establishes a Climate Change Response Council to implement Department-specific climate change activities, and established the DOI Carbon Storage Project and DOI Carbon Footprint Project. Additionally, the BLM prepared a presentation for Incorporating Climate Change into BLM Planning and NEPA Processes in 2009 (BLM, 2009a). This presentation provides informal guidance regarding:

- Climate change science and impacts,
- Incorporating climate change science into the NEPA framework, and
- Climate change and NEPA.

The information provided in this section has been designed to follow the NEPA process guidance recommendations provided in this presentation.

State Regulations

California is one of several states that have set GHG emission targets. Executive Order S-3-05 and AB 32, the California Global Warming Solutions Act of 2006, promulgated targets to achieve reductions in GHG to 1990 GHG levels by the year 2020. This target-setting approach allows progress to be made in addressing climate change, and is a forerunner to setting emission limits.

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency, consistent with the provisions in Section 15064. Section 15064.4 further provides that a lead agency should make a good-faith effort, to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. Use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

2. Rely on a qualitative analysis or performance-based standards.

Section 15064.4 also advises a lead agency to consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

3.3.3 CEQA Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, GHG impacts would be considered significant if the proposed Project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

3.3.4 Environmental Impacts and Mitigation Measures

Impact GHG-1: The Project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The proposed Project would generate GHG emissions through construction activities. The Project would also create a small amount of indirect GHG emissions from water use (dust suppression), but there is no incremental electricity use associated with this Project. Operation and maintenance of the proposed Project would not include any activities that generate significant amounts of GHG emissions.

The SCAQMD has established a GHG significance threshold of 10,000 tons per year, with project construction emissions to be amortized over the project life (SCAQMD, 2015c). The Project's operation emissions are not known and may or may not cause an increase in GHG emissions due to additional use of the trailheads, or actually decrease GHG emission due to those using these facilities not traveling to more distant trailheads without these improvements to trailhead access and parking. Regardless, these facilities are not expected to cause a large change to existing GHG emissions from trailhead use in the area. The GHG emissions from construction, conservatively estimated to be a total of 7 metric tons of CO_2e for the construction of all three trailhead locations (AEG, 2015), when amortized over the 30-year life of the Project would be a little over 0.2 metric tons per year, which is a very small fraction of the 10,000 metric ton per year SCAQMD significance threshold. Therefore, the Project's GHG emissions would be nominal and well below the SCAQMD significance threshold.

Impact GHG-2: The Project could conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The GHG emissions for the proposed Project, as described above, would be minimal during construction. Estimated GHG emissions from construction of the proposed Project would be well below the threshold of the federal and State mandatory reporting regulation. The proposed Project's GHG emissions would not trigger regulatory action under the federal 40 CFR Part 52 and the State Cap-and-Trade regulations, and are found to be consistent with all applicable plans, policies, and regulations identified in Section 3.2.2.

3.3.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact GHG-1**: The proposed Project would not generate GHG emissions, either directly or indirectly, that would exceed significance thresholds and may have a significant impact on the environment. Less than significant impacts would occur (Class III).
- **Impact GHG-2**: The proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Less than significant impacts would occur (Class III).

3.3.6 Alternatives Analysis

3.3.6.1 Alternative 1 - Pushawalla

This alternative would have marginally reduced direct GHG emissions in comparison with the proposed Project, which itself would have nominal direct GHG emissions.

3.3.6.2 Alternative 2 – Pushawalla and East Indio Hills

This alternative would have marginally reduced direct GHG emissions in comparison with the proposed Project, which would have nominal direct GHG emissions.

3.3.6.3 Alternative 3 – No Action

This alternative would have no direct GHG emissions in comparison with the proposed Project, which would have minimal direct GHG emissions.

3.3.7 Cumulative Analysis

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

3.4 Biological Resources

3.4.1 Environmental Setting

3.4.1.1 Methods

Available literature was reviewed to identify special-status plants, wildlife, and vegetation communities known from the vicinity of each proposed trail and trailhead. Data reviewed during the literature review includes information provided by the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) and the U.S. Fish and Wildlife Service (USFWS). These materials included searches of the California Natural Diversity Database (CNDDB; CDFW, 2015) for the following USGS 7½-minute topographic quads: Cathedral City, Desert Hot Springs, East Deception Canyon, Indio, Keys View, La Quinta, Malapai Hill, Myoma, Palm Springs, Rockhouse Canyon, Seven Palms Valley, Thermal, and West Berdoo Canyon (Attachment 4). The California Native Plant Society (CNPS) *On-line*

Electronic Inventory (CNPS, 2015) was also reviewed for the same quads. Additional data sources included the Consortium of California Herbaria data (CCH, 2015) and the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP; CVAG, 2007).

Rainfall over the past two years has been below average in the Coachella Valley. The average annual rain fall for the Coachella Valley is approximately 6 inches per year (Dawson and Belitz, 2012). Precipitation recorded at the Chino Canyon weather station (Station No. KCAPALMS10) from April 16, 2014 through April 16, 2015 at the station was 1.96 inches (WUI, 2015).

Several special-status species identified from the region during the literature review occur only in specialized native habitats that are absent from the proposed trails, or occur at higher elevations than the Project sites. These plants and animals are listed in Table 1 of Appendix B, but are not addressed further in this report because they do not have the potential to occur in the Project area. Table 3.4-1 lists all special-status plant and wildlife species known from habitats within the region comparable to those at each proposed trail and trailhead. Table 3.4-1 also summarizes the habitat, distribution, conservation status, and probability of occurrence on the sites for these species.

On March 24, 26, and 31, 2015 biologists Justin Wood and Rosina Goodman of Aspen Environmental Group surveyed the trails and trailheads. The route for the East Indio Hills Trail was modified slightly after the completion of spring surveys, and Aspen biologists Justin Wood and Jennifer Lancaster conducted a reconnaissance survey of the new route segment on August 27, 2015. During the surveys, the biologists mapped all special-status plant and wildlife locations they observed with GPS units and maintained lists of all species observed. Plants, wildlife, and wildlife sign (e.g., scat, tracks, and burrows) were identified in the field using binoculars and field guides. All plant species observed were identified in the field or collected for later identification. Plants were identified using keys, descriptions, and illustrations from sources such as Baldwin et al. (2012), Baldwin et al. (2002), and other regional references. All species detected on or around the sites are listed in Table 2 of Appendix B.

The field surveys were conducted in accordance with rare plant survey guidelines recommended by BLM (2009b), CNPS (2001), and CDFW (CDFG, 2009). The field surveys were “floristic in nature” (i.e., designed to find and identify all plants on the site, regardless of conservation status). The field surveys were “full coverage” and were completed within the documented flowering season for most special-status plants of the area (Table 3.4-1). However, due to poor rainfall, some plants may have been undetectable during spring 2015, as noted in Table 3.4-1 and the Results section below. A Coachella Valley milk-vetch reference location was visited by Senior Aspen Biologist Scott White in late February 2015 and plants were present.

During the survey, a burrowing owl habitat assessment was conducted in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012) was completed. All suitable owl burrows, owl sign (tracks, molted feathers, pellets, white wash, and possible owl perches), and live owls were mapped. A focused burrowing owl survey was not completed due to the nature of the proposed Project (recreational trails) and minimal amount of ground disturbance (CDFG, 2012).

The CVMSHCP (CVAG, 2007) names and describes natural communities that are present throughout the plan area. Vegetation mapping for this Project was based on the CVMSHCP natural communities.

3.4.1.2 Results

Vegetation and Habitat

Five vegetation types are mapped within the Project areas (Figures 3-1, 3-2, and 3-3) and are described in the following paragraphs. The vegetation maps provided with this report conform to the maps provided by the CVMSHCP for all trails.

Sonoran Creosote Bush Scrub. This natural community is the most widespread in the Colorado Desert and is the dominant community for each Project trail. Sonoran creosote bush scrub is characterized by its dominant species creosote bush (*Larrea tridentata*) and develops best on coarse, well-drained soils. At the Corkill Trail and Trailhead, this community occupied the majority of the site including rocky areas with white bur-sage (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), white rhatany (*Krameria bicolor*), and numerous other annuals. At the East Indio Hills Trail, the sandy flats were dominated by creosote bush, and in the washes smoke tree (*Psorothamnus spinosus*), indigo bush *(Psorothamnus schottii*), cheesebush (*Ambrosia salsola*), and creosote bush were present. The rocky hillsides of the trail were sparsely vegetated with creosote bush and brittlebush. Sonoran creosote bush scrub was also present on the southern trail end and trailhead for the Pushawalla Trail. These areas were dominated by creosote bush, desert lavender (*Hyptis emoryi*), and various cacti (*Opunitia* sp.).

Sonoran Mixed Woody and Succulent Scrub. Sonoran mixed woody and succulent scrub is located on the western edge of the Corkill Trail and Trailhead. This natural community is similar in composition to Sonoran creosote bush scrub but is more varied, with a substantial proportion of cacti and other stem succulents which included silver cholla (*Cylindropuntia echinocarpa*) at the Corkill Trail.

Active Sand Fields. Active sand fields are characterized by active sand movement with little to no vegetation, but not to a great enough depth to form sand dunes. This natural community is present at the Corkill Trail although the majority of the site is dominated by creosote bush scrub. In these active sand areas, species such as Sahara mustard (*Brassica tournefortii*), Coachella Valley milk-vetch (*Astragulus lentiginosus coachellae*), big galleta (*Hilaria rigida*), desert dicoria (*Dicoria canescens*), and many other annuals and perennials were present.

Stabilized Desert Sand Fields. This natural community is characterized by sand formations that lack dunes. Stabilized desert sand fields are present at the Corkill Trail at the far eastern edge. The trailhead area also contains some small inclusions of this community within the greater Sonoran mixed woody and succulent scrub mapped there. The trailhead and mapped area of the trail are dominated by allscale saltbush (*Atriplex polycarpa*) and bush seepweed (*Suaeda nigra*).

Mojave Mixed Woody Scrub. This natural community is characterized by very shallow, overly drained, and often rolling to steep soils, usually derived from granitic parent materials (CVAG, 2007). This natural community is present at the northern end of the Pushawalla Trail. Within this community are areas of broad alluvial fans that may be better classified as desert dry wash woodland. These areas are dominated by cheesebush, smoketree, and catclaw acacia (*Acacia greggii*).

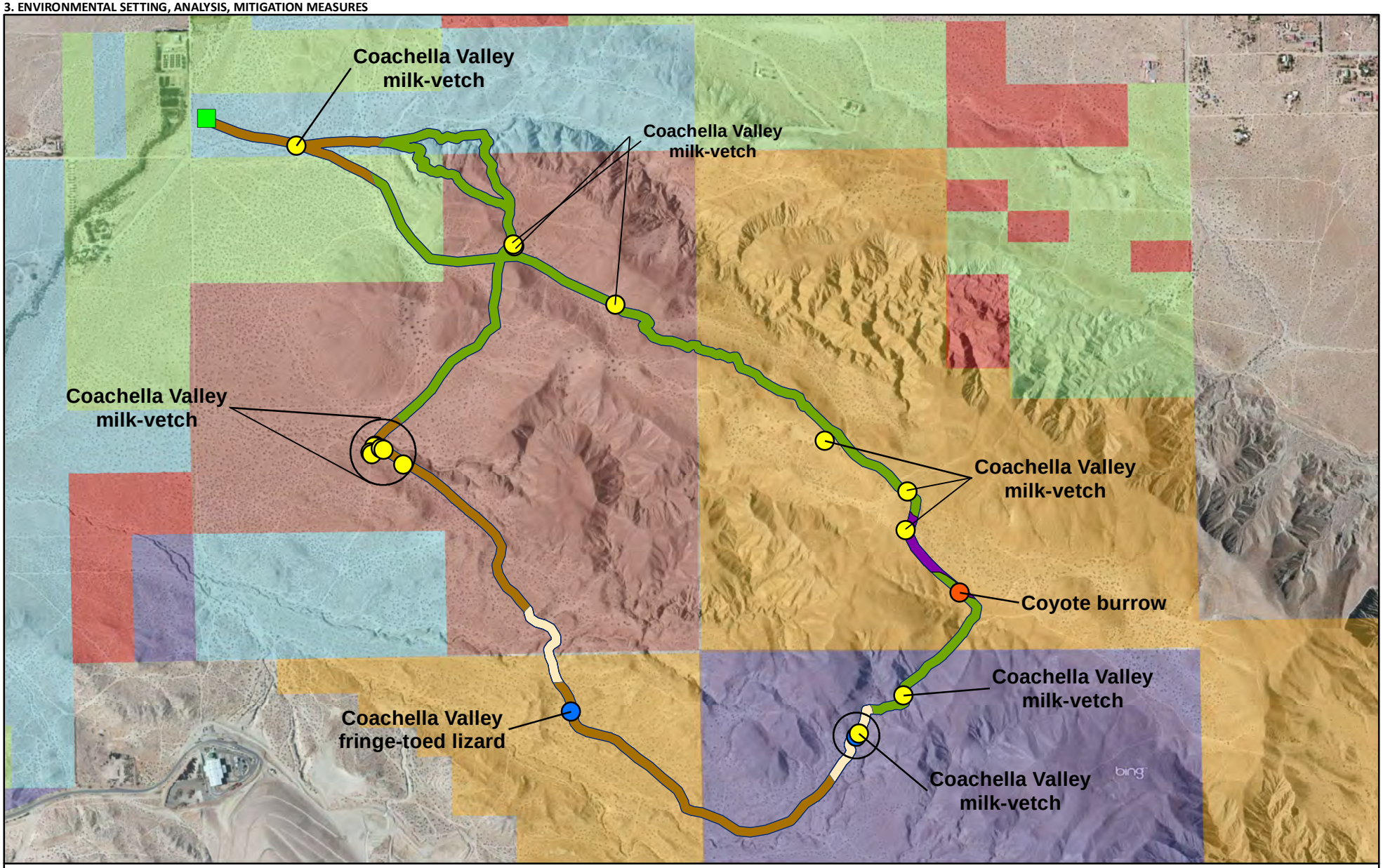


Figure 3-1

Corkill Trail Natural Communities and Biological Resources

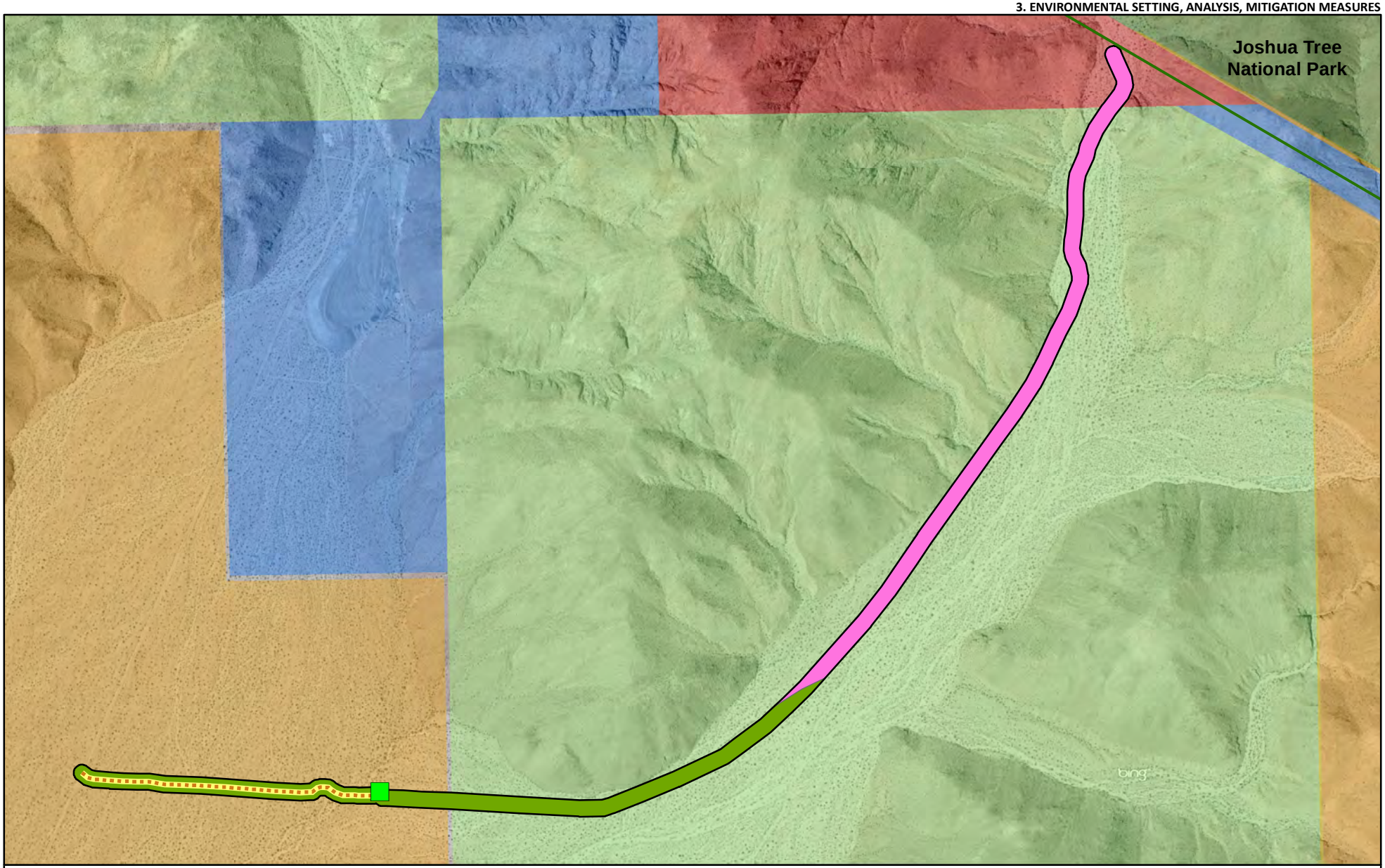


Figure 3-2

Pushawalla Trail
Natural Communities and Biological Resources

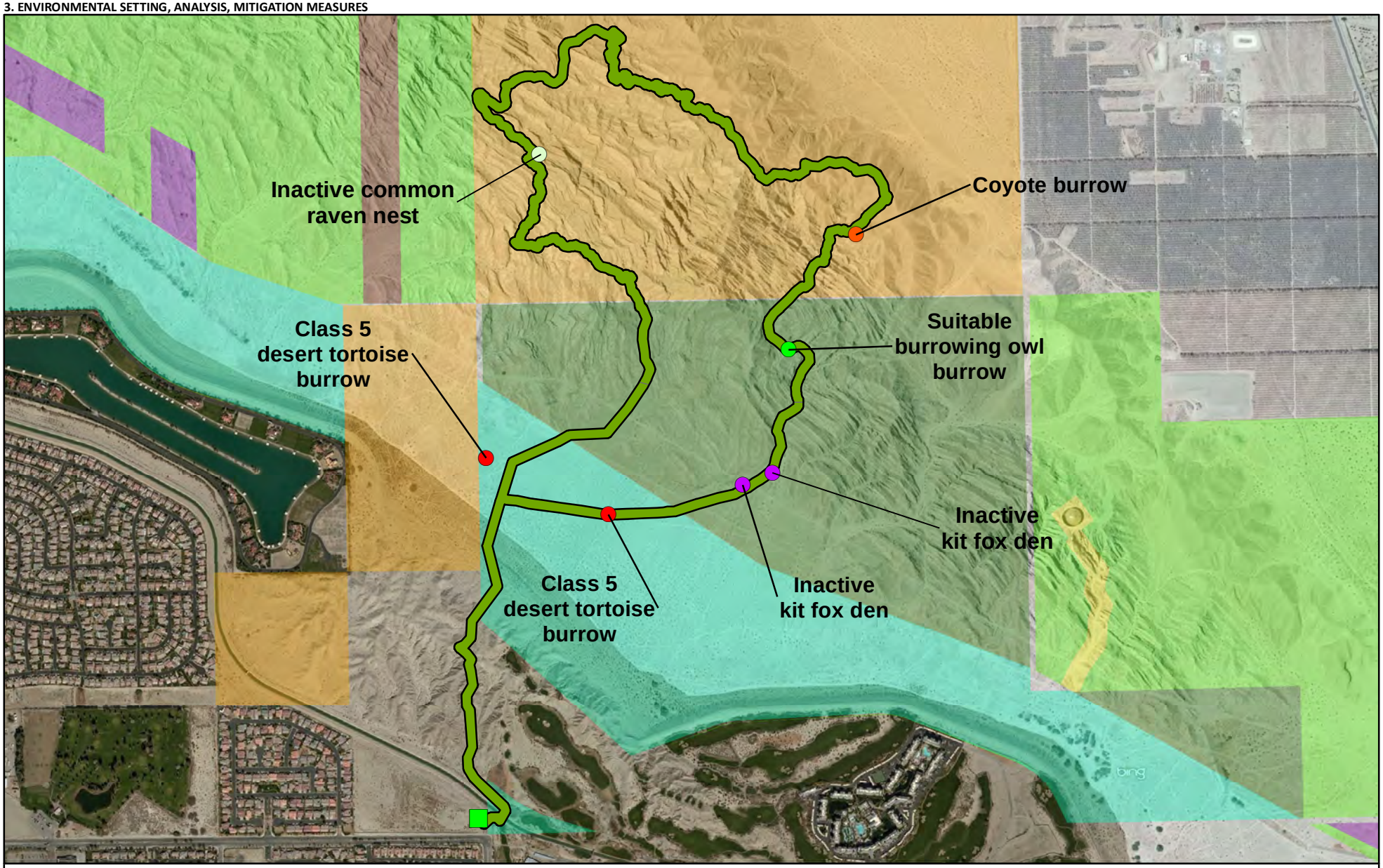


Figure 3-3

East Indio Hills Trail Natural Communities and Biological Resources

Streambeds

The proposed Corkill Trailhead site is located on the sandy bajada south of the Little San Bernardino Mountains. It is adjacent to an unnamed wash that crosses Corkill Road just to the north. During heavy summer rains in 2014, the wash flooded over its banks, leaving evidence of sheet flow near the northern portion of the proposed parking area. The sheet flow area appears to have been above the channel's normal bed and banks, and above the ordinary high water mark. However, the jurisdictional limits of the channel that may be subject to state or federal regulation under California Fish and Game Code Section 1600 or the federal Clean Water Act Sections 401 and 404 have not been delineated. In addition, each of the three trails cross numerous small washes which may meet jurisdictional criteria as waters of the state or waters of the US.

Wildlife

Wildlife and wildlife sign observed during the field surveys included species common in the open, xeric desert environment, such as common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), and coyote (*Canis latrans*). During each trail visit several special-status species were observed and are addressed below. Other wildlife species common in desert shrublands throughout the region are also likely to occur at each proposed trail, but were not observed during field work reported here. These include secretive reptiles, burrowing mammals, and uncommon wide-ranging species such as badger and golden eagle. Table 2 of Appendix B lists all species observed or detected at each proposed trail and trailhead.

Special-Status Species

Plants or wildlife may be ranked as special-status species due to declining populations, vulnerability to habitat change, or restricted distributions. Certain species have been listed as threatened or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). Others have not been listed, but declining populations or habitat availability cause concern for their long-term viability. These species appear on lists compiled by resource agencies or private conservation organizations. In this report, "special-status species" is used to include all plants and wildlife listed as threatened or endangered or included in other compilations. All special-status plants and wildlife occurring in the region in habitats similar to those found at the proposed trails are addressed in Table 3.4-1, with brief descriptions of habitat and distribution, conservation status, and probability of occurrence at each proposed trail.

One federally listed endangered plant, Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) was observed at the Corkill Trail. No other state or federally listed plants were observed or are likely to occur on any proposed trail. This conclusion is based on habitat and geographic and elevation range, rather than on the survey, due to very low rainfall in spring 2015. Several other BLM sensitive or other special-status plants have a low to high potential for occurrence at the proposed trails and are listed in Table 3.4-1. Two listed threatened or endangered animals may occur on the proposed trails: Coachella Valley fringe-toed lizard (*Uma inornata*) and desert tortoise (*Gopherus agassizii*). The Coachella Valley fringe-toed lizard was observed on the Corkill Trail. Coachella Valley fringe-toed lizard and desert tortoise are covered species under the CVMSHCP.

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
			PLANTS			
Abronia villosa var. *aurita* Chaparral sand-verbena	Annual or perennial herb; sand, about 250-5300 ft. elev.; San Jacinto Mtns, Inland Empire, adj. Colorado Des, Orange & San Diego cos; mostly alluvial fans and benches in w Riverside Co; dunes in deserts.	Jan–Sep	Fed: none BLM: Sensitive CA: S2 CRPR: 1B.1 MSHCP: none	High; Likely to be present in years with average rainfall.	Minimal; no suitable habitat present.	Minimal; no suitable habitat present.
Ambrosia monogyra Singlewhorl burrobrush	Shrub or small tree; desert and inland cismontane flats, washes, alluvial fans; below about 1700 ft. elev.; San Bernardino Valley; San Diego Co., east to Texas and mainland Mexico.	Aug–Nov	Fed: none BLM: none CA: S2 CRPR: 2B.2 MSHCP: none	Minimal at all three sites; some suitable habitat; known from one historic record in Palm Springs, likely extirpated.		
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch	Annual/perennial herb; desert dunes, Sonoran desert scrub; sandy areas; from 130 to 2200 ft. elev.	Feb–May	Fed: END BLM: none CA: S1 CRPR: 1B.2 MSHCP: covered	Present; numerous plants observed throughout the site.	Minimal; no suitable habitat present.	Low; minimal suitable habitat present; not observed, no recent records from vicinity.
Astragalus sabulonum Gravel milk-vetch	Annual/perennial herb; desert dunes, Mojave desert scrub, Sonoran desert scrub; sandy sometimes gravelly flats, washes and roadsides; from 190 to 3000 ft. elev.	Feb - Jun	Fed: none BLM: none CA: S2 CRPR: 2B.2 MSHCP: none	Minimal; well west of geographic range.	Minimal; well west of geographic range.	Low; five miles northwest of nearest historic population, suitable habitat present, not observed.
Astragalus tricarinatus Triple-ribbed milk-vetch	Perennial herb; exposed rocky slopes, canyon walls, alluvial fans; Whitewater Canyon, Mission Creek, and Morongo Canyon areas; ±1500 to 5000 ft. elev.	Feb–May	Fed: END BLM: none CA: S1 CRPR: 1B.2 MSHCP: covered	Low; Minimal suitable habitat present, outside of geographic range, no chance for wash-down waifs.	Moderate; Marginally suitable habitat present, known from hills to the north, potential for wash-down waif.	Low; Minimal suitable habitat present, outside of geographic range, no chance for wash-down waifs.
Chamaesyce abramsiana Abrams' spurge	Annual; sandy flats, found in silty clay soils; about sea level to 3,000 ft. elev.;	n/a	Fed: none BLM: none CA: S2 CRPR: 2B.2 MSHCP: none	Minimal; No suitable silty clay soils, no recent observations in Project vicinity		

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
Chamaesyce arizonica Arizona spurge	Perennial herb; sandy flats; Borrego & Coachella Valleys are only Calif. sites; S and E to Texas, mainland Mexico, central Baja; from 160 to 1000 ft. elev.	Mar–Apr	Fed: none BLM: none CA: S2 CRPR: 2B.3 MSHCP: none	Moderate; suitable sandy habitat is present, may be present during years of higher rainfall.	Minimal; No suitable habitat is present.	Moderate; suitable sandy habitat is present, may be present during years of higher rainfall.
Chamaesyce platysperma Flat-seeded spurge	Annual herb; desert dunes, Sonoran desert scrub; sandy areas; from about 210 to 350 ft. elev.	Feb–Sep	Fed: none BLM: Sensitive CA: S1 CRPR: 1B.2 MSHCP: none	Moderate; suitable sandy habitat is present, this species maybe be present during years with higher rainfall.	Minimal; No suitable habitat is present.	Moderate; suitable sandy habitat is present, this species maybe be present during years with higher rainfall.
Ditaxis claryana Glandular ditaxis	Perennial herb. Conflicting info. in literature. Sandy soils below about 350 ft. elev.; or rocky uplands & sandy washes to 3000 ft.; widely scattered, Sonoran Desert, Calif. to Ariz. and mainland Mexico.	Oct-Mar	Fed: none BLM: none CA: S1 CRPR: 2B.2 MSHCP: none	Minimal; outside of geographic range, no recent observations in Project vicinity	Minimal; outside of geographic range, no recent observations in Project vicinity	Low; no recent observations in Project vicinity, historically found in vicinity of Indio, not observed during surveys.
Imperata brevifolia California satintail	Perennial rhizomatous herb; meadows, seeps, and riparian scrub within arid shrublands; about 0 – 3900 ft. elev.	Sep - May	Fed: none BLM: Sensitive CA: S2.1 CRPR: 2B.1 MSHCP: none	Minimal; No suitable habitat present.	Minimal; No suitable habitat present.	Low; margins of irrigation canal and irrigated areas at golf course may provide suitable habitat; not observed.
Linanthus maculatus (Gilia maculata) Little San Bernardino Mtns. linanthus	Annual; sandy washes or dunes in desert shrubland habitats; Joshua Tree woodlands; about 600 - 6800 ft. elev.	Mar - May	Fed: none BLM: sensitive CA: S2 CRPR: 1B.2 MSHCP: covered	Minimal; No suitable habitat present.	Low; minimal habitat present and within elevation range, not observed.	Minimal; no suitable habitat present.
Matelea parvifolia Spear-leaf matelea	Perennial herb; rocky canyon in desert scrub; about 1500 – 3500 ft. elev.	Mar - May	Fed: none BLM: none CA: S3 CRPR: 2B.3 MSHCP: none	Minimal; No suitable rocky canyon habitat, well outside of geographic range.	Minimal; no suitable rocky canyon habitat, well below the elevation range.	Low: suitable habitat present, nearest occurrence roughly 5 miles, not observed.

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
Mentzelia tricuspis Spiny-hair blazing star	Annual; sandy or gravelly soil, slopes and washes, Mojavean desert scrub; 500-4200 ft. elev.; desert mts, east Sonoran Desert, to Utah, Arizona.	Mar–May	Fed: none BLM: none CA: S2 CRPR: 2B.1 MSHCP: none	Low; marginally suitable habitat, not observed during surveys, nearest known populations more than 10 miles from Project area.		
Nemacaulis denudata var. *gracilis* Slender cottonheads	Annual herb; coastal dunes, desert dunes, Sonoran desert scrub; about 160-1300 ft. elev.	Apr–May	Fed: none BLM: none CA: S2 CRPR: 2B.2 MSHCP: none	Moderate; suitable habitat present; likely present in good rainfall years.	Minimal; no suitable habitat present.	Minimal; no suitable habitat present.
Selaginella eremophila Desert spike-moss	Perennial herb; mountainous or hillside rock outcrops and crevices, about 600 - 3000 ft. elev.; lower desert-facing slopes of San Jacinto Mtns and adj. desert, to Texas and Baja	n/a	Fed: none BLM: none CA: S2S3 CRPR:2B.2 MSHCP: none	Minimal; no suitable habitat present.	Moderate; suitable habitat present, likely to be present in good rainfall years.	Minimal; no suitable habitat present.
Xylorhiza cognata Mecca-aster	Perennial herb; creosote bush scrub on slopes and bottoms of deep ravines in clay, rocky sand, and gravel;, mostly known from Indio Hills and Mecca Hills; about 65 – 1300 ft. elev.	Jan-Jun	Fed: none BLM: none CA: S2 CRPR: 1B.2 MSHCP: covered	Minimal; no suitable habitat.	Moderate; suitable habitat present, likely present in good rainfall years.	Moderate; suitable habitat present, possibly present in the area in good rainfall years.
			INVERTEBRATES			
Macrobaenetes valgum Coachella giant sand treader cricket	Active dunes and windblown sand; apparently absent from stabilized sand; nocturnal; endemic to Coachella Valley area.	Spring	Fed: none BLM: none CA: S1S2 MSHCP: covered	High; suitable habitat present; known from the Project vicinity; likely to be present.	Minimal; no suitable habitat present.	Minimal; no suitable habitat present.
Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	Dunes, stabilized sand, sometimes gravelly sand or vacant lots with remnant native plants; endemic to western Coachella Valley area; active mostly nocturnally or during wet conditions after rains.	Year-around (when humid or moist)	Fed: none BLM: none CA: S1S2 MSHCP: covered	Moderate; suitable habitat present; not known from the Project vicinity.	Minimal; minimal suitable habitat present.	Low; some suitable habitat present at trailhead.

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
			REPTILES			
Gopherus agassizii (Xerobates agassizi) Mojave Desert tortoise	Colorado River west through California and Nevada; desert shrublands where soil is suitable for burrows.	Spring - summer	Fed: THR BLM: none CA: THR, S2 MSHCP: covered	Low; poorly suitable habitat; no sign observed during surveys; very low densities in vicinity.	Moderate; some suitable habitat, no sign observed during surveys, very low densities in vicinity.	Moderate; some suitable habitat present, potential burrows were observed, very low densities in vicinity
Phrynosoma mcallii Flat-tailed horned lizard	Sandy desert washes, flats, and dunes; Coachella Valley southward to N Baja Calif.	Spring-summer	Fed: none BLM: Sensitive CA: Candidate, S2 MSHCP: covered	Low; suitable habitat present but local occurrence apparently extirpated.	Minimal; no suitable habitat present.	Minimal; marginally suitable habitat.
Uma inornata Coachella Valley fringe-toed lizard	Sand, especially dunes, sandy hummocks, washes, stabilized sand flats; southern Colorado Desert, endemic to the Coachella Valley.	Warm season	Fed: THR BLM: none CA: END, S1 MSHCP: covered	Present; numerous individuals observed throughout much of the site.	Minimal; no suitable habitat.	Minimal; no suitable habitat.
			BIRDS			
Aquila chrysaetos Golden eagle	Nests in remote trees and cliffs; forages over shrublands and grass-lands; breeds throughout W N America, winters to E coast.	Year-around	Fed: BGEPA BLM: Sensitive CA: FP, S3 MSHCP: none	Moderate (foraging); Minimal (nesting), no nesting habitat present.		
Athene cunicularia Burrowing owl	Nests mainly in rodent burrows, usually in open grassland or shrubland; forages in open habitat; increasingly uncommon in S Calif.; through W US and Mexico.	Year-around	Fed: none BLM: Sensitive CA: SC, S3 MSHCP: covered	Moderate; suitable foraging and nesting habitat present.		
Falco mexicanus Prairie falcon	Nests on high cliffs, forages primarily over open lands; occurs throughout arid western US and Mexico.	Year-around	Fed: none BLM: none CA: WL, S4 MSHCP: none	High (Foraging): suitable foraging habitat present. Moderate (Nesting): nesting habitat present in the vicinity of Pushawalla and East Indio Hills trails only.		
Lanius ludovicianus Loggerhead shrike	Woodlands, shrublands, open areas with scattered perch sites; widespread in N America; valley floors to about 7000 ft. elev.	Year-around	Fed: none BLM: none CA: SC S4 MSHCP: none	High; suitable foraging and nesting habitat present. One individual observed at East Indio Hills Trail.		

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
Polioptila melanura Black-tailed gnatcatcher	Desert shrublands, gen. nests in shrub thickets along washes; occas. in open scrub (esp. in winter); Calif. Deserts, to W Texas, Baja, and central Mexico.	Year-around	Fed: none BLM: none CA: S3S4 MSHCP: none	Present; suitable nesting and foraging habitat present.	Present; suitable nesting and foraging habitat present, one individual observed.	Moderate; (foraging) Low; (nesting)
Pyrocephalus rubinus Vermilion flycatcher	Desert riparian woodlands and shrublands; SE Calif., east through S Texas, and S through Mexico; winters in Mexico.	Spring - summer	Fed: none BLM: none CA: S2S3 MSHCP: none	Moderate; (foraging) Low (Nesting);	Minimal; no riparian habitat present.	Minimal; no riparian habitat present.
Toxostoma bendirei Bendire's thrasher	Joshua tree woodland, desert scrub; high cactus cover; mainly E Mojave Des in Calif. (scarce in W Mojave); American SW and mainl. Mexico; winters in S Arizona, New Mexico, and mainl. Mexico.	Spring - summer	Fed: none BLM:sensitive CA: S3 MSHCP: none	Minimal; no suitable foraging or nesting habitat present.		
Toxostoma crissale Crissal thrasher	Nests in dense brushy thickets of mesquite or other desert riparian shrubs; foraging in surrounding area; E Calif. To Texas, W mainland Mexico.	Year – around	Fed ESA: none BLM: none CA: SC, S3 MSHCP: covered	Low(Foraging); no suitable nesting habitat present.	Minimal; no suitable nesting or foraging habitat present.	Minimal; no suitable nesting or foraging habitat present.
Toxostoma lecontei LeConte's thrasher	Calif. Deserts, SW Central Val. & Owens Val., east to Utah, Arizona; open shrubland, often sandy or alkaline flats.	Year – around	Fed ESA: none BLM: none CA: SC, S3 MSHCP: covered	High; suitable habitat throughout, known from the Project vicinity.		
			MAMMALS			
Antrozous pallidus Pallid bat	Rock outcrops of shrublands, mostly below about 6000 ft. elev.; Calif, SW N Amer through interior Oregon and Washington; hibernates in winter. Have also been found in rodent burrows. Routinely forages for terrestrial invertebrates.	Warm season	Fed: none BLM: Sensitive CA: SC, S3 MSHCP: none	Moderate; suitable roosting and foraging habitat present, not observed.		

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
Chaetodipus fallax pallidus Pallid San Diego pocket mouse	Open shrublands and sandy areas; deserts and desert-facing foothills, LA Co. south to N Baja Calif.	Spring and Fall	Fed: none BLM: none CA: SC, S3S4 MSHCP: none	High; suitable habitat present, not observed.		
Corynorhinus (Plecotus) townsendii Townsend's big-eared bat	Many habitats throughout Calif. And W N America, scattered populations in E; day roosts in caves, tunnels, mines; feed primarily on moths.	Year-around	Fed: none BLM: Sensitive CA: Candidate, S2 MSHCP: none	Minimal (roosting); no caves, tunnels, or mines present. Moderate (foraging).		
Eumops perotis californicus Western mastiff bat	Lowlands (with rare exceptions); cent. and S Calif., S Ariz., NM, SW Tex., N Mexico; roost in deep rock crevices on high cliffs, forage over wide area	Year-around	Fed: none BLM: Sensitive CA: SC, S3? MSHCP: none	Minimal (roosting); no high cliffs present Moderate (foraging).		
Lasiurus xanthinus Western yellow bat	Mexico and Cent. Amer., to S AZ; Riv., Imperial and San Diego Cos.; desert riparian and wash habitats; roosts in trees; evidently migrates from Calif. During winter.	Spring-summer	Fed: none BLM: none CA: SC, S3 MSHCP: none	Minimal (roosting); no desert riparian habitats present Moderate (foraging).		
Neotoma lepida intermedia San Diego desert woodrat	Arid shrublands, esp. around rocky outctops & crevices; cismontane Calif from San Luis Obispo to San Diego Co, and NW Baja Calif.	Year-around	Fed: none BLM: none CA: SC, S3S4 MSHCP: none	High; likely to be present, no middens observed.	Present; middens observed along trail.	High; likely to be present, no middens observed.
Nyctinomops femorosaccus Pocketed free-tailed bat	Deserts and arid lowlands, SW US, Baja Calif., mainland Mexico; Roost mainly in crevices of high cliffs; forage over water and open shrubland.	Year-around	Fed: none BLM: none CA: SC, S3 MSHCP: none	Minimal (roosting); no high cliffs present. High (foraging).		
Nyctinomops macrotis Big free-tailed bat	Roosts in crevices of rocky cliffs, scattered localities in W N. Amer. Through Cent. Amer.; ranges widely from roost sites; often forages over water.	Year-around (?)	Fed: none BLM: none CA: SC, S3 MSHCP: none	Minimal (roosting); no high cliffs present. Moderate (foraging).		

Table 3.4-1. Special-Status Species of the Coachella Valley Area

Species Name	Habitat Requirements	Activity Season	Conservation Status	Occurrence Potential		
				Corkill	Pushawalla	East Indio Hills
Ovis canadensis nelsoni Desert bighorn sheep	Open shrublands and conifer forest, remote mountains; scattered populations in desert mountains and surrounding ranges, incl. San Bernardino Mtns. To the north.	Year-around	Fed: none BLM: Sensitive CA: FP, S3 MSHCP: none	Low; site partially isolated due to Dillon road.	Moderate; some suitable habitat present, can access site from JTNP.	Low; site partially isolated due to Dillon road.
Perognathus longimembris bangsi Palm Springs pocket mouse	Desert shrubland; Coachella Valley, Joshua Tree NM, to Borrego Valley.	Year-around	Fed: none BLM: Sensitive CA: SC, S2S3 MSHCP: covered	High; suitable habitat present, likely to appear on the Project site.	Low; marginal suitable habitat, known in vicinity in small densities.	Minimal; No suitable habitat present.
Taxidea taxus American badger	Mountains, deserts, interior valleys where burrowing animals are avail as prey and soil allows digging; throughout cent and W N America.	Year-around	Fed ESA: none BLM: none CA: SC, S3 MSHCP: none	Moderate; suitable habitat present; no potential badger burrows observed.		
Vulpes macrotis Desert kit fox	Widespread, open desert lands; constructs below-ground dens; requires soil suitable for burrowing; primarily nocturnal; preys on small mammals.	Year-around	Fed: none BLM: none CA: FP MSHCP: none	Moderate: suitable habitat present, no kit fox burrow complexes observed.		
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	Wind-blown sand and stabilized sand flats in Coachella Valley lowlands.	Year-around	Fed: none BLM: Sensitive CA: SC, S1S2 MSHCP: covered	High: suitable habitat present throughout the site.	Minimal; no suitable habitat present.	Moderate; suitable habitat present, not observed.

General references (botany): Baldwin et al. 2002; Baldwin et al. 2012; CDFW 2015; CNPS 2015; CCH 2015, Sawyer et al., 2009.
General references (wildlife): American Ornithologists Union, 1998 (including supplements through 2013); Barbour and Davis 1969; Feldhammer et al., 2003; Garrett and Dunn, 1981; Hall, 1981; Jennings and Hayes, 1994; Stebbins, 2003; Wilson and Ruff, 1999.
Conservation Status

Federal designations (*Fed*): (federal ESA, USFWS).
END: Federally listed, endangered.
THR: Federally listed, threatened.
Candidate: Sufficient data are available to support federal listing, but not yet listed.
Proposed: Formally proposed for federal status shown.
BGEPA: Bald and Golden Eagle Protection Act

State designations (*CA*): (CESA, CDFW)
END: State listed, endangered.
THR: State listed, threatened.
RARE: State listed as rare (applied only to certain plants).
SC: California species of special concern. Considered vulnerable to extinction due to declining numbers, limited geographic ranges, or ongoing threats.
WL: Species that were either previously listed as SC and have not been state listed under CESA; or were previously state or federally listed and now are on neither list; or are on the list of "Fully Protected" species.

FP: Fully protected. May not be taken or possessed without permit from CDFG.

CDFW Natural Diversity Data Base Designations: Applied to special-status plants and sensitive plant communities; where correct category is uncertain, CDFG uses two categories or question marks.

S1: Fewer than 6 occurrences or fewer than 1000 individuals or less than 2000 acres.
S1.1: Very threatened
S1.2: Threatened
S1.3: No current threats known
S2: 6-20 occurrences or 1000-3000 individuals or 2000-10,000 acres (decimal suffixes same as above).
S3: 21-100 occurrences or 3000-10,000 individuals or 10,000-50,000 acres (decimal suffixes same as above).
S4: Apparently secure in California; this rank is clearly lower than S3 but factors exist to cause some concern, i.e., there is some threat or somewhat narrow habitat. No threat rank.
S5: Demonstrably secure or ineradicable in California. No threat rank.
SH: All California occurrences historical (i.e., no records in > 20 years).
SX: Presumed extirpated in California.

California Native Plant Society (CNPS) Rare Plant Rank designations (CRPR). Note: According to CNPS (http://www.cnps.org/cnps/rareplants/ranking.php), plants ranked as CRPR 1A, 1B, and 2 meet definitions as threatened or endangered and are eligible for state listing. That interpretation of the state Endangered Species Act is not in general use.

1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2A: Plants presumed extinct in California but more common elsewhere in their range.
2B: Plants rare, threatened or endangered in California but more common elsewhere in their range.
3: Plants about which we need more information; a review list.
4: Plants of limited distribution; a watch list.

California Rare Plant Rank Threat designations:

.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20-80% occurrences threatened)
.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Definitions of occurrence probability: Estimated occurrence probabilities are based on literature sources cited earlier, field surveys, and habitat analyses reported here.

Present: Observed on the site by qualified biologists.
High: Habitat is a type often utilized by the species and the site is within the known range of the species.
Moderate: Site is within the known range of the species and habitat on the site is a type occasionally used.
Low: Site is within the species' known range but habitat is rarely used, or the species was not found during focused surveys covering less than 100% of potential habitat or completed in marginal seasons.
Minimal: No suitable habitat on the site; or well outside the species' known elevational or geographic ranges; or a focused study covering 100% of all suitable habitat, completed during the appropriate season and during a year of appropriate rainfall, did not detect the species.
Unknown: No focused surveys have been performed in the region, and the species' distribution and habitat are poorly known.

Coachella Valley Milk-Vetch (*Astragalus lentiginosus* var. *coachellae*). Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) is a federally listed endangered species. It is endemic to windblown sand habitat in the Coachella Valley from Cabazon to Indio, below about 1,200 feet elevation. Occurrences reported in the Chuckwalla Valley to the east (CDFW, 2015) are a separate subspecies, speckled milk-vetch, with no special conservation status (USFWS, 2009a and 2011a). Coachella Valley milk-vetch is an annual or short-lived perennial with a deep taproot. It dies back to ground level in summer. The first leaves appear in late winter or early spring. Coachella Valley milk-vetch may flower as early as February or as late as May (Munz, 1974), depending on rainfall and temperature. In drought years, it may not come up at all. After flowering, the leaves dry and fall. The plant may be recognized for a short period in early summer by its swollen pods, but they soon mature and disperse.

Coachella Valley milk-vetch plants were found in patches throughout parts of the Corkill Trail. They were most frequently found in areas with fine wind-blown sand, mapped as active sand fields or Sonoran creosote bush scrub. A total of 32 plants were mapped within the survey area (Figure 3-1). Most of the plants observed were seedlings that appeared to have germinated in late 2014 or early 2015. Most of the 32 plants had no flowers or fruit present; however, one plant was in fruit, one plant had already

dropped its fruit, and at least three plants were in flower. During a year with average rainfall, Coachella Valley milk-vetch is likely to be much more abundant at Corkill Trail and Trailhead. Although no plants were observed at the East Indio Hills Trail, they may be present in years with at least average rainfall.

BLM Sensitive Plants. The BLM maintains a list of sensitive plant species, including species that are rare, declining, or dependent on specialized habitats (BLM, 2013). The list includes all plants ranked by CNPS and CDFW as CRPR 1B. The BLM manages sensitive species to provide protection comparable to that afforded species that may become listed as threatened or endangered (i.e., candidate species for federal listing). No BLM sensitive plants have been documented on the proposed trails, but two have some potential to occur on the Corkill Trail or Trailhead (Table 3.4-1) – chaparral sand verbena and flat-seeded spurge.

Chaparral sand verbena (*Abronia villosa* var. *aurita*) has a CRPR of 1B.2 and is a BLM sensitive species. It is closely related to the common desert sand verbena (*A. villosa* var. *villosa*), often characteristic of desert sand dunes and sandy washes throughout much of the Sonoran and Mojave Deserts. In contrast to the desert variety, chaparral sand verbena's geographic distribution is primarily on the coastal sides of southern California mountains, especially sandy river washes (e.g., the San Jacinto River wash near Hemet and sandy flats near Murrieta Creek), and in the mountains themselves, especially Garner Valley in the San Jacinto Mountains, and in the western margins of the Sonoran Desert (Murdock, 2012; CNPS, 2015; Roberts et al., 2004; White, 2013). It generally grows in sandy soils of river washes and alluvial benches, in open places within shrublands and grasslands. Chaparral sand verbena is distinguished from the common desert sand verbena by its longer flower tubes (greater than 2 cm), some details of its fruit structure, and its perennial life history (Wojciechowski and Spellenberg, 2012; Roberts et al. 2004). Its populations in the Inland Empire and the western Coachella Valley are at risk due to land use conversions and flood control projects. It does not appear to be at risk in the rest of the Coachella Valley. The Corkill Trail supports suitable habitat. During years with average to above average rainfall, there is a high potential for this species to be present throughout and it should be assumed present.

Flat-seeded spurge (*Chamaesyce platysperma*) has a CRPR of 1B.2 and is a BLM sensitive species. It has only been recorded at a few locations in the United States, one at Superstition Mountain in Imperial County, two in the Coachella Valley in Riverside County, one in Little Blair Valley in Anza Borrego State Park, and one unverified report near Old Woman Springs in San Bernardino County (Kerney and Peebles, 1951; Shreve and Wiggins, 1964; CCH, 2015; CNPS, 2015; CDFW, 2015). California references (Munz, 1974; Koutnik, 1993) describe its habitat as "sandy soil," but do not specify that it is a plant of windblown dunes. Felger (2000) found that it is abundant in shifting windblown sand in the Gran Desierto of Sonora, Mexico. The California locations represent the margin of this plant's geographic range in the southwestern deserts. Flat-seeded spurge has been collected in California in February, April, and September, but it apparently can germinate at any time of year. Most specimens have been documented in fall or winter, indicating that late-season germination, probably in response to sporadic rainfall, is more common than spring germination. It was not found during the field surveys but the sandy soil on the Corkill Trail is suitable habitat. In years with average or above average rainfall, there is a moderate potential for this species to be present.

Other Special-Status Plants. In addition to the statutes and policies described above, several public agencies and private entities maintain lists of plant species of conservation concern. The CDFW includes these in its compendium of "Special Plants." These species are treated here as special-status species.

Arizona spurge (*Chamaesyce arizonica*) has a CRPR of 2B.3 and is an herbaceous perennial known in California from the Coachella Valley and Anza Borrego areas. These sites are evidently at the northwest

margin of its geographic range. Outside California, it ranges south to Baja California, east to Texas, and southeast into Sonora (Mexico). Its habitat is described as "gravelly slopes and rocky hillsides" (Shreve and Wiggins, 1964); "rocky places . . . especially along better-vegetated arroyos or canyons and gravelly-sandy arroyo beds" (Felger, 2000); "sandy flats" (Koutnik, 1993); and "sandy" (CNPS, 2015). Arizona spurge was not found during field surveys, but suitable habitat is present on the Corkill Trail. In years with average or above average rainfall, there is a moderate potential for this species to be present.

Slender cottonheads (*Nemacaulis denudata* var. *gracilis*) is an annual that grows in sandy soils. In California, it is known from sand dunes throughout much of the desert, as well as along the coast. It is known from numerous historic collections throughout the Coachella Valley (CCH, 2015; CDFW, 2015). It was not found during the field surveys but the windblown sand on the Corkill Trail is suitable habitat. In years with average or above average rainfall, there is a moderate potential that slender cottonheads would be present.

Desert spike-moss (*Selaginella eremophila*) is a perennial herb that grows on mountainous or hillside rock outcrops and crevices, from about 600 to 3,000 feet in elevation in lower desert-facing slopes of the San Jacinto Mountain and adjacent deserts. This species was not found during the field surveys, but there is suitable habitat on the Pushawalla Trail. In years with average or above average rainfall, there is a moderate potential for this species to be present.

Mecca aster (*Xylorhiza cognata*) is a perennial herb that grows on slopes and bottoms of deep ravines in clay, rocky sand, and gravel. This species was not found during the field surveys, but there is limited suitable habitat at the Pushawalla and East Indio Hills trails. In years with average or above average rainfall, there is a moderate potential for this species to be present at either site, occurring as isolated individuals originating from seed dispersed downstream from larger upstream populations.

Special-Status Wildlife

Coachella Valley Fringe-Toed Lizard (*Uma inornata*). The Coachella Valley fringe-toed lizard is state-listed as endangered and federally listed as threatened. It has lost approximately 75 percent of its habitat to human activities such as urban and agricultural development. It is restricted to fine, windblown sands of dunes, flats, riverbanks, and washes in some of the most arid parts of the desert (Stebbins, 1985). Vegetation, consisting of creosote bush and other shrubs, is usually sparse. The Coachella Valley fringe-toed lizard occupies sand deposits of the Coachella Valley in Riverside County, from near sea level to approximately 1,600 feet. Three Coachella Valley fringe-toed lizards were observed and mapped on the proposed Corkill Trail route in or near areas mapped as active sand fields (Figure 3-1).

Mojave Desert Tortoise (*Gopherus agassizii*). The Mojave Desert tortoise (i.e., west of the Colorado River) is state and federally listed as threatened. Tortoises east of the Colorado River have been considered a separate population of the same species, but recent work by Murphy et al. (2011) suggests that they should be recognized as a distinct species, Morafka's desert tortoise (*Gopherus morafkai*). All wild desert tortoises in California are part of the state and federally listed Mojave population. The proposed trails are not within critical habitat for the desert tortoise as designated by the USFWS (1994). The nearest designated critical habitat is in the Chuckwalla Complex, with its western extent about 7 miles east of the East Indio Hills Trail (USFWS, 1994).

Desert tortoises are uncommon in the Coachella Valley and have been extirpated from much of their historic range there. The Pushawalla and East Indio Hills trails have moderately suitable habitat. The soils on these proposed trails are suitable for burrowing. The windblown sand, covering much of the

Corkill Trail, is relatively poor habitat because it is poorly suitable for burrowing. In addition, surrounding land uses and linear barriers (including roadways, railroad lines, surface water management, and other development) tend to isolate the site from tortoise populations, although tortoises may traverse the site while moving between suitable habitats.

Aspen's field surveys were not USFWS protocol desert tortoise surveys (USFWS, 2010a); however, Wood and Goodman are familiar with desert tortoise sign and survey methods. The surveys were completed during the desert tortoise spring activity period, and our field methods covered all habitats throughout each proposed trail. Two Class 5 burrows were identified along the proposed East Indio Hills Trail (Figure 3-3). Class 5 burrows are described as old inactive burrows in poor condition that were possibly excavated by desert tortoise (USFWS, 2009b). No other sign (shells, bones, scutes, limbs, scats, pallets, tracks, egg fragments, courtship rings, drinking sites, mineral licks, etc.) of the desert tortoise were found on any proposed trail. While no desert tortoises were found, tortoises may occur at very low density in the general area or captive tortoises may be released illegally in the vicinity. We conclude there is a moderate potential for desert tortoise to be present on either the Pushawalla or the East Indio Hills trails, and a low probability to occur at the Corkill Trail.

Species Protected under the Federal Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668-668d; BGEPA) prohibits take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*). The BGEPA defines *take* to include "pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, and disturbing." The USFWS (2007) further defines *disturb* as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Golden eagles (*Aquila chrysaetos*) are year-round residents throughout most of their range in the western United States. In the southwest, they are more common during winter when eagles that nest in Canada migrate south into the region. They breed from late January through August, mainly during late winter and early spring in the California deserts (Pagel et al., 2010). In the desert, they generally nest in steep, rugged terrain, often on sites with overhanging ledges, cliffs or large trees as cover. Golden eagles are wide-ranging predators, especially outside of the nesting season, when they don't need to return to their nests to tend eggs or young.

Golden eagle foraging habitat consists of open terrain such as grassland, desert, savanna, and early successional forest and shrubland habitats throughout the regional foothills, mountains, and deserts. They prey primarily on rabbits and rodents, but will also take other mammals, birds, reptiles, and some carrion (Kochert et al., 2002).

The San Jacinto Mountains to the south, southwest, and southeast; and the San Bernardino Mountains to the northwest of the proposed trails; provide suitable golden eagle nesting habitat. Moderately suitable foraging habitat for the golden eagle is available at each of the proposed trails, but there is no suitable nesting habitat.

BLM Sensitive Wildlife Species. The BLM maintains a list of Sensitive Wildlife Species, including species that are rare, declining, or dependent on specialized habitats (BLM, 2010). It manages sensitive species to provide protections comparable to species that may become listed as threatened or endangered (i.e., candidate species for federal listing). In addition to species addressed in this section, all listed

threatened or endangered species (above) are managed as BLM sensitive species. Flat-tailed horned lizard, burrowing owl, Palm Springs pocket mouse, and Palm Springs round-tailed ground-squirrel are all covered species under the CVMSHCP. Additional BLM sensitive species that have a high or moderate probability of occurring at a proposed trail include Nelson's bighorn sheep, pallid bat, western mastiff bat, and Townsend's big-eared bat.

Flat-tailed horned lizard (*Phrynosoma mcallii*) is a BLM sensitive species and a candidate for listing as endangered under the California Endangered Species Act. It is also a CDFW Species of Special Concern. It has been proposed several times for federal listing but each proposal has been withdrawn, most recently in 2011 (USFWS, 2011b). It is managed under a multi-agency Conservation Agreement and associated Rangewide Management Strategy (FTHLICC, 2003) and is a covered species under the CVMSHCP. Within its range, the flat-tailed horned lizard typically occupies sparsely vegetated, sandy desert flatlands with low species diversity, but it also occurs in areas covered with small pebbles or desert pavement, mud hills, dunes, alkali flats, and low, rocky slopes. High-quality habitats include sparse vegetation, little slope, and surface soils of fine packed sand overlain intermittently with loose, fine sand (stabilized areas of dune edges). Flat-tailed horned lizard was not observed on the proposed trails during field surveys. However, negative survey data cannot reliably be interpreted as conclusive evidence that the animal is absent. Due to the local habitat loss and apparent local extirpation, the likelihood of its occurrence is low for the Corkill Trail and minimal for Pushawalla and East Indio Hills trails.

The burrowing owl (*Athene cunicularia*) is a BLM Sensitive Species and a CDFW Species of Special Concern. As a native bird, it is also protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. It is a small, terrestrial owl of open country. During breeding season, it ranges throughout most of the western US. It occurs year-around in southern California, but may be more numerous during fall and winter, when migratory individuals from farther north join the regional resident population. Burrowing owls favor flat, open annual or perennial grassland or gentle slopes and sparse shrub or tree cover. They use the burrows of ground squirrels and other rodents for shelter and nesting. Availability of suitable burrows is an important habitat component. Where ground squirrel burrows are not available, the owls may use alternate burrow sites or man-made features such as drain pipes, debris piles, or concrete slabs. In the California deserts, burrowing owls generally occur in low numbers in scattered populations, but they can be found in much higher densities near agricultural lands where rodent and insect prey tend to be more abundant (Wilkerson and Siegel, 2011). Burrowing owl nesting season, as recognized by the California Burrowing Owl Consortium (CBOC, 1993), is 1 February through 31 August. Burrowing owls are covered under the CVMSHCP. No burrowing owls or burrowing owl sign were observed on the proposed trails or at the proposed trailheads. Several suitable burrows were found along the East Indio Hills Trail (Figure 3-3). In addition, coyote burrows were observed along the East Indio Hills and Corkill trails that may also provide suitable burrows for burrowing owls (Figures 3-1 and 3-3). Field surveys were conducted during the state-wide breeding season, but burrowing owls in the low desert tend to nest and breed earlier in the year, and may not have nested in 2015 due to low rainfall. We conclude there is a moderate potential that burrowing owls may occur on all three of the proposed trails, either during winter or during the breeding season.

The BLM includes several bat species on its list of sensitive species. In addition, several of the bats known from the Project vicinity are CDFW "Special Animals" as described below. The special-status bats of the local area roost in rock crevices, tunnels, or caves and one species (western yellow bat*, Lasiurus xanthinus*) roosts in the foliage of riparian trees and in the fronds of native and non-native palm trees. Roost sites may be used seasonally (e.g., inactive cool seasons) or daily (day roosts, used during inactive daylight hours). Maternity roosts are particularly important overall for bat life histories. Knowledge of

bat distributions and occurrences is sparse, and bat life histories vary widely. Some species hibernate during winter or migrate south. During the breeding season, bats generally roost during the day, either alone or in communal roost sites, depending on species. All special-status regional bats are insectivorous, catching their prey either on the wing or on the ground. Some species feed mainly over open water where insect production is especially high, but others forage over open shrublands. The rocky outcrops on at the Pushawalla and East Indio Hills trails may provide some roosting habitat for common bat species, but the likelihood is minimal. Special-status bat species in the area are unlikely to utilize the areas for roosting, but may forage on any proposed trail from dusk until dawn. The potential for occurrence (foraging) ranges from moderate to high for the various special-status bat species; see Table 3.4-1.

Palm Springs pocket mouse (*Perognathus longimembris bangsi*) is a BLM Sensitive Species, a California Species of Special Concern, and is covered under the CVMSHCP. It occurs in the lower Sonoran life zone from the San Gorgonio Pass area east to the Little San Bernardino Mountains and south along the eastern edge of the Peninsular Range to Borrego Valley and the east side of San Felipe Narrows (Hall, 1981). Its habitat includes loose, sandy soils with sparse vegetation cover on gently sloping topography (CVAG, 2007). Recently, it was found within the Pushawalla Canyon in compacted, stony, and cobbly habitat. This previously undocumented habitat type expands the understanding of the range of habitats the Palm Springs pocket mouse may utilize (USFWS, 1997). Threats to this species and its habitat within the Coachella Valley include urban development; construction of roads, railroads, airports, and other structures; OHV use; illegal trash dumping; and domestic animal predators. Palm Springs pocket mouse was not observed on any proposed trail but they are likely to be present on the Corkill Trail and Trailhead. The Pushawalla Trail has marginal suitable habitat and there is a low potential for the species to be present in small numbers.

Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus)* (also called Coachella Valley round-tailed ground squirrel) is a California Species of Special Concern, a BLM Sensitive Species, and was formerly a candidate for federal listing as threatened or endangered. It was removed from the list of candidates in 2010 (USFWS, 2010b). Until recently, it was believed to be limited in range to the Coachella Valley region. Recent research indicates that its range is substantially larger than previously understood, extending at least 150 miles northward to Hinkley Valley and Death Valley. Based on this range extension, the protected habitat in Death Valley National Park, and ongoing conservation efforts in the Coachella Valley, the USFWS concluded that the species no longer warranted candidate status. The expanded understanding of Palm Springs round-tailed ground squirrel's geographic range also seems to indicate that it uses a broader range of habitat than previously understood. Within the Coachella Valley, the Palm Springs round-tailed ground squirrel's primary habitat is mesquite (*Prosopis glandulosa*) hummocks and associated sand dunes, and to a lesser extent, dunes and hummocks associated with creosote bush or other vegetation. The primary threats to its habitat are land use changes and groundwater pumping, both of which have eliminated much of the honey mesquite from the area. No Palm Springs round-tailed ground squirrels were observed on any of the proposed trails. Suitable sandy soils and shrubland habitat is found on the Corkill and East Indio Hills trails and Palm Springs round-tailed ground squirrels are likely to be present. There is no suitable habitat on the Pushawalla Trail and there is a minimal potential it would occur on the proposed trail.

Desert bighorn sheep (*Ovis canadensis nelsoni*) is a subspecies of bighorn sheep that is found in the desert mountains of southeastern California and into Mexico. It is recognized as sensitive by the BLM and fully protected under the California Fish and Game Code except where designated otherwise by CDFW. It lives in the desert mountains of California, Nevada, northern Arizona, and Utah. Populations in the Peninsular Ranges (far west of the Project area) are federally listed as a threatened. Threats to

desert bighorn sheep include habitat loss or degradation; limited availability of water sources; barriers to local or regional movement (e.g., highways and aqueducts); disease spread by domestic livestock; and natural predation by mountain lions in some populations. Near the proposed trails, they range in the Little San Bernardino Mountains and bordering the rapidly expanding Coachella Valley (CVAG, 2007). Desert bighorn sheep spend most of the year close to the desert floor, only moving into higher elevations as summer progresses and the foraging conditions diminish, returning after the winter rains for lambing (Ingles, 1965).

No desert bighorn sheep or sign of bighorn sheep were observed on any of the proposed trails. There is a moderate potential for desert bighorn sheep at the Pushawalla Trail which is along the base of the Little San Bernardino Mountains and Joshua Tree National Park. Dillon Road would act as a partial barrier for bighorn sheep at the Corkill or East Indio Hills trails, providing them a low potential for occurrence at those sites.

Wildlife Species Fully Protected Under the California Fish and Game Code. Under the state Fish and Game Code, selected fish and wildlife species are designated as fully protected or as protected furbearers, and take is prohibited except under permit for scientific purposes. Most of the designated fully protected species occur well outside the Project vicinity, but several may be found in the study area. These are golden eagle (discussed above, Species Protected under the Bald and Golden Eagle Protection Act), desert bighorn sheep (discussed above as a BLM Sensitive Species), and the desert kit fox.

The desert kit fox (*Vulpes macrotis*) is not listed as a special-status species by the State of California or the USFWS, but it is protected under Title 14, Section 460, California Code of Regulations, which prohibits take. Kit foxes are primarily nocturnal, and inhabit open level areas with patchy shrubs. Friable soils are necessary for the construction of dens, which are used throughout the year for cover, thermoregulation, water conservation, and rearing pups. Desert kit fox pairs and young may use one or several active den complexes. Pairs raise one litter of about four pups per year, born between late January and March. The pups emerge from the natal den four weeks after birth and begin to forage with the parents at age three to four months (Cypher, 2003). In early 2012, an outbreak of canine distemper virus was discovered in desert kit fox populations in eastern Riverside County. CDFW is testing desert kit foxes for distemper and monitoring the overall health of the kit fox population (CDFW, 2014). Desert kit fox is known from the region and has a moderate potential to be present.

Other Special-status Wildlife Species. In addition to the statutes and policies described above, several public agencies and private entities maintain lists of wildlife species of conservation concern. The CDFW includes these in its compendium of "Special Animals." These species are treated here as special-status species. Coachella Valley giant sand-treader cricket and the Coachella Valley Jerusalem cricket are covered species under the CVMSHCP; no other special-status wildlife species have habitat mapped on the Project sites (CVAG, 2007).

Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum*) occurs exclusively in the active sand hummocks and dunes in the Coachella Valley. The historic range of this species is entirely within the Coachella Valley, from Fingal's Finger east to the sand dune areas in the vicinity of Indio. This insect has no official state or federal status although it is considered a Species of Concern by USFWS. The Coachella Valley giant sand-treader cricket is most abundant in the active dunes and ephemeral sand fields at the west end of the Coachella Valley, west of Palm Drive at least to Snow Creek Road, adjacent to the Whitewater River and San Gorgonio River washes. Its distribution has been described by Tinkham (1962) as extending to two miles west of Indio.

Coachella Valley giant sand-treader cricket is known from the immediate vicinity of the Corkill Trail and there is a high potential that it is present in the windblown sands on the site. There is a minimal probability of the cricket occurring at either the Pushawalla or the East Indio Hills trails due to unsuitable habitat.

Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*) is found in sandy to somewhat gravelly sandy soils. It may occupy sand dunes and drifts, but does not require active windblown sand habitat. Jerusalem crickets are most often seen beneath surface debris during the cooler, wetter months and require a somewhat moist environment. During the summer, it remains in deep burrows during the day and is rarely seen at the surface at night. Coachella Valley Jerusalem cricket has a high potential for occurrence in the sandy soils on the Corkill Trail but minimal probability for occurring at the Pushawalla or East Indio Hills trails.

Several other special-status birds of prey are found seasonally in the region, especially during winter and during migration. These are sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), and northern harrier (*Circus cyaneus*). Suitable winter or migratory season foraging habitat for all of these raptors is widely available throughout the region. Prairie falcon has a high probability of foraging on any of the proposed trails and has a high to moderate potential to nest at either the Pushawalla or East Indio Hills trails.

Several additional special-status bird species are reported from the surrounding area (CDFW, 2015; Table 3.4-1). One of these, LeConte's thrasher (*Toxostoma lecontei*), is a covered species under the CVMSHCP with suitable habitat mapped on each of the proposed trails. In addition to LeConte's thrasher, these species include loggerhead shrike (*Lanius ludovicianus*), black-tailed gnatcatcher (*Polioptila melanura),* vermillion flycatcher (*Pyrocephalus rubinus*), Crissal thrasher (*Toxostoma crissale*), and yellow warbler (*Dendroica brewsteri*). The loggerhead shrike was observed at the East Indio Hills Trail and the black-tailed gnatcatcher was observed at both the Pushawalla and East Indio Hills trails. The other special-status birds have a low to high potential for foraging or nesting at the proposed trails and are listed in Table 3.4-1.

The pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) is a small burrowing mammal, widespread in shrublands and grasslands throughout most of the southern California deserts. It tends to be found in open areas with sandy or gravelly soils and herbaceous vegetation (CDFW, 2015). It feeds primarily on grass seeds, and is active nocturnally. It reduces its activity during cold weather and may go into torpor (Zeiner et al., 1990; Erikson and Patten, 1999). Habitat at each of the proposed trails is suitable for pallid San Diego pocket mouse, and there is a high probability that it occurs on each of the trails.

San Diego desert woodrat (*Neotoma lepida intermedia*) is known from coastal and desert scrub and rocky outcrops throughout much of southern California (CDFW, 2015). They frequently build large middens (piles of sticks arranged to form a shelter) in rock outcrops or around the bases of shrubs. Suitable habitat is present throughout each of the proposed trail and middens were observed at the Pushawalla Trail along the existing dirt road. This species is considered present at the Pushawalla Trail and has a high potential for occurrence at the Corkill and East Indio Hills trails.

American badger (*Taxidea taxus*) ranges widely throughout the region. They feed primarily on small burrowing mammals (e.g., ground squirrels) and may occur wherever adequate prey is found and soils are suitable for vigorous digging. Badgers may use any of the proposed trails periodically for foraging, but no burrows or dens were observed. They would be unlikely to at any of the trails regularly, though

they could be expected to occasionally forage or travel across them. This species has a moderate potential for occurrence on the proposed trails.

Native Birds. The federal MBTA prohibits take of any migratory bird, including active nests, except as permitted by regulation (e.g., waterfowl or upland game bird hunting). The MBTA broadly defines "migratory bird" as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species. California Fish and Game Code Section 3503 prohibits take, possession, or needless destruction of bird nests or eggs; Section 3503.5 prohibits take or possession of birds of prey or their eggs; and Section 3513 prohibits take or possession of any migratory nongame bird. With the exception of a few non-native birds such as European starling, the take of any birds or active bird nests or young is regulated by these statutes. Most of these species have no other special conservation status as defined in Table 3.4-1.

3.4.2 Applicable Regulations, Plans, and Standards

Federal Regulations

Endangered Species Act (16 USC Sections 1531–1544). The ESA establishes legal requirements for the conservation of endangered and threatened species and the ecosystems upon which they depend. The ESA is administered by the USFWS for terrestrial species, and by the National Marine Fisheries Service (NMFS) for marine species and anadromous fish. Under the ESA, the USFWS or NMFS may designate critical habitat for listed species. Section 7 of the ESA requires federal agencies to consult with USFWS or NMFS to ensure that their actions are not likely to jeopardize listed threatened or endangered species, or cause destruction or adverse modification of critical habitat. Section 10 of the ESA requires similar consultation for non-federal applicants.

Clean Water Act (33 USC Sections 1251–1387). The Clean Water Act (CWA) regulates the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires that an applicant obtain State certification for discharge into waters of the United States. The Regional Water Quality Control Boards administer the certification program in California. Section 404 of the CWA established a permit program, administered by the U.S. Army Corps of Engineers (USACE), to regulate the discharge of dredged or fill material into waters of the United States, including wetlands.

Migratory Bird Treaty Act (16 USC Sections 703–712). The MBTA prohibits take of any migratory bird, including eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). Under the MBTA, "migratory bird" is broadly defined as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species.

Bald and Golden Eagle Protection Act (16 USC Section 668). The Bald and Golden Eagle Protection Act (BGEPA) prohibits the take, possession, and commerce of bald eagles and golden eagles. Under the BGEPA and subsequent rules published by the USFWS, "take" may include actions that injure an eagle, or affect reproductive success (productivity) by substantially interfering with normal behavior or causing nest abandonment. The USFWS can authorize incidental take of bald and golden eagles for otherwise lawful activities.

Plant Protection Act of 2000. Prevents importation, exportation, and spread of pests that are injurious to plants, and provides for the certification of plants and the control and eradication of plant pests. The

Act consolidates requirements previously contained within multiple federal regulations including the Federal Noxious Weed Act, the Plant Quarantine Act, and the Federal Plant Pest Act.

State Laws and Regulations

California Endangered Species Act (Fish and Game Code Section 2050 et seq.). CESA prohibits take of state-listed threatened or endangered species, or candidates for listing, except as authorized by the CDFW. Authorization may be issued as an Incidental Take Permit or, for species listed under both CESA and the federal ESA, through a Consistency Determination with the federal incidental take authorization.

Fully Protected Designations (Fish and Game Code Sections 3511, 4700, 5050, and 5515). The California Fish and Game Code designates 36 fish and wildlife species as "fully protected" from take, including hunting, harvesting, and other activities. The CDFW may only authorize take of designated fully protected species through a natural community conservation plan (NCCP) or for necessary scientific research.

Birds (Fish and Game Code Sections 3503 and 3513). The California Fish and Game Code prohibits take, possession, or needless destruction of bird nests or eggs except as otherwise provided by the code. Section 3513 provides for the adoption of the MBTA's provisions (above).

Protected Furbearers (California Code of Regulations Title 14 Section 460). Title 14 specifies that "[f]isher, marten, river otter, desert kit fox and red fox may not be taken at any time." The CDFW may permit capture or handing of these species for scientific research, but does not issue Incidental Take Permits for other purposes.

Natural Community Conservation Planning Act (Fish and Game Code Sections 2800 et seq.). The Natural Community Conservation Planning Act provides a regional approach to conservation for multiple species. The NCCP Program is implemented by CDFW as a cooperative effort by the State of California and private and public partners, to protect species and their habitats. The program helps identify and provide for large area-wide protection of plants, animals, and their habitats while allowing for compatible and appropriate economic activity. At the time of CDFW approval of an NCCP, CDFW may authorize by permit the taking of any covered species; i.e., a species whose conservation and management is provided for in the approved plan. The Project area is within a recognized NCCP area, covered under the Coachella Valley Multiple Species Habitat Conservation Plan.

Lake and Streambed Alteration (Fish and Game Code Sections 1600–1616). The CDFW regulates project activities that would divert, obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake.

Coachella Valley Multiple Species Habitat Conservation Plan

The CVMSHCP provides long-term conservation and habitat protection for 27 covered species of special-status plants and animals. It provides CESA and ESA take authorization of these covered species for conforming projects, subject to the Plan's administrative and mitigation requirements and USFWS and CDFW take authorizations. The CVMSHCP is managed by the Coachella Valley Conservation Commission (CVCC), a joint powers authority of elected representatives, and funded through a combination of development impact fees, open space trust funds, and funding from permittees for infrastructure projects. The proposed Project would be subject to CVMSHCP authorization which would effectively offset many of the Project's expected impacts to biological resources through habitat compensation and protection.

3.4.3 CEQA Significance Criteria

The significance criteria listed below are from the Environmental Checklist form in Appendix G of the CEQA Guidelines and Section 15065 of the Guidelines ("mandatory findings of significance"). They are used to determine whether a project would result in significant impacts to biological resources as defined by CEQA. For purposes of this EA/MND, impacts would be significant if the Project would:

- Have 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 USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404, of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

All other CEQA significance criteria from Appendix G for biological resources have been found to have no impact (refer to Appendix A). Therefore, those items are not evaluated.

3.4.4 Environmental Impacts and Mitigation Measures

3.4.4.1 Environmental Impacts

Impact BIO-1: The Project could adversely affect special-status species and their habitat.

The proposed Project would affect habitat for special-status species and, without mitigation, could cause take of special-status plants and animals. Direct impacts would include removal of sensitive habitat for special-status plants and wildlife though the grading of the Corkill and Pushawalla trailheads and parking areas, and trail improvements for each trail. Construction activities could also disturb nests on or adjacent to the proposed trails and trailheads. Potential indirect effects of proposed trail construction include increased use of the area by the public, potential for increased OHV use, and the spread of invasive weeds. The increase in use by the public may cause increased disturbance to wildlife and habitat, but it may also focus visitors into designated areas thereby reducing the current dispersed disturbance. The Project is also expected to increase visitor awareness of regulations, reduce off-road activity, and reduce littering. Weed management would be conducted periodically as a component of routine trail and trailhead maintenance; all weed eradication would be done by hand and no herbicides would be used. The effect of the spread of weeds, if any, is expected to be minimal and no weed-specific mitigation is recommended. Participation in the CVMSHCP would mitigate impacts to special-status species and their habitat through payment of a fee to fund the CVMSHCP or other appropriate mechanism based on the type of proposed activity as described in Section 11.7.3 of the CVMSHCP Implementing Agreement.

Impacts at the proposed Corkill Trailhead, parking area, and trail would include vegetation clearing and grading of an approximately 50 feet by 75 feet (3,750 square feet, or 0.09 acre) area within Sonoran mixed woody & succulent scrub natural community. Trail construction would be minimal and comprised

of trail marker installation and hand clearing a 0.7-mile portion where the terrain is steep and an existing trail is not obvious. This construction activity could result in direct impacts to special-status plants and wildlife and the permanent loss of natural vegetation and its habitat value. Activities could also cause the mortality of mammals and reptiles which may be crushed during clearing and grading for the trailhead. The federally endangered Coachella Valley milk-vetch and the federally threatened and state endangered Coachella Valley fringe-toed lizard are both present throughout the proposed parking area. Additional special-status species that could be affected include: chaparral sand verbena, flat-seeded spurge, Arizona spurge, slender cottonheads, Mojave desert tortoise, flat-tailed horned lizard, burrowing owl, Palm Springs pocket mouse, Palm Springs round-tailed ground squirrel, desert bighorn sheep, desert kit fox, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Pallid San Diego pocket mouse, San Diego woodrat, American badger, loggerhead shrike, black-tailed gnatcatcher, vermillion flycatcher, LeConte's thrasher, and Crissal thrasher (see Table 3.4-1).

Impacts at the proposed Pushawalla Trailhead would include vegetation clearing and grading of an approximately 50 feet by 75 feet (3,750 square feet, or 0.09 acre) area within Sonoran creosote bush scrub. The trail alignment is already well established and no improvements to the trail are proposed, with the exception of signage at the trailhead and periodic trail markers. Impacts to plants and animals from construction activities would be similar to those described above for the Corkill Trailhead, except that Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard would not be affected. No threatened or endangered species were detected on the proposed trail site, although Mojave desert tortoise could use the area. Additional special-status species that could be affected include: mecca aster, desert spike-moss, burrowing owl, Palm Springs pocket mouse, desert bighorn sheep, desert kit fox, Pallid San Diego pocket mouse, San Diego woodrat, American badger, loggerhead shrike, black-tailed gnatcatcher, LeConte's thrasher, and prairie falcon (see Table 3.4-1).

Impacts at the proposed Golf Center Parkway Trailhead would include vegetation clearing and grading of an approximately 50 feet by 75 feet (3,750 square feet, or 0.09 acre) area that is mostly covered with rough rock and gravel. Clearing and grading would not affect natural habitat. Construction of the East Indio Hills Trail would include minor improvements within Sonoran creosote bush scrub such as widening and out-sloping or slope stabilization efforts. Several areas along the 4.5-mile-long trail would require additional construction using hand tools, including installation of switchbacks and steps. Impacts to plants and animals from construction activities would be similar to those described above for the Corkill Trailhead, except that Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard would not be affected. No threatened or endangered species were detected on the proposed trail site, although Mojave desert tortoise could use the area. Additional special-status species that could be affected include: mecca aster, burrowing owl, Palm Springs round-tailed ground squirrel, desert bighorn sheep, desert kit fox, Pallid San Diego pocket mouse, San Diego woodrat, American badger, loggerhead shrike, black-tailed gnatcatcher, LeConte's thrasher, and prairie falcon.

Although they are not expected to nest in the Project areas, the proposed trailhead construction activities may cause foraging golden eagles to avoid work areas due to noise and other construction-related activities. Given the limited acreage to be impacted, the short duration of construction (two days at each trailhead), and the eagle's ability to move away from the Project area, any effects to foraging behavior would be negligible and temporary.

The mitigation measures listed below in Section 3.4.4.2 would minimize the potential impacts from the proposed Project. Requiring adherence to the CVMSHCP avoidance and minimization measures and fee payment to fund the CVMSHCP, and targeting mechanical disturbance to previously disturbed habitats for the trailhead sites would reduce the amount of sensitive habitat removed. Pre-construction surveys for

special-status species and biological monitoring would ensure that impacts to those species are avoided through moving special-status animals out of harm's way (as allowed); establishing appropriate no-disturbance buffers for nesting birds, burrowing owl, or Coachella Valley milk-vetch; and halting construction to allow desert tortoises to leave the work area. Worker training would ensure all construction personnel are aware of sensitive biological resources they may encounter and all mitigation measures. Training would include identification of special-status species in the area, what to do in the event one is encountered, not bringing pets to the Project site, keeping trash and water storage properly contained, minimizing standing water, and reducing speed limits to prevent wildlife mortality.

Impact BIO-2: The Project could adversely affect sensitive natural communities.

The proposed Project would not affect riparian habitat or other sensitive communities identified in the CNDDB. However, the active and stabilized sand fields at the Corkill Trailhead and Trail, and at the East Indio trail, are locally important habitat types supporting numerous special-status plants and animals, including the listed Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch. Trailhead and parking area construction would degrade a small area (0.09 acre) of this habitat at the Corkill Trailhead site. Trail construction would have only minimal effects to sand field habitat, due to the minimal disturbance area and rapid replenishment of windblown sand.

Participation in the CVMSHCP (in accordance with Mitigation Measure BIO-1) would mitigate impacts to sensitive habitats through payment of a fee to fund the CVMSHCP or other appropriate mechanism as described in Section 11.7.3 of the CVMSHCP Implementing Agreement. Additionally, any potential impacts that may occur would be reduced with implementation of Mitigation Measure BIO-2, which would limit mechanical disturbance to previously disturbed habitats (including soils) to the greatest extent practicable to minimize impacts to sensitive and other natural communities.

Impact BIO-3: The Project could adversely affect jurisdictional waters.

There are no wetlands on or adjacent to any of the proposed Project sites. However, the proposed Corkill Trailhead site is adjacent to an unnamed wash that crosses Corkill Road just to the north. In addition, improvements to Corkill Road would be required where the dirt road passes through a sandy wash that is not currently passable to 2-wheel-drive passenger vehicles (approximately the last 0.1 mile of Corkill Road before the trailhead location). The improvements may consist of grading and placing rock similar to trailhead preparation, or other means to stabilize the road and allow access into the Corkill Road Trailhead for all passenger vehicles. The jurisdictional limit of the wash areas have not been delineated. Depending on the precise location of the jurisdictional limits, grading activities for the parking area and road improvement could alter the streambed by placing or removing fill material. This effect, should it occur, may necessitate authorization from regulatory agencies, as follows:

- CDFW, under Section 1600 of the California Fish and Game Code (Lake and Streambed Alteration Agreement);
- California Regional Water Quality Control Board, under Section 401 of the federal CWA; or
- US Army Corps of Engineers, according to Section 404 of the CWA.

In order to minimize impacts to jurisdictional waters, Mitigation Measure BIO-13 (Streambed Avoidance) would ensure that no substantial fill or other streambed alterations occur at the parking area, by requiring a jurisdictional delineation at the ephemeral streambed and requiring the Project disturbance area to remain outside of the jurisdictional limit of the wash. Impacts to the wash would be regulated

through the permitting processes identified above. Therefore, Mitigation Measure BIO-13 would reduce impacts such that only the road improvements, and not grading for the parking area, would impact jurisdictional resources. These impacts for the road crossing are expected to be 0.3 acre or less and would occur within the existing dirt road.

Each of the three trails cross numerous small washes which may meet jurisdictional criteria as waters of the state or waters of the US. The expected trail work could include streambed alterations such as placement or removal of fill material; however, these alterations (if any) would be minimal and would not be subject to permitting under the regulations listed above.

Impact BIO-4: The Project could conflict with an established Habitat Conservation Plan or Natural Community Conservation Plan.

The Project is within the CVMSHCP area, and is subject to the CVMSHCP conservation requirements. Impacts to CVMSHCP covered species located on private lands (including CVMSHCP conservation lands) are authorized by USFWS and CDFW for participants in the CVMSHCP, and are mitigated through the CVMSHCP. Any potential take of listed species on BLM lands, even within the CVMSHCP area, is not authorized through the CVMSHCP, and must be covered separately through formal or informal consultation with the USFWS under Section 7 of the ESA.

With incorporation of Mitigation Measure BIO-1, below, the Project would comply with the CVMSHCP requirements, and there would be no conflict with any HCP or NCCP.

3.4.4.2 Mitigation Measures

The following mitigation measures would avoid or minimize adverse Project impacts to biological resources.

MM BIO-1: **CVMSHCP Compliance.** All applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction and O&M activities on federal lands. For O&M activities the CVMC shall ensure that personnel are instructed to be alert for listed wildlife species. If a desert tortoise or Coachella Valley fringe-toed lizard is spotted, activities adjacent to its location will be halted and the animal will be allowed to move away from the activity area. In addition, consistent with Section 7.3.4.2 of the CNMSHCP, trails and facilities will be designed to be consistent with CVMSHCP Conservation Goals and Objectives, to avoid or minimize impacts to habitat occupied by Covered Species, and to discourage intrusion into environmentally sensitive areas. Interpretive facilities, access control, and signage will encourage proper resource usage, and adverse effects of passive recreation, such as trampling vegetation and erosion, will be minimized.

MM BIO-2: **Limit Disturbance Areas.** At all work areas, mechanical disturbance of previously undisturbed habitats (including soils) will be limited to the minimum area necessary. Project disturbance areas will be sited on previously disturbed areas to the extent feasible.

MM BIO-3: **Assign Project Biologist.** The CVMC will assign one or more acceptable biologists (according to CVMSHCP requirements) to conduct pre-construction surveys and construction monitoring as described in Mitigation Measures BIO-4 and BIO-5. An "acceptable biologist" means a biologist whose name is on a list, maintained by the

Coachella Valley Conservation Commission (CVCC), of biologists who are acceptable to CVCC, CDFW, and USFWS for purposes of conducting surveys for Covered Species.

MM BIO-4: **Preconstruction Surveys.** An acceptable biologist (according to CVMSHCP requirements) will conduct pre-activity clearance surveys for desert tortoise and their burrows, burrowing owls (year-round), nesting birds (at trail and trailhead sites where construction or maintenance activities are scheduled from January 1 to August 31), Coachella Valley fringe-toed lizards, Coachella Valley milk-vetch, and other special-status species. Construction or maintenance activities outside of the breeding season for nesting birds would not require nesting bird surveys. Surveys for desert tortoise, burrowing owl, LeConte's thrasher, and crissal thrasher will be conducted according to the avoidance and minimization measures in Section 4.4 of the CVMSHCP. Pre-activity surveys will be conducted no more than 7 days in advance of any ground- or vegetation-disturbing activities in any location. For construction or maintenance activities planned between February 15 and November 15 at the Corkill Trail and Trailhead, all work sites will be surveyed by an acceptable biologist prior to any ground disturbing activities to avoid take of Coachella Valley fringe-toed lizards.

MM BIO-5: **Construction Monitoring.** An acceptable biologist (according to CVMSHCP requirements) will monitor construction and maintenance activities, provide worker education programs, and supervise or perform other related actions. The Biological Monitor will be authorized to temporarily halt construction or maintenance activities if needed to prevent potential harm to these and any other special-status species. Project activities may not disturb an active bird nest. If an active bird nest is located on or adjacent to the work site, a Biological Monitor will designate and flag an appropriate buffer area around the nest where construction or maintenance activities will not be permitted. The buffer area will be based on the bird species and nature of the construction activity. The work supervisor will coordinate with the Biological Monitor on planned or ongoing construction or maintenance activities and any specific pre-activity surveys or monitoring requirements for each activity in those areas.

MM BIO-6: **Special-Status Species Avoidance and Minimization Measures.** The acceptable biologist (according to CVMSHCP requirements) and all workers shall regularly observe the work areas for Coachella Valley milk-vetch, desert tortoise, and the Coachella Valley fringe-toed lizards, and burrowing owl. The Project will adhere to avoidance and minimization measures for sensitive species as described in Section 4.4 of the CVMSHCP. For desert tortoise, installing exclusionary fencing per CVMSHCP guidelines for trailhead or trail construction would be infeasible. Instead, if a desert tortoise or fringe-toed lizard is observed, it will be left to move away from the work site on its own. Burrowing owl measures include establishing appropriate buffers, depending on the season, where no construction or maintenance activities may occur; and coordinating with Wildlife Agencies on appropriate eviction/passive relocation procedures. If any Coachella Valley milk-vetch are found within the disturbance area, and cannot be avoided, the biological monitor will collect and distribute its seed pods, as per the USFWS's guidance, to outside of the disturbance area as feasible.

MM BIO-7: **Worker Training.** Employees will be trained to ensure that all workers on site (including contractors) are aware of all applicable mitigation measures for biological resources. Specifically, workers will be required to (1) limit all activities to approved work areas; (2)

report any desert tortoise, Coachella Valley fringe-toed lizard, burrowing owl, or other special-status species, or bird nest observation in the work areas and access routes to the supervisor or Biological Monitor; (3) avoid contact with any wildlife that may approach a work area, and be aware of potential venomous reptile bites from carelessness or unnecessary harassment; (4) pick up and properly dispose of any food, trash, or construction refuse; and (5) report any spilled materials (oil, fuel, solvent, engine coolant, raw concrete, or other material potentially hazardous to wildlife) to the supervisor or on-site Biological Monitor. During the training, the instructor will briefly discuss special-status species that may occur in the work areas, their habitats, and requirements to avoid or minimize impacts. In addition, all workers will be informed of civil and criminal penalties for violations of the federal ESA, CESA, the Migratory Bird Treaty Act, relevant sections of the California Fish and Game Code, and the Bald and Golden Eagle Protection Act.

MM BIO-8: **Wildlife Avoidance.** Workers will not be permitted to feed, harm, approach, harass, or handle wildlife at any time, except to move animals out of harm's way, and only as directed by a supervisor. Listed species will not be handled; if a desert tortoise or Coachella Valley fringe-toed lizard enters a work area, it will not be disturbed and will be allowed to leave on its own. This condition will not exempt workers, including the Biological Monitor, from any safety policies with regard to venomous reptiles.

MM BIO-9: **Trash, Refuse, Concrete, and Other Construction Materials.** All trash and food materials will be properly contained within vehicles or closed refuse bins while on any site, and will be regularly removed from the site (at least on a weekly basis) for proper disposal. All refuse from construction or maintenance activities will be removed from each work site upon completion of work. No raw cement, concrete or washings thereof, asphalt, paint, oil, solvents, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, shall be disposed of on-site or allowed to spill onto soil. Cleanup of any spilled material shall begin immediately.

MM BIO-10: **Minimize Standing Water.** Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards, to prevent the formation of puddles, which could attract wildlife to construction sites.

MM BIO-11: **Water Storage.** All water containers (i.e., tanks or trailers) will be securely covered to prevent wildlife from entering the containers and becoming trapped.

MM BIO-12: **Speed Limit.** To minimize potential impacts to special-status wildlife, no vehicles will be permitted to exceed 15 mph while traveling on dirt access roads, and vehicle use will be limited to the access routes and parking/trailhead areas. There will be no off-road vehicle use.

MM BIO-13: **Streambed Avoidance.** A qualified biologist or hydrologist will identify the jurisdictional boundaries of the unnamed wash adjacent to the proposed Corkill Trailhead site, and ensure that the boundaries of work areas are clearly marked outside the jurisdictional area. No work activities will be authorized outside the flagged work area boundaries.

MM BIO-14: **Operations Monitoring.** The CVMC, in coordination with the BLM and USFWS, will identify a series of "photo points" on each trail, trailhead, and parking area, for long-

term photo documentation of trail condition and resource damage (if any). The photo points will be located at representative sites likely to sustain high use (e.g., parking areas), likely to support listed species (e.g., habitat identified in the attached figures) or vulnerable to resource damage (e.g., steep trail segments). Each photo point will be visited and photographed at least annually. Based on the documentation, CVMC will determine and implement appropriate follow-up action (e.g., trash cleanup, trail or kiosk maintenance, or new signage). In addition, CVMC will provide annual documentation to the BLM and USFWS of the photo-point monitoring and follow-up measures.

3.4.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact BIO-1:** Without mitigation, impacts to special-status species and habitat from the proposed Project could be substantial; however, participation in the CVMSHCP and implementing the additional mitigation measures above would reduce the potential impacts to less than significant (Class II).
- **Impact BIO-2:** There would be no impacts to riparian habitat. Impacts to sand field habitat would be reduced to less than significant through Mitigation Measures BIO-1 (CVMSHCP compliance) and BIO-2 (Limit Disturbance Areas). Impacts would be less than significant with mitigation (Class II).
- **Impact BIO-3:** The Project would not affect wetlands. However, the proposed Corkill Trailhead site is adjacent to an unnamed wash that may meet jurisdictional criteria as waters of the state or waters of the US. Mitigation Measure BIO-13 (Streambed Avoidance) would ensure that no fill or other streambed alterations occur at the parking area, by limiting the disturbance area at the northern boundary. This measure would avoid impacts to the jurisdictional area, if present. Therefore, impacts would be less than significant with mitigation incorporated (Class II).
- **Impact BIO-4:** The proposed Project would not conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. With incorporation of Mitigation Measure BIO-1, above, the Project would comply with the CVMSHCP requirements. Impacts would be less than significant with mitigation incorporated (Class II).

3.4.6 Alternatives Analysis

3.4.6.1 Alternative 1 - Pushawalla

Direct and indirect impacts for the Pushawalla only alternative would generally be the same as those described for the proposed Project, but of lesser magnitude. With this alternative, no Project impacts to the Corkill Trail and Trailhead or the East Indio Hills Trail would occur from the Project. Alternative 1 would avoid Project impacts to the listed Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch at the Corkill Trail and Trailhead. It would also avoid minor impacts to Sonoran creosote bush scrub and special-status plants and wildlife at the East Indio Hills Trail. All other impacts at the Pushawalla Trail and Trailhead would be as described for the proposed Project. It should be noted that under Alternative 1, existing uncontrolled recreational use of the area would continue in the areas of

the East Indio Hills and Corkill project areas; therefore, this alternative could potentially have greater impacts on biological resources than the proposed Project.

3.4.6.2 Alternative 2 – Pushawalla and East Indio Hills

Direct and indirect impacts for the Pushawalla and East Indio Hills trails alternative would be the same as those described for the proposed Project, but of a slightly reduced magnitude. With this alternative, no impacts to listed species at the Corkill Trail and Trailhead would occur from the Project. Alternative 2 would avoid impacts to Coachella Valley fringe-toed lizard, Coachella Valley milk-vetch, other special-status species, and native vegetation at the Corkill Trail and Trailhead. All other impacts at the Pushawalla and East Indio Hills trails would be as described for the proposed Project. It should be noted that under Alternative 2, existing uncontrolled recreational use of the area would continue in the area of the Corkill Trail and Trailhead; therefore, this alternative could potentially have greater impacts on biological resources than the proposed Project.

3.4.6.3 Alternative 3 – No Action

Under the No Action Alternative, the proposed Project would not be constructed. As such, no direct or indirect impacts would occur from the Project. However, because uncontrolled recreational use would continue in the areas of all three proposed trails and trailheads, Alternative 3 could have greater impacts to biological resources than the proposed Project. The No Action Alternative would leave biological resources, including listed species, with the least amount of protection and provide the least amount of education to the public on their importance.

3.4.7 Cumulative Analysis

Cumulative impacts to biological resources throughout the Coachella Valley are the result of many past, present, and reasonably foreseeable projects. Examples of cumulative projects in the area include residential, commercial, and industrial development, transportation and infrastructure projects, and renewable energy projects. In general, these impacts have been substantial. The Project's impacts to biological resources would be minor, and would be mitigated through several measures (Section 3.4.4.2) including participation in the CVMSHCP. Moreover, the CVMSHCP serves to mitigate ongoing cumulative impacts of most current and future land use projects in the Coachella Valley by preserving and managing significant habitat areas to offset resource impacts. Therefore, with mitigation measures incorporated, the Project would not contribute considerably to any cumulatively substantial impacts to biological resources in the Coachella Valley.

3.5 Cultural Resources and Tribal Cultural Resources

Cultural resources can reflect the history, diversity, and culture of the region and people who created them. They are unique in that they are often the only remaining evidence of activity that occurred in the past. Cultural resources can be natural or built, purposeful or accidental, physical or intangible. They encompass archaeological, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, districts, and sites. Cultural resources include sites of important events, traditional cultural places and sacred sites, and places associated with an important person. Tribal cultural resources are sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Tribe. Many cultural resources and tribal cultural resources are

present in the Coachella Valley region that could be affected by development without adequate protections in place.

3.5.1 Environmental Setting

Three kinds of cultural resources, classified by their origins, are considered in this assessment: prehistoric, ethnographic, and historic period. Prehistoric archaeological resources are associated with the human occupation and use of California prior to prolonged European contact. In California, the prehistoric period began over 12,000 years ago and extended through the eighteenth century until 1769, with the establishment of the first Spanish mission in San Diego. Ethnographic resources represent the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. Historic-period resources, both archaeological and architectural, are associated with exploration and settlement of the area and the beginning of a written historical record after the arrival of European colonists. The following prehistoric, ethnographic, and historical background provides the context for the evaluation of the National Register and California Register eligibility of any identified cultural resources within the study area for this Project.

Prehistory

Human populations have occupied the Coachella Valley for at least 12,000 years. However, little is known about the prehistory of the region compared to other parts of California. In part, this is the result of fewer research projects and of natural processes that have buried or eroded many sites. Human action through agricultural and other developments has also played a part in this destruction. The culture-historical chronology for the Coachella Valley consists of six periods, based on a general evolutionary sequence hallmarked primarily by different artifact types: Paleo-Indian Complex (11,000 to 8000 B.C.), Lake Mojave Complex (8000 to 6000 B.C.), Pinto Complex (6000 to 3000 B.C), Gypsum Complex (2000 B.C to A.D. 200), the Rose Spring Complex (A.D. 200 to 1200), and Protohistoric Period (A.D. 1200 to Historic European Contact) (Sutton et al., 2007).

Archaeological investigations along the Coachella Valley have revealed numerous prehistoric occupation sites from all time periods. These sites are located throughout the Coachella Valley and suggest alternating settlement strategies by prehistoric groups based on varied changing climatic epochs. This region is highly sensitive for prehistoric settlement due to the presence of a large lake, known as Lake Cahuilla, which periodically inundated the valley, providing habitat for animals and plants that were used as food by the local inhabitants. The modern manifestation of this lake is the Salton Sea (Schaefer and Laylander, 2007). The high-stand shores of the lake were present immediately adjacent to the East Indio Hills Trail and Golf Center Parkway Trailhead (Dibblee and Minch, 2008). Additionally, in the past there have been periodic upwellings of fresh water along the San Andreas Fault in the vicinity of the East Indio Trail, providing prehistoric inhabitants with this important resource within the desert (Kline, 2015).

Ethnographic History

The Cahuilla peoples were noted by the early Spanish missionaries for already having developed agricultural practices for species of native corn, beans, and squash. These agricultural practices reflect methods used by other groups from the American Southwest (Schaefer and Laylander, 2007; Arnold and Walsh, 2010). The Cahuilla are generally divided into subgroups defined by the topographical settings in which they lived: Pass, Mountain, and Desert (Bean, 1978). The first official United States land survey in Southern California in the mid-1850's noted eight Indian villages, or "rancherias," within the Eastern Coachella Valley region, presumably occupied by the Desert Cahuilla people. An ethnographically and

archaeologically attested Cahuilla village was located at Willow Hole or Seven Palms, approximately two miles west of the Corkill Trail (BLM, 1984; Lando and Modesto, 1977). Edom Hill was an important place to the Cahuilla people and is located approximately one mile to the south of the trail (BLM, 1984; Lando and Modesto, 1977; Cathedral City, 2002).

History

The history of the region is generally divided into the Spanish (1769-1821), Mexican (1821-1846), and American (post-1846) periods. The historic period began in the 1790s with Spanish and Mexican expeditions moving through the Coachella Valley, but little actual settlement began until the Southern Pacific Railroad line was finished in 1876. With the coming of the railroad, non-native settlements began to flourish across the Coachella Valley as new federal laws, including the Homestead Act and Desert Land Act, opened up lands for new settlers. The discovery of underground water sources began to increase farming activities throughout the Valley in the early 20th century.

Background Research: Methods and Results

Aspen cultural resource specialists conducted a desktop cultural resource assessment of the Project area. This background research included obtaining information concerning previously conducted cultural resource surveys and previously recorded sites in the project area, as well as examining historical maps and land patents. The California Historical Resources Information System (CHRIS) is composed of ten information centers across the state. Aspen submitted a request for the staff of the Eastern Information Center (NEIC), located at the University of California, Riverside, to conduct a literature and records search of the project areas and vicinity.

The desktop assessment included the record search area, the Project area and the Area of Potential Effect (APE). The *record search area* is defined as a half mile on either side of the three proposed trail routes and a half mile around the corresponding trailhead parking lot locations. The *Project area*, in contrast, is defined as those locations where substantial ground disturbance is planned and the 50 ft. area on either side of the trail that could be easily accessed by recreational users. Finally, the *Area of Potential Effect* (APE) as defined by the BLM is a 15 meter (50 feet) buffer on either side of the trail centerline *on federal lands*.

The Project area for the Corkill Trailhead consists of a proposed 50 ft. by 75 ft. parking lot and a .1 mile section of Corkill Road to be improved for two-wheel drive vehicle access. These two areas would be subject to substantial ground disturbance activities. The Corkill Trail consists of a proposed 4.5-mile loop which initiates and ends at the Corkill Trailhead location. The majority of the 4.5-mile loop would utilize existing footpaths and would only require the placement of markers to identify trail location. Approximately 0.7 mile of the entire 4.5-mile loop would require new trail construction and would be completed by crews using hand tools.

The Project area for the Pushawalla Trailhead consists of a proposed 50 ft. by 75 ft. parking lot. The Pushawalla Trail consists of a 1.4-mile trail along an existing dirt road from the proposed trailhead to the boundary of JTNP and would not require any improvements, and therefore is not considered part of the Project area for the purposes of the records search.

The Project area for the Golf Center Parkway Trailhead consists of a proposed 50 ft. by 75 ft. parking lot. The East Indio Hills Trail consists of a proposed 4.5-mile loop which initiates and ends at the Golf Center Parkway Trailhead location. The trail route will primarily utilize existing footpaths created by

recreational and wildlife use, and will require trail improvements in several locations as well as placement of trail signage.

Record Search Results

A record search for the Project area was conducted by research staff at the Eastern Information Center (EIC) of the California Historical Resources Information System (CHRIS) at the University of California Riverside on April 24, 2015. A supplemental search was conducted on August 11, 2015.

Three cultural resources surveys were previously conducted within ½ mile radius of the Corkill Trail, two of which (RI-01672 and RI-03917) overlap with the APE. No cultural resources were previously identified within the Corkill Trail APE, but one, CA-RIV-22 (P-33-000022), was recorded within ½ mile of the trail. This resource, recorded in 1964, is a portion of a trail traversing a pass and could not be dated, but may be prehistoric.

Three cultural resources surveys were conducted within ½ mile radius of the Pushawalla Trail, and one (RI-02179) covers the federal APE for the trail. However, none have been completed in the last 5 years, necessitating survey of the APE. No cultural resources were previously identified within the Pushawalla Trail APE or within ½ mile of the trail.

A total of 44 cultural resources surveys have been conducted within ½ mile radius of the East Indio Hills Trail since 1975. Many of these cross the federal APE for the trail. A total of seven cultural resources were recorded within ½ mile of the East Indio Hills trail, but none were identified within the trail APE.

Additional National and California register-eligible resources may be present along the route of any of these trails and at any of the trailheads, both on the surface and below the surface. Results of the cultural resources record search are summarized in Table 3.5-1 (Elliott and Bagwell, 2015).

Table 3.5-1. Cultural Resources Intersecting with the East Indio Hills Trail

Resource Name (number)	Type	California Register Eligibility	Construction or Recreation Impact
Chino-Hayfield 200kV Transmission Line (P-33-15035)	Historic-era steel lattice transmission line.	Recommended ineligible through survey evaluation	No
Coachella Canal (P-33-005705)	Historic-era aqueduct	Appears eligible through survey evaluation	No
Coco-Maricopa Trail (CA-RIV-53T)	Prehistoric trail system	Determined eligible	No
P-33-008142	Prehistoric lithic and ceramic scatter	Unevaluated	No
P-33-013262	Prehistoric ground stone fragments	Unevaluated	No
P-33-017764	Historic-era refuse deposit	Unevaluated	No
P-33-018153	Prehistoric ceramic scatter	Unevaluated	No

The **Coachella Canal (P-33-005705)** is located adjacent to the Golf Center Parkway Trailhead and the East Indio Hills Trail crosses it approximately 0.03 mile (160 feet) from the trailhead over an existing bridge. This resource was completed in 1949 and carries Colorado River water 123 miles from the All-American Canal to the Coachella Valley. This recorded segment of the Coachella Canal is a 4,840 ft. long reinforced concrete lined flat-bottom structure with sloping sides. The Coachella Canal segment appears

eligible for NRHP as an individual property through survey evaluation. However, due to the current existence of a bridge over the canal, the construction of the East Indio Hills Trail would not constitute an impact to this resource.

CA-RIV-53T is mapped as within a ½ mile radius of the East Indio Hills Trail immediately to the north of the Chino-Hayfield Transmission Line. This resource is a section of a long trail network between the Colorado River region and the Pacific Coast that has been called the Coco-Maricopa Trail and the Halchidhoma Trail (Pappas et al, 2004). This trail is associated with two larger trail system cultural landscapes: the Pacific to Rio Grande Trails Landscape (PRGTL) and Prehistoric Trails Cultural Landscape (PTCL). The PRGTL is a large cultural landscape important for understanding human migration and settlement of the Americas, along with patterns of trade throughout the prehistory of western North America. This cultural landscape accommodates three trail corridors from the Southern Pacific Coast of California, across the desert regions of Southern California and the Colorado Plateau, to the Northern Rio Grande Valley in what is now New Mexico. The California Energy Commission (CEC) determined the landscape was eligible for listing in the California Register as a district (CEC, 2014). The PTCL represents smaller geographic and temporal portions of the much broader regional PRGTL. Originally based on the Halchidoma Trail, it was expanded as a discontinuous cultural landscape. This trail has been documented archaeologically within Riverside County as CA-RIV-53T, as well as other resource numbers. Site types associated with the PTCL are divided into three categories: destinations, trails, and trail-associated sites or features. Destinations primarily include water sources, but also include residential, religious, and resource-collection sites. Trails can either be created by the movement of traveling feet or formally constructed. They average 30 cm in width and can be traced for many miles, interrupted only by gullies and washes. Trail-associated sites or features can include: concentrations of ceramics/pot drops, cleared circles, rock rings, rock clusters, rock cairns, rock alignments, petroglyphs, and geoglyphs. When the trail itself is not preserved, its route can often be approximately traced by distinctive patterns of trail-associated sites and features (Bagwell and Bastian, 2010). Like the wider PRGTL, the CEC determined the landscape was eligible for listing in the California Register as a district (CEC, 2014).

It is not clear from the previous records if CA-RIV-53T has been documented in the field in or adjacent to the Project area, or if it is only the presumed or ethnographically attested route that was depicted in the record search documents. If segments of the trail or associated PTCL site types, such as cairns and pot drops, are present, the construction of the East Indio Hills Trail could pose an adverse effect.

The Southern California Edison Company **Chino-Hayfield 200kV Transmission Line (P-33-15035)** was constructed in 1945-1946 between SCE's Chino Substation in Chino, CA and the Metropolitan Water District of Southern California's Hayfield Pumping Plant, east of Coachella, CA, and the SCE Highgrove Substation in Colton, CA. It consists of steel lattice tower structures types L, S, D, and H. The Chino-Hayfield 200kV Transmission Line has subsequently been segmented into five transmission lines. This resource is recommended ineligible for NRHP, CRCR or Local designation through survey evaluation. A formal determination by a federal or state lead agency would need to be made for this resource to be considered a historic property or historical resource. This resource is mapped as within a ½ mile radius of the East Indio Hills Trail. However, the construction of the East Indio Hills Trail would not constitute an impact to this resource.

P-33-008142 is mapped as within a ½ mile radius of the East Indio Hills Trail and along the shoreline of ancient Lake Cahuilla. It consists of a prehistoric ceramic scatter, possibly from a single pot drop. In addition, a projectile point, hammerstone, core and lithic debitage were identified. Other artifacts may be present beneath the sand present at the site. This resource has not been formally evaluated.

Additional information, in the form of research and archaeological testing, would be required to determine if it is eligible for the National or California registers.

P-33-013262 is an isolated ground stone fragment made of granite. This resource is mapped as within a ½ mile radius of the East Indio Hills Trail. Isolated finds are not considered eligible for the National or California registers.

P-33-17764 is located a short distance to the west of the proposed trail route, north of the Chino-Hayfield Transmission Line. It consists of a partially buried 18 ft. diameter concentration of two historic period cans and rusted metal, probably pieces of bent and torn 55 gallon drums. This resource has not been formally evaluated, but is not likely to be eligible to the National or California registers.

P-33-18153 is mapped as within a ½ mile radius of the East Indio Hills Trail, north of the Chino-Hayfield Transmission Line. It consists of a prehistoric ceramic scatter, likely a single pot drop, spilling into a seasonal drainage on a tilted consolidated and unconsolidated sandstone formation. Ceramic scatters such as this are often associated with trails, such as the PTCL, and may contain the remains of human cremations. While this site is not likely eligible to the National or California registers by itself, it may be a contributor to the PTCL or it may contain human remains that need to be treated in accordance with federal and state law.

A variety of historical maps were consulted for this project. They revealed the presence of various trails, roads, and other features in the vicinity of the project area (Table 3.5-2). However, the only features noted within the trail APEs were historic period roads or jeep trails within the Pushawalla and East Indio Hills trails APEs.

Table 3.5-2. Features Depicted on Historic Maps within the Record Search Area

Map Name	Date	Findings	California Register Eligibility
USGLO Plat of T3/R5E	1856	Indian Trail	Unevaluated
USGLO Plat of T5/R8E	1914	Road alignment	Unevaluated
Edom Hill USGS	1941	Jeep trail	Unevaluated
Pinyon Well USGS Quad	1944	Jeep trail; Road alignment	Unevaluated
Lost Horse Mtn. USGS	1956	Pipeline; Transmission line; Access road; Road alignment; Structure	Unevaluated
Seven Palms Valley USGS	1958	Road alignment	Unevaluated

Pedestrian Survey: Methods and Results

On August 18 and 19, 2015, Aspen cultural resource specialist Evan Elliott, MA, RPA, assisted by Patrick Meddaugh, BA, conducted a pedestrian survey of all three trail APEs. Surveys were conducted by walking 15 meters (50 feet) wide transects along the length of the trails. When cultural resources were encountered, they were assigned a field number, plotted on USGS topographic maps with a Trimble GEO7 global positioning system (GPS) unit, and described in written notes. Thorough documentation of all resources was assured with the use of California Department of Parks and Recreation (DPR) series 523 field recording forms. The field crew examined the ground surface for the presence of prehistoric

artifacts (e.g., flaked stone tools, tool-making debris or debitage, stone milling tools, ceramics), historic-era artifacts (e.g., metal, glass, ceramics), sediment discolorations that could indicate the presence of cultural features (e.g., midden, hearths, cairns), and depressions or other features which could indicate the presence of structures (e.g., post holes, foundations). Additionally, the abundant bedrock outcrops in and adjacent to the East Indio Hills Trail APE were surveyed for any signs of rock art, bedrock milling features, rock shelters, or artifacts cached in crevices or small wind-caves. Isolated finds consist of single, and occasionally multiple (2 artifacts), prehistoric or historic artifacts or a single feature. Generally isolated finds are not considered National or California Register-eligible resources.

No National or California Register-eligible cultural resources were identified within any of the three trail APEs. However, a total of five resources were identified. A cairn of undetermined prehistoric or historic period age (Aspen-CVMC-C-1) and a 1911 U.S. GLO Survey Section Marker and cairn (Aspen-CVMC-C-2) were recorded along the Corkhill Trail. The entire federal APE of the Pushawalla Trail was encompassed by a historic period road and debris scatter resource (Aspen-CVMC-PR-1). A portion of the East Indio Hills Trail follows the alignment of a historic period road and a prehistoric isolate consisting of two ceramic sherds were recorded just off the trail. Much of the area surveyed showed signs of considerable erosion and soil movement as well as opportunistic dumping by recent users. While no obvious signs of looting were observed, it cannot be discounted. Although no National or California Register-eligible cultural resources were identified, the artifacts and features that were identified attest to both prehistoric and historic period use of the Project areas.

Table 3.5-3. Resources Identified through Field Survey

Aspen Field No.	Trail	Age	Description	Eligibility Recommendation
Aspen-CVMC-C-1	Corkill	Prehistoric/ Historic-era	Cairn of unknown age with two weathered cores and one historic tobacco tin.	Additional Information Needed
Aspen-CVMC-C-2	Corkill	Historic-era	US GLO Survey monument and cairn, dated 1911.	Not eligible
Aspen-CVMC-PR-1	Pushawalla Road	Historic-era	A road alignment with berms, diffuse refuse scatter, and small dam.	Not Eligible
Aspen-CVMC-EIH-1	East Indio Hills	Historic-era	A road alignment without any associated artifacts.	Not Eligible
Aspen-CVMC-EIH-ISO-1	East Indio Hills	Prehistoric	Two Salton buff prehistoric ceramic sherds.	Not Eligible

Native American Outreach

AB 52 directs tribes to contact all CEQA lead agencies to formally request to be notified of projects in regions the tribe is traditionally affiliated. Within 14 days of deciding to undertake a project or determining that an application for a project is complete, the CEQA lead agency must formally notify all tribes that have requested this notification. Notification usually takes the form of a letter and should be followed with a phone call confirming that the appropriate representative has received the project information. No tribes have contacted CVMC to request formal notification of projects.

3.5.2 Applicable Regulations, Plans, and Standards

Numerous laws, ordinances, regulations, and standards on federal, state, and local levels seek to protect and manage cultural resources. Due to the location of this Project on both federal (BLM) and non-federal lands, federal, state, and local laws and regulations were followed. Federal protections for scientifically significant cultural resources include NEPA, the National Historic Preservation Act (NHPA), among others, Federal Land Policy Management Act (FLPMA). California state regulations include the CEQA and Public Resources Code (PRC) Section 5097. Local regulations include the County of Riverside General Plan and the City of Indio General Plan.

Federal

National Historic Preservation Act of 1966 As Amended (NHPA) sets forth the responsibilities that federal agencies must meet in regard to cultural resources, especially in regards to Section 106 as set forth in the regulations (36 CFR Part 800). Federal agencies must conduct the necessary studies and consultations to identify cultural resources that may be affected by an undertaking, evaluate cultural resources that may be affected to determine if they are eligible for the NRHP (that is, whether identified resources constitute historic properties), and assess whether such historic properties would be adversely affected. Historic properties are resources listed on or eligible for listing on the NRHP (36 CFR 800.16[l][1]). A property may be listed in the NRHP if it meets criteria provided in the NRHP regulations (36 CFR 60.4). Typically such properties must also be 50 years or older (36 CFR 60.4[d]).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, or association and:

(A) That are associated with events that have made a significant contribution to the broad patterns of our history; or

(B) That are associated with the lives of persons significant in our past; or

(C) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) That have yielded, or may be likely to yield, information important in prehistory or history.

Section 106 defines an adverse effect as an effect that alters, directly or indirectly, the qualities that make a resource eligible for listing in the NRHP (36 CFR 800.5[a][1]). Consideration must be given to the property's location, design, setting, materials, workmanship, feeling, and association, to the extent that these qualities contribute to the integrity and significance of the resource. Adverse effects may be direct and reasonably foreseeable or may be more remote in time or distance (36 CFR 8010.5[a][1]).

National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) is an important tool for considering cultural and Native American interests, especially those that do not fall within the NHPA Section 106 authority.

Federal Land Policy Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.). In accordance with Section 103(c) of FLPMA, public lands are to be managed to consider the long-term needs of future generations for renewable and nonrenewable resources, including archaeological and historical resource values. Title VI of this act established several Designated Management Areas, including the California Desert Conservation Area (CDCA), where this Project is located. Appendix VII of the CDCA Final

Environmental Impact Statement (FEIS) describes the cultural resource element of the CDCA and outlines the methods employed by the BLM for gathering cultural resources data in the California Desert.

BLM State Protocol Agreement with the California State Historic Preservation Officer (2014) outlines how the BLM and the SHPO shall cooperatively implement the National Programmatic Agreement and the NHPA, Section 106, in California and in portions of Nevada managed by BLM California. The protocol streamlines Section 106 by eliminating case-by-case consultation with the SHPO on certain types of undertakings that culminate in "no historic properties affected" (36 CFR 800.4[d][1]) and "no adverse effect" findings (36 CFR 800.5[b]) (BLM, 2012d).

State

California Environmental Quality Act (California Public Resources Code Section 21000 et seq.) (1970) established that historical and archaeological resources are afforded consideration and protection by CEQA (14 CCR Section 21083.2, 14 CCR Section 15064). CEQA Guidelines define significant cultural resources under two regulatory designations: historical resources and unique archaeological resources.

A historical resource is a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR"; or "a resource listed in a local register of historical resources or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code"; or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record" (14 CCR Section 15064.5[a][3]).

While TCPs and cultural landscapes are not directly identified by name (category) in the state definitions of historical resources, TCPs correspond to "places" in CEQA and cultural landscapes correspond to "areas" in CEQA. Places and areas are included as types of historical resources. Historical resources automatically listed in the CRHR include California cultural resources listed in or formally determined eligible for the NRHP and California Registered Historical Landmarks from No. 770 onward (PRC 5024.1[d]). Locally listed resources are entitled to a presumption of significance unless a preponderance of evidence in the record indicates otherwise.

Under CEQA, a resource is generally considered historically significant if it meets the criteria for listing in the CRHR. A resource must meet at least one of the following criteria (PRC 5024.1; 14 CCR Section 15064.5[a][3]):

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. Title 14, CCR Section 4852(b)(1) adds, "is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States."

2. Is associated with the lives of persons important in our past. Title 14, CCR Section 4852(b)(2) adds, "is associated with the lives of persons important to local, California, or national history."

3. Embodies the distinctive characteristics of a type, period, region, or method of construction; or represents the work of an important creative individual; or possesses high artistic values.

Title 14, CCR 4852(b)(3) allows a resource to be CRHR eligible if it represents the work of a master.

4. Has yielded, or may be likely to yield, information important in prehistory or history. Title 14, CCR 4852(b)(4) specifies that importance in prehistory or history can be defined at the scale of "the local area, California, or the nation."

Historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (14 CCR 4852[c]).

An archaeological artifact, object, or site can meet CEQA's definition of a unique archaeological resource even if it does not qualify as a historical resource (PRC 21083.2[g]; 14 CCR 15064.5[c][3]). An archaeological artifact, object, or site is considered a unique archaeological resource if "it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC 21083.2[g]):

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person."

Assembly Bill 52. This bill changes sections of the public resources code to add consideration of Native American culture within the CEQA. The goal of AB 52 is to promote the involvement of California Native American Tribes in the decision-making process when it comes to identifying and developing mitigation for impacts to resources of importance to their culture. To reach this goal, the bill establishes a formal role for tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential Tribal Cultural Resources in the project area, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (PRC Section 21084.2).

Tribal Cultural Resources (TCR) can be sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Tribe. To qualify as a TCR, it must either be 1) listed on or eligible for listing on the California Register or a local historic register or, 2) a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC Section 21074). TCRs can include "non-unique archaeological resources" (see "unique archaeological resource" above) that, rather than being important for "scientific" value as a resource, can also be significant because of the sacred and/or cultural tribal value of the resource. Tribal representatives are considered experts appropriate for providing substantial evidence regarding the locations, types, and significance of tribal cultural resources within their traditionally and cultural affiliated geographic area (PRC Section 21080.3.1(a)).

Public Resources Code (PRC), Section 5097.5 states that no person shall willingly or knowingly excavate, remove, or otherwise destroy a vertebrate paleontological site or paleontological feature without the express permission of the overseeing public land agency. It further states under PRC 30244 that any

development that would adversely impact paleontological resources shall require reasonable mitigation. These regulations apply to projects located on land owned by or under the jurisdiction of the state or a city, county, district, or other public agency.

Public Resources Code (PRC), Section 5097.9 et seq. (1982) establishes that both public agencies and private entities using, occupying, or operating on state property under public permit, shall not interfere with the free expression or exercise of Native American religion and shall not cause severe or irreparable damage to Native American sacred sites. This section also creates the NAHC, charged with identifying and cataloging places of special religious or social significance to Native Americans, identifying and cataloging known graves and cemeteries on private lands, and performing other duties regarding the preservation and accessibility of sacred sites and burials.

Local

County of Riverside General Plan (Update 2008), Chapter 5, Multipurpose Open Space Element outlines several policies for the protection and preservation of prehistoric and historic-era cultural resources. These include (1) establishing a cultural resources program in consultation with tribes and the professional cultural resources consulting community; (2) reviewing proposed development for the possibility of cultural resources and for compliance with the cultural resources program; (3) designating as open space and allocating resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state; and (4) exercising sensitivity and respect for human remains from prehistoric and historic periods and complying with all applicable laws concerning such remains (Riverside County, 2008).

City of Indio General Plan includes a land use diagram map outlining Prehistoric/Ethnohistoric Cultural Resources Sensitivity that was developed as part of the General Plan for projects within the city. This map indicates the proposed area at the Golf Center Parkway Trailhead as being located in a high sensitivity area for cultural resources (Indio, 2015).

3.5.3 CEQA Significance Criteria

The following significance criteria are derived from Appendix G of the State CEQA Guidelines and PRC Section 21083.2. Any construction or recreational activity would result in a significant impact related to cultural or tribal cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5 and PRC Section 21083.2.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5 and PRC Section 21083.2.
- Disturb any human remains, including those interred outside of formal cemeteries (State CEQA Guidelines Section 15064.5[d]).
- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Section 21074.

3.5.4 Environmental Impacts and Mitigation Measures

3.5.4.1 Environmental Impacts

Both construction activities and recreational activities related to trail use could potentially affect cultural resources on or along the margins of the trails. The three trailhead locations of Corkill, Pushawalla, and Golf Center Parkway, along with the .1-mile road improvement on Corkill Road are the only locations within the Project to be adversely affected by substantial ground disturbance. However, surface or just below surface cultural resources could be damaged through trail building activities, and the access provided to recreationalists may facilitate casual looting and collection of archaeological artifacts, human remains, and fossils.

Impact CR-1: The Project could cause a substantial adverse change in the significance of a historic property or historical resource.

The proposed Project would be located in areas considered highly sensitive for cultural resources. Trail construction or recreational activities would not constitute an impact to the Coachella Canal due to the current existence of a bridge over the canal and the nature of the resource. Additionally, during construction there is a possibility of unanticipated discovery of cultural resources. Implementation of Mitigation Measure CR-1 and Mitigation Measure CR-2 would reduce the potential for the Project to impact historic properties or historical resources to a minor level by requiring monitoring for sensitive cultural resources during construction and protection of any significant unanticipated cultural resources discovered during construction. Mitigation measures are listed in Section 3.5.4.2 below.

Impact CR-2: The Project could cause a substantial adverse change in the significance of a unique archaeological resource.

The proposed Project contains no previously identified unique archaeological resources, thus no impact is expected. However, portions of the proposed Project would be located in areas considered highly sensitive for cultural resources. Project-related ground-disturbing activities have the potential to uncover prehistoric or historic period features, artifacts, or other cultural deposits that may be buried below the ground surface. Due to the sensitive nature of the area surrounding the Golf Center Parkway Trailhead, Mitigation Measure CR-1 (Monitor Sensitive Areas for Cultural Resources) would be implemented. In the case of unanticipated discovery of a unique archaeological resource, Mitigation Measure CR-2 (Assess and Treat Incidental Discovery of Cultural Resources) would be applied. Together, these measures reduce the potential for the Project to impact unique archaeological resources by requiring monitoring for sensitive cultural resources during construction and protection of any significant unanticipated cultural resources discovered during construction.

Impact CR-3: The Project could disturb human remains, including those interred outside of formal cemeteries.

The proposed Project is not known to contain any previously identified human remains, thus no impact is expected. However, portions of the proposed Project would be located in areas with considerable prehistoric occupation and thus are considered sensitive for encountering human remains. Project-related ground-disturbing activities have the potential to uncover human remains that may be buried below the ground surface, and recreational activities have the potential to encounter remains on the surface that were either exposed through aeolian sand movement or that were deposited in cairns or ceramic vessels on the surface. If any human remains are encountered during construction of the

Project, Mitigation Measure CR-3 would be implemented. Mitigation Measure CR-3 outlines specific measures to be implemented if human remains are discovered in order to treat the remains with respect and dignity, prevent damage, and ensure that the remains are properly treated in accordance with all applicable laws and regulatory guidance.

Impact TCR-1: *The Project could cause substantial adverse change in the significance of a tribal cultural resource.*

The proposed Project is not known to contain any previously identified tribal cultural resources, thus no impact is expected. However, portions of the proposed Project would be located in areas considered highly sensitive for cultural resources, which may also be considered tribal cultural resources. Project-related ground-disturbing activities have the potential to uncover prehistoric or historic period features, artifacts, or other cultural deposits that may be buried below the ground surface. With implementation of Mitigation Measures CR-1 through CR-3, the potential for an adverse change in the significance of a tribal cultural resource would be minimal.

3.5.4.2 Mitigation Measures

MM CR-1 **Monitor Sensitive Areas for Cultural Resources.** The area surrounding the Golf Center Parkway Trailhead is highly sensitive for subsurface cultural resources due to the proximity of the prehistoric shoreline of Lake Cahuilla and the large number of previously identified sites nearby. A qualified archaeological monitor must be present for any grading work required at this trailhead. In the event that unanticipated discoveries are made, Mitigation Measure CR-2 will be implemented.

MM CR-2 **Assess and Treat Incidental Discovery of Cultural Resources.** In the event that unanticipated cultural resources are encountered during ground disturbance, actions must be taken to assess their importance and, if necessary, protect them from any further potential adverse effects. This will include stoppage of all construction within 50 ft. of the discovery and a qualified archaeologist notified. If this is on BLM property, this archaeologist will be the appropriate BLM field station archaeologist. Work may continue only after the resources are recorded and evaluated by a cultural resources specialist who meets or exceeds the Secretary of the Interior Professional Qualification Standards in archaeology and the necessary mitigation is implemented.

MM CR-3 **Assess and Treat Inadvertent Discovery of Human Remains.** All human remains discovered are to be treated with respect and dignity following the guidance put forward in BLM Instruction Memorandum No. CA-2010-024. Upon discovery of human remains, all work within 50 ft. of the discovery area must cease immediately, nothing is to be disturbed, and the area must be secured. On federal lands, BLM law enforcement must first be called; they will contact the Riverside County Coroner's Office. On non-federal lands, the Coroner's Office must be called directly. The Coroner has 2 working days to examine the remains after notification. The appropriate land manager/owner of the site is to be called and informed of the discovery.

It is very important that the suspected remains, and the area around them, are undisturbed and the proper authorities called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are archaeological/historic or of modern origin and if there are any criminal or jurisdictional questions. If the remains are determined

to be archaeological/historic in origin, the requirements change depending on whether the discovery site is located on federally or non-federally owned/managed lands.

- Remains discovered on federally owned/managed lands: After being notified by BLM law enforcement, if the Coroner has determined the remains are archaeological or historic, these materials are by definition archaeological resources, and the appropriate federal laws apply. The local Field Office Archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA to determine the disposition of the materials. If the remains are determined to be Native American, the steps as outlined in NAGPRA, 43 CFR 10.6 (Inadvertent discoveries) must be followed.

- Remains discovered on non-Federally owned/managed lands: California state law has additional requirements that apply to non-federal lands. After the Coroner has determined the remains on non-federally owned/managed lands are archaeological/historic, the Coroner will make recommendations concerning the treatment and disposition of the remains to the person responsible for the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American he/she shall contact the NAHC by telephone within 24 hours. The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48 hours to make recommendations to the land owner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the land owner shall reinter the remains in an area of the property secure from further disturbance. If the land owner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC.

3.5.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact CR-1:** The proposed Project would be located in areas considered highly sensitive for cultural resources. Implementation of Mitigation Measures CR-1 and CR-2would reduce the potential for the Project to impact historic properties or historical resources to a less-than-significant level (Class II).

- **Impact CR-2:** The proposed Project contains no previously identified unique archaeological resources, thus no impact is expected. However, portions of the proposed Project would be located in areas considered highly sensitive for cultural resources. Implementation of Mitigation Measures CR-2 and CR-3 would reduce the potential for the Project to impact unique archaeological resources. With implementation of mitigation, this impact would be less than significant (Class II).

- **Impact CR-3:** The proposed Project is not known to contain any previously identified human remains, thus no impact is expected. However, portions of the proposed Project would be located in areas with considerable prehistoric occupation and thus are considered sensitive for encountering human remains. Implementation of Mitigation Measure CR-3 would minimize the potential for the Project to disturb any human remains that may be encountered, and impacts would be less than significant (Class II).

- **Impact TCR-1**: The proposed Project contains no previously identified tribal cultural resources, thus no impact is expected. However, portions of the proposed Project would be located in areas considered highly sensitive for cultural resources which may also be tribal cultural resources. Implementation of Mitigation Measures CR-1 through CR-3 would reduce the potential for the Project to impact tribal cultural resources. With implementation of mitigation, this impact would be less than significant (Class II).

3.5.6 Alternatives Analysis

3.5.6.1 Alternative 1 - Pushawalla

Under the Pushawalla Alternative, the only components of the Project that would be implemented would be the Pushawalla Trailhead and the Pushawalla Trail, described in Sections 1.3.3 and 1.3.4. The impacts associated with trailhead and trail construction and recreation under this alternative would be reduced compared to the proposed Project. However, as existing uncontrolled recreational use of the area would continue in the East Indio Hills and Corkill project areas, this alternative has the potential to have greater impacts on cultural and tribal cultural resources than that of the proposed Project.

3.5.6.2 Alternative 2 – Pushawalla and East Indio Hills

Under the Pushawalla and East Indio Alternative, the proposed Corkill Road Trailhead and Corkill Trail would not be established, but all other aspects of the proposed Project would be implemented, including the Pushawalla Trailhead, the Pushawalla Trail, the Golf Center Parkway Trailhead, and the East Indio Hills Trail. The impacts associated with trailhead and trail construction and recreation under this alternative would be reduced compared to the proposed Project. However, as existing uncontrolled recreational use of the area would continue in the areas of the Corkill project area, this alternative has the potential to have greater impacts on cultural and tribal cultural resources than that of the proposed Project.

3.5.6.3 Alternative 3 – No Action

The No Action Alternative has the potential to cause the greatest amount of impact to cultural resources. Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing uncontrolled recreational use of the area would continue, including hiking, mountain biking, and equestrian use. This alternative would leave cultural resources and tribal cultural resources with the least amount of protection and provide the least amount of education to the public on their importance to the community.

3.5.7 Cumulative Analysis

The purpose of this Project is to construct and improve proposed trailheads and trails in order to reduce the currently uncontrolled recreational use of the area, including hiking, mountain biking, and equestrian use. By directing these actions to these three established and maintained trails, this Project would have a positive effect on cultural resources and tribal cultural resources when considered cumulatively.

3.6 Environmental Justice

3.6.1 Environmental Setting

Table 3.6-1 identifies the minority and low-income percentages of Riverside County and the incorporated communities nearest the proposed trails. As shown, only the City of Palm Springs contains a minority population percentage less than that of Riverside County as a whole. Meanwhile, only Thousand Palms contains a low-income population percentage less than Riverside County as a whole.

Table 3.6-1. Environmental Justice Demographics for the Project Area

Area	Total Population	Minority[2] Population (Percent of Total)[1]	Percent of Total Population Low-Income[1,3]
Riverside County	2,228,558	1,360,669 (61.1%)	16.2%
Indio	80,167	59,333 (74.0%)	21.9%
Cathedral City	51,942	35,871 (69.0%)	20.5%
Palm Springs	45,317	17,019 (37.6%)	18.2%
Coachella	41,625	40,959 (98.4%)	30.9%
Desert Hot Springs	27,096	18,529 (68.4%)	32.0%
Thousand Palms	7,453	4,901 (65.8%)	14.4%

Source: U.S. Census Bureau 2015a and 2015b.

[1] Because U.S. Census 2009-2013 American Community Survey (ACS) estimates come from a sample population, a certain level of variability is associated with the estimates. Supporting documentation on ACS data accuracy and statistical testing can be found on the ACS website in the Data and Documentation section available here: http://www.census.gov/acs/www/data_documentation/documentation_main/. For purposes of this analysis, U.S. Census ACS data was utilized for providing current data used to identify minority and low-income populations. For these reasons, U.S. Census ACS data is considered best available for representing the demographic makeup of communities for this Environmental Assessment. Use of published U.S. Census ACS data estimates is commonly used by Lead Agencies in compliance with Executive Order 12898, as well as CEQ and EPA guidance for incorporating Environmental Justice Concerns under NEPA.

[2] Represents the population excluding those identified as "Not Hispanic or Latino, White Alone" within the US Census 2009-2013 ACS data set.

[3] Represents individuals with mean annual incomes below the annual statistical poverty level, identified by poverty status in the last 12 months, identified as "percent below poverty level" within the US Census 2009-2013 ACS data set.

3.6.2 Applicable Regulations, Plans, and Standards

Executive Order 12898

In 1994 President Clinton issued the Executive Order, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, to focus federal attention on environmental and human health conditions in minority and low-income communities. EO 12898 promotes nondiscrimination in federal programs that substantially affect human health and the environment, and it provides information access and public participation relating to these matters. This order requires federal agencies (and state agencies receiving federal funds) to identify and address any disproportionately high or adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations. The Council on Environmental Quality (CEQ) oversees federal compliance with EO 12898.

Council on Environmental Quality's *Environmental Justice Guidance Under the National Environmental Policy Act*

To ensure that environmental justice concerns are effectively identified and addressed according to EO 12898, the CEQ, in consultation with the Environmental Protection Agency (EPA), developed guidance to assist federal agencies to implement procedures. According to the CEQ's "Environmental Justice Guidance Under NEPA," agencies should consider the composition of affected areas to determine whether minority or low-income populations are affected by a proposed action, and, if so, whether those environmental effects may be disproportionately high or adverse (EPA, 1998 and CEQ, 1997).

According to the CEQ environmental justice guidelines, minority populations should be identified if:

- A minority population percentage either exceeds 50 percent of the population of the affected area, or
- If the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (e.g., a governing body's jurisdiction, neighborhood census tract, or other similar unit).

3.6.3 Environmental Impacts and Mitigation Measures

Impact EJ-1: Project effects could be disproportionately borne by minority or low-income populations.

Table 3.6-1 identifies minority and low-income populations of communities proximate to the proposed Project. Construction impacts of the Project are nominal, with any temporary impacts mitigated to a level not considered adverse. Once completed, the trailheads and trails would be open to all members of the public and would not generate any substantial adverse environmental impacts.

The proposed Project would provide increased access to low-impact, non-motorized, mixed-use outdoor recreation in natural open space lands for the Coachella Valley and surrounding areas. As described in Section 2.3, an objective of the proposed Project is to provide the rapidly expanding population in the area, including underserved communities with ethnic minority groups, new recreational opportunities. Presently, this area is lacking in established low-impact recreational opportunities.

Because the primary objective/purpose of the proposed Project is to expand recreational areas and opportunities to all members of the community, minority populations or low-income populations would not burden disproportionate environmental impacts of any kind. The proposed Project is considered beneficial to the community, including environmental justice population groups.

3.6.4 Alternatives Analysis

3.6.6.1 Alternative 1 - Pushawalla

While beneficial recreational opportunities would be reduced under Alternative 1 compared with the proposed Project because Alternative 1 would only build one trailhead and enhance one trail, this alternative would continue to provide minority and low-income populations within the area new recreational opportunities. Therefore, minority or low-income populations would not burden disproportionate environmental impacts of any kind. Alternative 1 is considered beneficial to the community, including environmental justice population groups.

3.6.6.2 Alternative 2 – Pushawalla and East Indio Hills

While beneficial recreational opportunities would be reduced under Alternative 2 compared with the proposed Project, Alternative 2 would continue to provide minority and low-income populations within the area new recreational opportunities. Therefore, minority or low-income populations would not burden disproportionate environmental impacts of any kind. Alternative 2 is considered beneficial to the community, including environmental justice population groups.

3.6.6.3 Alternative 3 – No Action

Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing recreational use of the area would continue, including hiking, mountain biking, and equestrian use. While beneficial recreational opportunities would not be generated under the No Action Alternative, status quo would continue so minority or low-income populations would not burden disproportionate environmental impacts of any kind.

3.6.5 Cumulative Analysis

While cumulative development projects within the area have the potential to create environmental impacts that are disproportionate to minority or low-income populations, the proposed Project and alternatives would not generate any potential for these populations to burden disproportionate environmental impacts of any kind. No adverse cumulative environmental justice impacts would occur.

3.7 Hydrology and Water Quality

3.7.1 Environmental Setting

The proposed Project study area is located in the Coachella Valley, within the northwestern portion of the Colorado Desert geomorphic province (CGS, 2002). Climate in the area is generally arid, with hot, dry summers and mild winters. Average annual precipitation for the community of Thousand Palms (near the center of the proposed Project study area) is approximately 5 inches, with the majority of the precipitation falling during the winter and early spring (idcide.com, 2015). The topography in the area is generally characterized by alluvial fans that form the valley. The low-lying Indio Hills rise from the center of the valley, and the area is surrounded by larger mountain ranges, including the San Bernardino and San Jacinto Mountains.

The proposed Project study area is located in the Colorado River Hydrologic Region and is subject to the water quality standards and regulations of the Colorado River Regional Water Quality Control Board (CDF, 2004). Most of the streams in the area are ephemeral and flow only intermittently in response to precipitation. The man-made Coachella Canal, which is crossed by the East Indio Hills Trail, conveys water from the Colorado River and exhibits steady, regular flow. The only nearby impaired waterbody is the Coachella Valley Storm Water Channel, which is located approximately 1 mile southwest of the Golf Center Parkway Trailhead, across Interstate 10. The channel is listed as impaired by pesticides, PCBs, and pathogens (SWRCB, 2010). The channel is subject to the limits of the Coachella Valley Storm Water Channel Bacterial Indicators Total Maximum Daily Load (TMDL).

None of the proposed Project components are located within a 100-year floodplain (FEMA, 2015). The Desert Hot Springs, Indio, and Mission Creek Subbasins of the Coachella Valley Groundwater Basin

underlie the proposed Project area. Groundwater levels generally declined over the last several decades due to agricultural and residential use, but have recently begun to recover due to improved groundwater management (USGS, 2014). Construction of the proposed Project would not encounter shallow groundwater as the amount and depth of ground disturbance would be minimal (i.e., surface grading and shallow post installation for signs).

3.7.2 Applicable Regulations, Plans, and Standards

Clean Water Act. The 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. The National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402) regulates those discharges. 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 Colorado River RWQCB. The proposed Project would disturb more than 1 acre in total, and the CVMC may be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) to comply with Clean Water Act NPDES requirements.

California Streambed Alteration Agreement. Sections 1600 to 1616 of the California Fish and Game Code require that any 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 CDFW. If the CDFW determines the alteration may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) would be prepared. The Agreement includes conditions necessary to protect those resources. The Agreement applies to any CDFW jurisdictional stream, including ephemeral streams and desert washes.

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 proposed Project area are contained in the Water Quality Control Plan for the Colorado River Basin – Region 7 (CRWQCB, 2006). Water quality protection relative to the proposed Project relates primarily to the avoidance of increased erosion and sedimentation, and the avoidance of toxic pollutants discharges to surface waterbodies or groundwater aquifers.

3.7.3 CEQA Significance Criteria

The following significance criteria for hydrology and water quality have been identified based on the CEQA Appendix G Environmental Checklist and adjusted for relevance to the proposed Project. For the purposes of the CEQA analysis for this proposed Project, an impact would be considered significant and require mitigation if proposed Project construction or operation would:

- Violate any water quality standards or waste discharge requirements

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.

All other CEQA significance criteria from Appendix G for hydrology and water quality have been found to have no impact (refer to Appendix A). Therefore, those items are not evaluated further.

3.7.4 Environmental Impacts and Mitigation Measures

This section discusses potential impacts to hydrology and water quality that could result from construction and operation of the proposed Project.

Impact WQ-1: Construction of the proposed Project could violate water quality standards or waste discharge requirements.

Construction of the proposed Project would disturb more than 1 acre of soil. This disturbed soil could be subsequently eroded during a storm event and result in increased sedimentation of a nearby waterbody. However, the potential for construction of the proposed Project to result in increased erosion and sedimentation is very small due to the small amount of soil disturbance, the generally arid climate, and the lack of nearby perennial waterbodies (with the exception of the Coachella Canal adjacent to the Golf Center Parkway Trailhead). An existing berm that separates the proposed Golf Center Parkway Trailhead from the Coachella Canal would prevent any eroded sediment from entering the canal. Because the Corkill Road improvements likely would impact a wash that is a jurisdictional water (either water of the State or water of the U.S., or both), the CVMC may be required to obtain several water quality permits, including 401 certification, a 404(b)(1) permit, or a LSAA. These permits would contain goals and requirements to minimize erosion and to minimize water quality degradation. In addition to the permits listed above that may be required for the proposed Project, Mitigation Measures BIO-2 and BIO-13 (see Section 3.4.3.2) would further reduce the potential for water quality degradation from increased erosion and sedimentation.

The use of construction equipment to prepare the trailhead sites could result in a spill or accidental release of hazardous materials, including fuel, engine oil, engine coolant, and lubricants. These hazardous materials could contaminate a nearby waterbody either directly or indirectly through subsequent transport by stormwater runoff. Contamination of a nearby waterbody by hazardous materials is unlikely due to the short construction period, the minimal amount of construction equipment and associated hazardous materials to be used in construction of the proposed Project, the generally arid climate of the region, and the lack of nearby perennial waterbodies (except for the Coachella Canal). Also, because the proposed Project would disturb more than 1 acre in total, the CVMC may be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) to comply with Clean Water Act NPDES requirements. Compliance with these requirements would include preparation of a Storm Water Pollution Prevention Plan, which would specify Best Management Practices to minimize erosion and to quickly contain and clean up any accidental spills or leaks.

Impact WQ-2: Construction of the proposed Project could alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially alter the rate or amount of runoff in a manner which would result in substantial erosion, siltation, or flooding on or off site.

Construction of the proposed Project would involve minor alterations to the existing drainage pattern of the area. Berms would be constructed along portions of the Corkill and Pushawalla Trailheads to divert surface runoff from rainstorms away from the parking areas. A short section of Corkill Road, just north of the proposed trailhead site, would be improved through grading, the placement of rock or another stabilizing material, and drainage improvements to prevent erosion of the roadway. These minor alterations of the existing drainage pattern would not result in substantial erosion or siltation on- or off-site. The climate of the region is generally arid and both streamflow and overland sheet flow occur only briefly following storm events. The drainage alterations would be designed to prevent erosion on site. Also, the minor drainage alterations would not result in increased runoff nor would they substantially concentrate sheet flow across the proposed Project sites. No substantial increase in off-site erosion or siltation due to the minor drainage pattern alterations is expected. On-site flooding would be prevented or reduced by construction of berms along portions of the Corkill Road and Pushawalla Trailheads. The floodwater that would be diverted away from those trailheads would not substantially increase flooding off-site.

3.7.5 CEQA Significance Determination

This section provides significance determinations for the criteria evaluated from the CEQA Appendix G Environmental Checklist.

- **Impact WQ-1:** Construction of the proposed Project would result in ground disturbance and the use of heavy construction equipment and vehicles. These activities could result in increased erosion and sedimentation and the accidental spill or release of hazardous materials. Implementation of Mitigation Measures BIO-2 and BIO-13, as well as compliance with existing laws and regulations, would reduce the severity of this potential impact to less than significant and no additional mitigation is required (Class II).
- **Impact WQ-2**: Construction of the proposed Project would result in minor alterations to the drainage pattern. These minor alterations would not result in substantial erosion, sedimentation, or flooding on or off site. This impact would be less than significant and no mitigation is required (Class III).

3.7.6 Alternatives Analysis

3.7.6.1 Alternative 1 - Pushawalla

Under this alternative, the only components of the proposed Project that would be implemented would be the Pushawalla Trailhead and the Pushawalla Trail. Compared to the proposed Project, this alternative would result in a decreased amount of construction activity, a decreased amount of ground disturbance, and fewer alterations to the existing drainage pattern. The potential for increased erosion, sedimentation, flooding, and degradation of water quality would be lower than under the proposed Project.

3.7.6.2 Alternative 2 – Pushawalla and East Indio Hills

Under this alternative, the proposed Corkill Road Trailhead and Corkill Trail would not be established, but all other aspects of the proposed Project would be implemented. Compared to the proposed Project, this alternative would result in a decreased amount of construction activity, a decreased amount of ground disturbance, and fewer alterations to the existing drainage pattern. The potential for increased erosion, sedimentation, flooding, or degradation of water quality would be lower than under the proposed Project. However, the potential for hydrology and water quality impacts in this alternative would be slightly greater than under Alternative 1.

3.7.6.3 Alternative 3 – No Action

Under this alternative, none of the proposed trailheads or trails would be constructed or improved. No impacts related to hydrology or water quality would occur under this alternative.

3.7.7 Cumulative Analysis

The cumulative conditions for hydrology and water quality are the result of many past, present, and reasonably foreseeable projects within the cumulative analysis study area. Examples of cumulative projects in the cumulative analysis study area include residential, commercial, and industrial development, transportation and infrastructure projects, and renewable energy projects.

Construction and operation of numerous past and present projects within the study area have resulted in alteration of the natural drainage pattern and degradation of the surrounding water resources. Construction and operation of the proposed Project would not substantially degrade water quality. Existing drainage patterns would not be altered such that there would be a substantial increase in erosion, sedimentation, or flooding on or off site. Therefore, construction and operation of the proposed Project would not combine with the adverse effects from construction and operation of other projects in the cumulative analysis study area to result in a substantial cumulative adverse effect to hydrology and water quality.

3.8 Land Use and BLM Lands and Realty

3.8.1 Environmental Setting

The Project would be on land that is under the jurisdiction of several agencies, including the BLM, CVMC, County of Riverside, and City of Indio. The Project includes primarily existing trails that would be officially designated with implementation of the Project. Immediately surrounding the trails and trailheads are natural open space areas. Other land uses in the vicinity of the Corkill Road Trailhead and Trail include rural residences to the west of the Project area. Other land uses in the vicinity of the Pushawalla Trailhead and Trail include a cluster of rural residences approximately one mile southwest of the Project area. Other land uses in the vicinity of the Golf Center Parkway Trailhead include a single-family residential development approximately 500 feet south of the trailhead boundary, and the Coachella Canal is adjacent to the Golf Center Parkway Trailhead and the East Indio Hills Trail crosses it approximately 0.03 mile (160 feet) from the trailhead over an existing bridge. Also, portions of the southern end of the East Indio Hills Trail would be adjacent to the Golf Club at Terra Lago and would be approximately 1,000 feet east of the Shadow Lake Estates, a private lake community. At the northeast end of the East Indio Hills Trail, rural residences are located approximately half of a mile east of the trail.

3.8.2 Applicable Regulations, Plans, and Standards

Federal

Federal Land Policy and Management Act (FLPMA) of 1976, as Amended

The FLPMA establishes public land policy; guidelines for administration; and provides for the management, protection, development, and enhancement of public lands. BLM is responsible for responding to requests regarding the development of resources on BLM-administered lands in a manner that balances diverse resource uses.

CDCA Plan, as Amended

The CDCA encompasses 25 million acres in southern California designated by Congress in 1976 through the FLPMA. The BLM manages about 10 million of those acres. Congress directed the BLM to prepare and implement a comprehensive long-range plan for the management, use, development, and protection of public lands within the CDCA. The CDCA Plan, as amended, is based on the concepts of multiple-use, sustained yield, and maintenance of environmental quality. The CDCA Plan provides overall regional guidance for BLM-administered lands in the CDCA and establishes long-term goals for protection and use of the California desert. The CDCA Plan establishes four multiple-use classes (MUCs); MUC guidelines; and plan elements for specific resources or activities, such as motorized vehicle access, recreation, and vegetation (BLM, 1999).

The MUC designations within the Coachella Valley CDCA Amendment planning area include Class L (Limited), Class M (Moderate), Class I (Intensive), and Class C (Controlled) (BLM, 2002). The Project would traverse lands under the Class L designation. MUC Class L lands are managed to protect sensitive natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished.

Coachella Canal Area Resource Management Plan (RMP)

This RMP was prepared by the Bureau of Reclamation with the purpose of establishing a 10-year plan for the conservation, protection, enhancement, development, and use of the natural resources along the Coachella Canal while protecting the authorized Reclamation project purposes as detailed in the Boulder Canyon Project. The objectives of this Plan are the following:

- Explore ways to enhance and protect the natural and cultural resources.
- Identify and determine uses of Reclamation lands that are compatible and consistent with Reclamation's primary project purposes and CVWD's operation, maintenance, and replacement responsibilities associated with the Coachella Canal.
- Identify long-term programs that address public health and safety, fish and wildlife, recreation, and other resources.
- Identify financially feasible opportunities or partnerships to assist in managing resources.
- Document specific management actions that will allow Reclamation to operate and maintain lands associated with the Coachella Canal, while protecting authorized Reclamation project purposes as detailed in the Boulder Canyon Project Act of December 21, 1928 (45 Stat. 1057).

- Protect and enhance Reclamation's existing partnerships with the Coachella Valley Water District, Riverside County, and Coachella Valley Recreation and Park District (CVRPD).
- Protect existing right-of-use authorizations. (USBR, 2006).

State

Coachella Valley Mountains Conservancy (CVMC, 2007)

The CVMC is a state agency established in 1991 to pursue the mission to protect the natural and cultural resources of the Coachella Valley: the scenic, wildlife, cultural, geologic, and recreational resources. The CVMC is directed by a 23-member Governing Board, with local communities, state and federal agencies, elected officials, non-profit organizations, and business and environmental interests working together. Since its inception, the Conservancy and its partners have conserved over 81,000 acres. Included in the CVMC's Strategic Plan is the following goal and objective:

> Goal 3. Provide enhanced educational, interpretive, and recreational opportunities for the public to increase their appreciation, understanding, and enjoyment of the mountains.
>
> > Objective 2. Coordinate with local, federal, tribal, and other state agencies, non-profit organizations, and user groups on regional trails planning consistent with resource conservation.

Local

County of Riverside General Plan (Riverside County, 2014)

The County of Riverside General Plan is the result of a comprehensive planning process that establishes a series of fundamental values shaping the future quality of life for the County. The General Plan consists of 11 elements that generally discuss countywide policies and plans, and 19 area plans that discuss regional issues and policies to address the special needs of each unique community within the County.

The Land Use Element of the General Plan functions as a guide to planners, the general public, and decision makers as to the ultimate pattern of development. It designates the general distribution, general location, and extent of land uses, such as housing, child care facilities, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses.

The Project site is within the Western Coachella Valley Area Plan, which includes the following policy:

> Policy WCVAP 18.1 – Develop a system of local trails that enhances the Western Coachella Valley's recreational opportunities and connects with the Riverside County regional trails system and the Eastern Coachella Valley Area Plan trails system.

City of Indio General Plan 2020 (Indio, 1994)

The General Plan contains the plan for the City of Indio's future development and operation through the goals and policies that the City will follow. It also contains a full set of implementation measures that will ensure the success of the General Plan. Section 3.2 of the General Plan provides goals and policies for circulation throughout the City. The following policy applies to trails:

Policy CIR-2.4 Equestrian/Pedestrian Trails – Provide for the development of equestrian and hiking trails in appropriate areas of the City.

3.8.3 CEQA Significance Criteria

According to the CEQA Environmental Checklist for assessing the impacts to recreation, the Project would have a potentially significant impact if it would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

All other CEQA significance criteria from Appendix G for land use and planning have been found to have no impact (refer to Appendix A). Therefore, those items are not evaluated further.

Impact LR-1 below discusses the impacts associated with the first criterion. Under the second criterion, the analysis for potential conflicts with Multiple Species Habitat Conservation Plan is discussed in detail under the biological resources analysis. Therefore, this criterion is not addressed in this section of the EA/MND. Refer to Section 3.4 (Biological Resources) for the full analysis.

3.8.4 Environmental Impacts and Mitigation Measures

Impact LR-1: The Project could conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Federal

BLM CDCA Plan and Coachella Valley Amendment

The proposed Project is located within the Limited designation. The classification designation governs the type and degree of land use action allowed within the classification area. All land use actions and resource management activities on BLM-administered lands within a MUC delineation must meet the guidelines for that class. These guidelines are listed on Table 1, MUC Guidelines, of the CDCA Plan (page 15). Under the Limited designation, the CDCA guidelines state the following regarding recreation activities:

- This class is suitable for recreation which generally involves low to moderate user densities.
- Permanent or temporary facilities for resource protection and public health and safety are allowed.

As such, the proposed trails, trailheads, and trail improvements under the Project would not conflict with the Limited classification.

USBR Coachella Canal Area RMP

As stated in the setting above, the Golf Center Parkway Trailhead is adjacent to the Coachella Canal and the East Indio Hills Trail crosses the canal approximately 0.03 mile (160 feet) from the trailhead over an existing bridge. The proposed Project would provide increased access and recreation opportunities

along the Coachella Canal, which would not conflict with the objectives noted in Section 3.8.2, above. Therefore, the proposed Project would not conflict with this RMP.

State and Local Plans

Section 3.8.2 above provides the applicable plans for the CVMC, County of Riverside, and City of Indio. Each of the applicable plans includes goals, objectives, and policies to provide pedestrian and equestrian trails. The proposed Project would provide increased access to low-impact, non-motorized, mixed-use outdoor recreation opportunities for hikers, mountain bikers, and equestrians in natural open space lands for the Coachella Valley and surrounding areas; thereby fulfilling the goals and objectives that aim to expand upon the existing trail system. Therefore, the proposed trails, trailheads, and trail improvements under the Project would comply with the applicable State and local land use plans.

3.8.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact LR-1:** The proposed trails, trailheads, and trail improvements under the Project would comply with and fulfill the applicable State and local land use plans, goals, objectives and policies that aim to provide and expand upon the existing trails. Therefore, there would be no land use impacts related to conflict with land use plans, policies, or regulations.

3.8.6 Alternatives Analysis

3.8.6.1 Alternative 1 - Pushawalla

In comparison to the proposed Project, Alternative 1 would reduce the recreational opportunities by only constructing one trailhead and enhancing one trail. Nonetheless, the goals and objectives for trail development would occur under this alternative, and therefore would be consistent with the applicable plans, goals, and policies.

3.8.6.2 Alternative 2 – Pushawalla and East Indio Hills

In comparison to the proposed Project, Alternative 2 would reduce the recreational opportunities by developing one less trail and trailhead. Nonetheless, the goals and objectives for trail development would occur under this alternative, and therefore would be consistent with the applicable plans, goals, and policies.

3.8.6.3 Alternative 3 – No Action

Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing recreational use of the area would continue, including hiking, mountain biking, and equestrian use. Although recreational opportunities that comply with the State and local goals and objectives to expand the existing trail system would not occur under the No Action Alternative, the absence of the Project would not conflict with the applicable plans and policies.

3.8.7 Cumulative Analysis

While cumulative development projects within the area have the potential to create environmental impacts to surrounding recreation areas, the Project and alternatives would not generate any potential for conflicts with applicable plans and policies. Therefore, no adverse cumulative land use impacts would occur.

3.9 Recreation

3.9.1 Environmental Setting

The existing recreation facilities and areas surrounding the Project area include Joshua Tree National Park, several golf courses, and designated and informal trails throughout the mountainous regions. Recreation activities within the mountainous areas include hiking, camping, mountain biking, and OHV use. There are areas of BLM land that, based on the Limited Multiple-Use Class designation, are suitable for recreation activities that involve low to moderate users. Also, trails are open for non-vehicle use and new trails for non-motorized access may be allowed (BLM, 1999).

3.9.2 Applicable Regulations, Plans, and Standards

Federal

Federal Land Policy and Management Act of 1976

The FLPMA requires BLM to manage public lands in a manner that will (1) protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; (2) where appropriate, preserve and protect certain public lands in their natural condition; (3) provide food and habitat for fish, wildlife, and domestic animals; and (4) provide for both outdoor recreation and human occupancy and use by encouraging collaboration and public participation throughout the planning process.

CDCA Plan

The CDCA encompasses 25 million acres in southern California designated by Congress in 1976 through the FLPMA. The BLM manages about 10 million of those acres. The CDCA Plan provides overall regional guidance for BLM-administered lands in the CDCA and establishes long-term goals for protection and use of the California desert. The CDCA Plan includes a Recreation Element, which is summarized below, and an amendment to the CDCA for the Coachella Valley area, also summarized below.

Recreation Element

The California Desert's diversity of natural values provides a myriad of things for people to do in pursuing recreational interests. Opportunities include activities such as target shooting, hang gliding, model rocket and airplane flying. There is a wealth of geological areas to lure the rockhound and hobby prospector. Hunters find the Desert a challenge for game species from quail to mule deer. Sightseers, painters, and photographers know the recreational delights of spring wildflower displays, year-round birdwatching, as well as the sublime desert landscape. Activities, such as sightseeing, camping, and hiking, depend on an unspoiled natural setting for a rewarding experience. Opportunities for solitude and primitive or unconfined forms of recreation are also provided in the Desert. (BLM, 1999)

Amendment for the Coachella Valley

Part of the purpose and need for the CDCA Plan Amendment for the Coachella Valley is to provide recreational opportunities on the public lands, and establish and maintain a network of hiking, biking, and equestrian trails that provide opportunities for year-round recreation. (BLM, 2002)

Recreation and Public Purposes Act

The Recreation and Public Purposes Act is administered by the BLM. The Act authorizes the sale or lease of public lands for recreational or public purposes to State and local governments and to qualified nonprofit organizations. Examples of typical uses on lands subject to the Act are historic monument sites, campgrounds, schools, fire houses, law enforcement facilities, municipal facilities, landfills, hospitals, parks, and fairgrounds.

State

Coachella Valley Mountains Conservancy (CVMC, 2007)

The CVMC is a state agency established in 1991 to pursue the mission to protect the natural and cultural resources of the Coachella Valley: the scenic, wildlife, cultural, geologic, and recreational resources. The CVMC is directed by a 23-member Governing Board, with local communities, state and federal agencies, elected officials, non-profit organizations, and business and environmental interests working together. Since its inception, the Conservancy and its partners have conserved over 81,000 acres. Included in the CVMC's Strategic Plan is the following goal and objective applicable to recreation:

> Goal 3. Provide enhanced educational, interpretive, and recreational opportunities for the public to increase their appreciation, understanding, and enjoyment of the mountains.
>
> > Objective 2. Coordinate with local, federal, tribal, and other state agencies, non-profit organizations, and user groups on regional trails planning consistent with resource conservation.

Local

County of Riverside General Plan – Chapter 5: Multipurpose Open Space Element

The Multipurpose Open Space Element of Riverside County's General Plan addresses protecting and preserving natural resources, agriculture and open space areas, managing mineral resources, preserving and enhancing cultural resources, and providing recreational opportunities for the citizens of Riverside County. This element categorizes issues and policies into those that seek to conserve, or manage the use of, resources and those that seek to preserve resources for the purpose of sustaining their stocks in perpetuity. (Riverside County, 2014)

City of Indio General Plan 2020 (Indio, 1994)

The General Plan contains the plan for the City of Indio's future development and operation through the goals and policies that the City will follow. It also contains a full set of implementation measures that will ensure the success of the General Plan. Section 3.2 of the General Plan provides goals and policies for circulation throughout the City. The following policy applies to recreational trails:

Policy CIR-2.4 Equestrian/Pedestrian Trails – Provide for the development of equestrian and hiking trails in appropriate areas of the City.

3.9.3 CEQA Significance Criteria

According to the CEQA Environmental Checklist for assessing the impacts to recreation, a Project causes a potentially significant impact if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.9.4 Environmental Impacts and Mitigation Measures

3.9.4.1 Environmental Impacts

Impact REC-1: The Project could increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

The primary objective/purpose of the Project is to provide non-motorized recreational opportunities, which would be beneficial to the surrounding community. The second objective/purpose of the Project is that, by designating trails in the area, use of more sensitive habitat areas for hiking, mountain biking, and horseback riding will diminish and unauthorized uses will be discouraged by the more visible presence of outdoor recreationists. Therefore, the objectives/purposes of the Project are to increase the use of these designated trails, which will help avoid the physical deterioration of other informal trails in the surrounding area. However, construction and expansion of the trails could result in increased access to the trails by unauthorized OHV users. The use of motorized vehicles would increase the rate of physical deterioration of the trails, and would not be compatible with the intended users (hikers and equestrians, and mountain bikers on the Corkill and East Indio Hills trails). In efforts to reduce existing and future unauthorized uses, Mitigation Measure REC-1 is provided below. Where feasible, implementation of this measure would block access to the trails by motorized vehicles. The CVMC would provide routine trail patrols to prevent unauthorized uses. Also, the signage at the trailheads would include phone numbers for authorized users to contact the CVMC and report any unauthorized uses.

Impact REC-2: The Project would include recreation facilities and require the construction and expansion of recreational facilities, which could have an adverse physical effect on the environment.

The Project consists of establishing or improving three trailheads, each with an associated recreation trail. The primary objective/purpose of the Project is to provide increased access to low-impact, mixed-use outdoor recreation opportunities for hikers, mountain bikers, and equestrians. As the Project includes the establishment or improvement of recreational facilities, which would require construction and operation activities, there may be adverse physical effects on the environment. However, the purpose of this CEQA/NEPA analysis is to identify the potential impacts and provide mitigation measures for impacts that would result in adverse effects. Therefore, implementation of all mitigation measures set forth in this EA/MND would avoid adverse physical impacts under this criterion.

3.9.4.2 Mitigation Measures

MM REC-1 Prevent Unauthorized Recreation Activities. Where feasible, the CVMC will block access to the trails that allow for unauthorized OHV use to occur. Measures to block access shall include fencing, gates, or natural barriers using either rock or vegetation.

3.9.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact REC-1:** Any unauthorized use of motorized vehicles on the proposed trails would increase the rate of physical deterioration of the trails, and would not be compatible with the intended users (hikers and equestrians, and mountain bikers on the Corkill and East Indio Hills trails). In efforts to reduce existing and future unauthorized uses, Mitigation Measure REC-1 would block access to the trails where feasible. With implementation of Mitigation Measure REC-1, the impact would be less than significant (Class II).
- **Impact REC-2:** As the Project includes the establishment or improvement of recreational facilities, which would require construction and operation activities, there may be adverse physical effects on the environment. However, implementation of the mitigation measures set forth in the EA/MND would reduce impacts to less than significant (Class II).

3.9.6 Alternatives Analysis

3.9.6.1 Alternative 1 - Pushawalla

In comparison to the proposed Project, Alternative 1 would reduce the recreational opportunities by developing fewer trails and trailheads. However, Alternative 1 could also result in unauthorized recreation activities, which would require implementation of Mitigation Measure REC-1. Therefore, the potential adverse effects associated with Alternative 1 would be the same as the proposed Project, but to a lesser degree.

3.9.6.2 Alternative 2 – Pushawalla and East Indio Hills

In comparison to the proposed Project, Alternative 2 would reduce the recreational opportunities by developing one less trail and trailhead. However, Alternative 2 could also result in unauthorized recreation activities, which would require implementation of Mitigation Measure REC-1. Therefore, the potential adverse effects associated with Alternative 2 would be the same as the proposed Project, but to a lesser degree.

3.9.6.3 Alternative 3 – No Action

Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing recreational use of the area would continue, including hiking, equestrian use, and mountain biking. New or enhanced beneficial recreational opportunities would not be generated under the No Action Alternative. Unauthorized motorized recreation access would be greater than other alternatives, potentially contributing to and accelerating the physical deterioration of the existing trails

and facilities. Therefore, the potential adverse effects associated with the No Action Alternative would be greater than that of the proposed Project.

3.9.7 Cumulative Analysis

Cumulative development projects within the area have the potential to create environmental impacts to surrounding recreation areas. The proposed Project and alternatives would result in beneficial recreational effects by designating recreation trails and reducing ongoing physical degradation of the areas from dispersed recreational uses. Therefore, the Project would not contribute to adverse cumulative impacts to recreational facilities.

3.10 Traffic and Transportation

3.10.1 Environmental Setting

3.10.1.1 Corkill Road Trailhead

The Corkill Road Trailhead site is located at the west end of the Indio Hills, just south of the community of Desert Edge, near the junction of Corkill Road and 20th Street. Access to the proposed trailhead site is via Corkill Road, and the nearest major cross street is Dillon Road, located approximately 1.5 miles north of the proposed trailhead site (see Figure 2-2 in Section 2). Access from 20th Street is not currently feasible due to erosion damage, steep embankments where 20th Street meets Corkill Road, and primitive road conditions on 20th Street that are only passable by four-wheel-drive vehicle. South of Dillon Road, Corkill Road is paved to within 0.5 mile of the proposed trailhead site, after which point the substrate becomes too soft for safe access by two-wheel-drive vehicles.

3.10.1.2 Pushawalla Trailhead

The proposed Pushawalla Trailhead site is located approximately 1.5 miles north of Dillon Road on BLM land. The dirt road providing access to the site off Dillon Road is labeled on maps as Perkins Road; however, the intersection is unmarked. Approximately 1.1 miles north from the Dillon Road intersection, an unmarked dirt road intersects Perkins Road from the east. The trailhead site is adjacent to the unmarked road, about 0.5 mile east of Perkins Road (see Figure 2-3, Section 2).

3.10.1.3 Golf Center Parkway Trailhead

The location of the Golf Center Parkway Trailhead is shown in Figure 2-4 (Section 2). Golf Center Parkway is a paved road and provides direct access to the proposed trailhead site.

3.10.2 Applicable Regulations, Plans, and Standards

Permits and engineering approval are generally needed for any location where an activity would occur physically within or modify the right-of-way of a public road. The California Department of Transportation (Caltrans) issues such permits for highway facilities. Meanwhile, Riverside County and incorporated cities are responsible for local roadways, depending upon the jurisdiction where the roadway segment is to be affected. Traffic control plans may be required for any location where a roadway would be physically impeded by an activity, and such plans would be subject to approval by the responsible jurisdiction.

3.10.3 CEQA Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, traffic and transportation impacts would be considered significant if the proposed Project:

- 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 and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Substantially increase hazards because of a design feature or incompatible uses.

All other CEQA significance criteria from Appendix G for traffic and transportation have been found to have no impact (refer to Appendix A). Therefore, those items are not evaluated.

3.10.4 Environmental Impacts and Mitigation Measures

Impact TR-1: The Project could 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 and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

The proposed Project would not encroach on any roadways or introduce any features that would conflict with mass transit, bike lanes, pedestrian facilities, or authorized non-motorized travel components of the circulation system.

The Project would generate nominal temporary vehicle trips during construction from activities and worker commuter trips. Construction worker commutes and trucks delivering equipment would generate vehicle trips on roadways providing access to each trailhead site. All construction-related workers and deliveries are expected to come from within the Coachella Valley Area. Because these trips would be temporary and for a short duration when accessing each trailhead location, they would not have an adverse effect on the performance of the circulation system.

Once operational, the Project may result in a nominal number of new trips to the trailhead locations. However, vehicles accessing the proposed trails are expected to come from within the local area. These recreationalists are assumed to already make vehicle trips to access similar designated or undesignated trails in the area. Therefore, any new trips to the proposed facilities are considered to offset existing trips to other facilities. No adverse number of additional trips would occur from recreationists accessing the new trailheads, but instead likely result in a redistribution of trips within the Project area. Therefore, traffic from vehicles accessing the new trailheads would not have an adverse effect on the performance of the circulation system.

Impact TR-2: The Project could substantially increase hazards because of a design feature or incompatible uses.

While line-of-sight is good at all trailhead locations, necessary roadway improvements and traffic controls could potentially affect roadway conditions, access, and traffic flow. The Project would include the creation of off-road parking areas at each trailhead including traffic controls (stop signs).

Additionally, for the Corkill Road Trailhead, the final 0.10 mile of Corkill Road north of the proposed trailhead site would be improved to provide access for two-wheel-drive vehicles. Finally, at the Golf Center Parkway Trailhead, Golf Center Parkway makes an abrupt turn at the proposed trailhead location, which would also provide future access to the adjacent park site. Therefore, the CVMC would need to consult with the City of Indio's traffic engineer on the specifics of situating the ingress and egress to the Golf Center Parkway Trailhead. However, the CVMC will obtain all permits and approvals from the public agencies responsible for each affected roadway where roadway improvements, new traffic controls, and/or trailhead ingress and egress shall occur. Compliance with permit requirements would avoid introducing any hazards from a design feature or incompatible use.

3.10.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact TR-1**: The proposed Project would not 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 and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Impacts would be less than significant (Class III).
- **Impact TR-2**: The proposed Project would not substantially increase hazards because of a design feature or incompatible uses. Compliance with existing regulations would ensure that impacts would be less than significant (Class III).

3.10.6 Alternatives Analysis

3.10.6.1 Alternative 1 - Pushawalla

This alternative would reduce the number of temporary trips generated during construction and trip redistribution assumed to occur within the area from recreationists accessing the Corkill Road and Golf Center Parkway Trailheads.

3.10.6.2 Alternative 2 – Pushawalla and East Indio Hills

This alternative would nominally reduce the number of temporary trips generated during construction and trip redistribution assumed to occur within the area from recreationists accessing the Corkill Road Trailhead.

3.10.6.3 Alternative 3 – No Action

Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing recreational use of the area would continue, including hiking, mountain biking, and equestrian use. No temporary construction trips would occur and no redistribution of traffic accessing existing designated and informal recreational areas would occur. Because no trailheads or trailheads would be constructed, no alterations to the existing circulation system would occur.

3.10.7 Cumulative Analysis

Cumulative development projects within the area have the potential to generate new traffic volumes on the circulation system. However, the proposed Project and alternatives would not generate a substantial number of new trips, but instead would redistribute some trips accessing existing designated and informal recreational areas to the new trailheads. The proposed Project and alternatives would not contribute to adverse cumulative traffic or transportation impacts.

3.11 Paleontological Resources

Significant paleontological resources are any fossil that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be of scientific interest if it is a rare or previously unknown species, it is of high quality and well preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has an identified educational or recreational value. Paleontological resources that may not be considered to have scientific significance include those that lack provenience or context, lack physical integrity because of decay or natural erosion, or that are overly redundant or are otherwise not useful for research. Vertebrate fossil remains and traces include bone, scales, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities (BLM, 2008). The Indio Hills are considered to be highly sensitive for paleontological resources.

3.11.1 Environmental Setting

The trails and trailheads proposed by the CVMC are located in the Coachella Valley, a large northwest to southeast trending basin that is the result of the San Andreas Fault system in California. Sedimentary deposition has been slowly filling this basin since the Miocene Epoch (23.03 to 5.332 million years ago). Being an area of sedimentary deposition, there exists the potential for paleontological resources to be present and affected by Project construction (Indio, 2015).

Methods and Results

This analysis utilizes the BLM's Potential Fossil Yield Classification System (PFYC). The PFYC follows, and is excerpted directly from BLM IM 2008-009 (2007).

Occurrences of paleontological resources are closely tied to the geologic units (i.e., formations, members, or beds) that contain them. The probability for finding paleontological resources can be broadly predicted from the geologic units present at or near the surface. Therefore, geologic mapping can be used for assessing the potential for the occurrence of paleontological resources. However, it is impossible to predict the specific types of fossils that will be found or their exact locations in a geologic formation.

Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential. This classification is applied to the geologic formation, member, or other distinguishable unit, preferably at the most detailed level that can be mapped. It is not intended to be applied to specific paleontological localities or small areas within units. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or

localities do not necessarily indicate a higher class; instead, the relative abundance of significant localities is intended to be the major determinant for the class assignment.

The PFYC system is meant to provide baseline guidance for predicting, assessing, and mitigating paleontological resources. The classification should be considered at an intermediate point in the analysis, and should be used to assist in determining the need for further mitigation assessment or actions.

Class 1 – Very Low. Geologic units that are not likely to contain recognizable fossil remains.

Class 2 – Low. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils.

Class 3 – Moderate (3a) or **Unknown (3b)**. Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.

Class 4 – High. Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Surface disturbing activities may adversely affect paleontological resources in many cases.

Class 5 – Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils, and that are at risk of human-caused adverse impacts or natural degradation.

Geologic Map Analysis

The purpose of the geologic map reviews was to determine the names and number of geologic formations and surficial deposits within the Project area and their geographic distribution. The geologic map reviewed for this analysis was the *Geologic map of the Thousand Palms & Lost Horse Mountain 15 minute quadrangles* (Dibblee and Minch, 2008). The geologic mapping of Dibblee and Minch (2008) was used to establish PFYC rankings for the Project areas. Additionally, the Riverside County Land Information System was queried for paleontological sensitivity in the area of each trail and trailhead (TLMA, 2015). Table 3.11-1 presents the PFYC system sensitivity for the geological units mapped in the Project areas.

Table 3.11-1. Potential Fossil Yield Classification System Sensitivity

Geologic Units	PFYC Class 5 Very High	PFYC Class 4 High	PFYC Class 3a Moderate	PFYC Class 3b Unknown	PFYC Class 2 Low	PFYC Class 1 Very Low
Quaternary Alluvium					X	
Quaternary sand dunes					X	
Quaternary clay					X	
Older Quaternary Lake Sediments	X					
Ocotillo Formation				X		
Lower member Ocotillo Formation				X		
Palm Spring Formation	X					
Imperial Formation	X					
Mecca Formation	X					
Gneiss						X

Source: Aron and Kelley, 2011; BLM, 2008; Dibblee and Minch, 2008; IID and BLM, 2006; Indio, 2015; TLMA, 2015

Pushawalla Trailhead and Trail

The geologic units underlying the Pushawalla Trailhead and Trail are:

- Surficial sediment, primarily Quaternary alluvium consisting of alluvial sand and gravel that are not generally considered to be sensitive for paleontological resources (Aron and Kelly, 2011).
- Gneiss that likely dates to the Precambrian, indicating that it has a Class I (very low) sensitivity for recognizable fossil remains (BLM, 2007).

Corkill Trailhead and Trail

The geologic units underlying the Corkill Trailhead and Trail are:

- Surficial sediments that include Quaternary alluvium consisting of alluvial sand and gravel, and loose fine sand deposited by prevailing winds as dunes. These sediments are not generally considered to be sensitive for paleontological resources (Aron and Kelly, 2011). Quaternary sand dunes generally cover either Quaternary alluvium or older Quaternary Lake Sediments, the latter of which is considered to be sensitive for fresh water fauna fossils (Indio, 2015).
- The lower member of the Ocotillo Formation is a Pleistocene terrestrial sediment that consists of pebble-cobble conglomerate. The paleontological sensitivity of this deposit is designated as unknown in the City of Indio Existing Conditions Report but the entire area containing this geologic unit is shown as having high paleontological sensitivity in the Riverside County Land Information System (Indio, 2015; Transportation and Land Management Agency, 2015).
- The Palm Spring Formation is a Pliocene and early Pliestocene geologic unit consisting of terrestrial sedimentary rocks. While Dibblee and Minch (2008) defined this deposit as unfossiliferous, in the Indio Hills area the Palm Spring Formation has yielded fossils of extinct vertebrates including *Sigmodon* sp. and *Equus* sp. (IID and BLM, 2006). Elsewhere, the Palm Spring Formation has produced over 100 species of Plio-Pleistocene fossil vertebrates (Aron and Kelley, 2011). The Palm Spring Formation is of particular scientific importance because its fossils provide critical information for the understanding of the evolution and diversification of Pliocene-Pleistocene fauna communities.

Because it produces locally abundant, diverse, and scientifically important vertebrate and invertebrate fossils, the Palm Spring Formation has very high potential fossil yield (PFYC Class 5) (Aron and Kelley, 2011).

- The Imperial Formation consists of Pliocene shallow marine sediments of claystone and sandstone. Dibblee and Minch (2008) note that this formation is fossiliferous. Fossils reported from the Imperial Formation include abundant and diverse assemblages of late Miocene and Pliocene marine invertebrates and vertebrate fossils such as sharks, rays, bony fishes, sea turtles, sirenians, baleen whales, and camels. Because it produces locally abundant, diverse and scientifically important vertebrate and invertebrate fossils, the Imperial Formation has very high potential fossil yield (PFYC Class 5) (Aron and Kelly, 2011).

Golf Center Parkway Trailhead and East Indio Hills Trail

The geologic units underlying the East Indio Hills Trail and Golf Center Parkway Trailhead are:

- Surficial sediments including Quaternary alluvium consisting of alluvial sand and gravel and Quaternary clay from playa lakes. Neither of these are generally considered to be sensitive for paleontological resources (Aron and Kelley, 2011).

- The Ocotillo Formation is a Pleistocene terrestrial sediment that consists of a fanglomerate of conglomerate, sandstone, silts, and tuff that contain some vertebrate fossil fragments. The paleontological sensitivity of this deposit is designated as unknown in the City of Indio Existing Conditions Report but the entire area containing this geologic unit is shown as having high paleontological sensitivity in the Riverside County Land Information System (Indio, 2015; TLMA, 2015).

- Palm Spring Formation is a Pliocene and early Pliestocene geologic unit consisting of terrestrial sedimentary rocks. While Dibblee and Minch (2008) defined this deposit as unfossiliferous, in the Indio Hills area the Palm Springs Formation has yielded fossils of extinct vertebrates including *Sigmodon* sp. and *Equus* sp. (IID and BLM, 2006). Elsewhere, the Palm Spring Formation has produced over 100 species of Plio-Pleistocene fossil vertebrates (Aron and Kelley, 2011). The Palm Spring Formation is of particular scientific importance because its fossils provide critical information for the understanding of the evolution and diversification of Pliocene-Pleistocene fauna communities. Because it produces locally abundant, diverse, and scientifically important vertebrate and invertebrate fossils, the Palm Spring Formation has very high potential fossil yield (PFYC Class 5) (Aron and Kelley, 2011).

- The Mecca Formation is a Miocene-Pliocene formation composed of terrestrial alluvial fan sedimentary rocks including clay, sandstone, and conglomerate. This formation has been previously identified as being sensitive for paleontological resources (Indio, 2015)

3.11.2 Applicable Regulations, Plans, and Standards

Numerous laws, ordinances, regulations, and standards on federal, state, and local levels seek to protect and manage paleontological resources. Due to the location of this Project on both federal (BLM) and non-federal lands, federal, state, and local laws and regulations were followed.

Federal

The management and preservation of paleontological resources on public lands are governed under various laws, regulations, and standards. For the past several decades, the BLM has used the FLPMA as the legislative foundation for its paleontological resource management policies. The BLM has also developed general procedural guidelines (Manual H-8720-1; Instructional Memorandum [IM] 2008-009; IM 2009-011) for the management of paleontological resources (BLM, 2007; 2008).

Federal Land Management and Policy Act of 1976 (43 U.S.C. 1712[c], 1732[b]) defines significant fossils as: unique, rare or particularly well-preserved; an unusual assemblage of common fossils; being of high scientific interest; or providing important new data concerning [1] evolutionary trends, [2] development of biological communities, [3] interaction between or among organisms, [4] unusual or spectacular circumstances in the history of life, [5] or anatomical structure.

Paleontological Resources Preservation, Omnibus Public Lands Act, Public Law 111-011, Title VI, Subtitle D (OPLA-PRP, 2009) directs the Secretaries (Interior and Agriculture) to manage and protect paleontological resources on federal land using "scientific principles and expertise." OPLA-PRP incorporates most of the recommendations of the report of the Secretary of the Interior entitled *Assessment of Fossil Management on Federal and Indian Lands* (2000) in order to formulate a consistent paleontological resources management framework. In passing the OPLA-PRP, Congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. The OPLA-PRP codifies existing policies of the BLM, National Park Service, U.S. Forest Service, Bureau of Reclamation, and U.S. Fish and Wildlife Service, and provides the following:

- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands,
- Uniform minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants),
- Uniform definitions for "paleontological resources" and "casual collecting," and
- Uniform requirements for curation of federal fossils in approved repositories.

Federal legislative protections for scientifically significant fossils applies to projects that take place on federal lands (with certain exceptions such as DOD), involve federal funding, require a federal permit, or involve crossing state lines. Because a large portion of the proposed Project area occurs on BLM- managed lands, federal protections for paleontological resources apply under NEPA, FLPMA, and OPLA-PRP.

State

California Environmental Quality Act (California Public Resources Code Section 21000 et seq.) (1970) establishes the procedures, types of activities, persons, and public agencies required regarding paleontological resources. One of the questions listed in the CEQA Environmental Checklist (Section 15023, Appendix G, Section XIV, Part A) is: "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?"

Public Resources Code (Chapter 1.7), Section 5097.5 and 30244, includes additional state-level requirements for the assessment and management of paleontological resources. These statutes

require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological "sites" or "features" from state lands as a misdemeanor, and prohibit the removal of any paleontological "site" or "feature" from state land without permission of the applicable jurisdictional agency. These protections apply only to State of California land, and thus apply only to portions of the proposed Project, that occur on state land.

3.11.3 CEQA Significance Criteria

The following significance criteria are derived from Appendix G of the State CEQA Guidelines. Any construction or recreational activity would result in a significant impact related to paleontological resources if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.11.4 Environmental Impacts and Mitigation Measures

3.11.4.1 Environmental Impacts

Both construction activities and recreational activities related to trail use could potentially affect paleontological resources on or along the margins of the trails. The three trailhead locations of Corkill, Pushawalla, and Golf Center Parkway, along with the .1-mile road improvement on Corkill Road are the only locations within the Project to be adversely affected by substantial ground disturbance. However, surface or just below surface paleontological resources could be damaged through trail building activities, and the access provided to recreationalists may facilitate casual looting and collection of fossils.

Impact PAL-1: The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Portions of the proposed Project, including segments of all three trails and trailheads, are located in areas sensitive for paleontological resources. Specifically, large portions of the Corkill and East Indio Hills trails traverse geologic units that have been determined to be highly sensitive (PFYC Class 5) for their potential to yield significant fossil resources due to their containing scientifically important vertebrate and invertebrate fossils. The destruction of these resources through either trail or trailhead construction or through recreational activities would be an adverse impact. Mitigation Measure PAL-1 would be implemented in order to identify any significant fossil resources present on the surface that could be impacted by construction or recreational activities. In the case of the discovery of a unique paleontological resource or site or unique geologic feature, Mitigation Measure PAL-2 would be implemented. This measure includes evaluation of the resource and a halt to work until a treatment plan for the resource is developed and implemented, to prevent damage to the resource and to allow for its preservation. Together, Mitigation Measures PAL-1 and PAL-2 would minimize the potential for the Project to impact paleontological resources.

3.11.4.2 Mitigation Measures

MM PAL-1 Conduct a Pre-activity Field Survey of Areas with Class 5 Fossil Yield Potential. As per BLM guidance (BLM, 2008) it will be necessary to conduct a pre-activity field survey of the areas directly and indirectly impacted in areas that have been determined to have a Class 5 (very

high potential) sensitivity for paleontological resources. This field survey must be conducted by a qualified paleontologist, who is required to submit a report of findings after completion of the field survey. In addition to standard reporting information, the report should contain the qualified paleontologist recommendations for further mitigation, and this recommendation should be considered when determining the need for and type of on-site monitoring or locality avoidance.

MM PAL-2 **Evaluate Inadvertent Discovery of Paleontological Resources.** If significant paleontological resources are discovered during surface disturbing actions or at any other time, CVMC or any of its agents must: (a) stop work immediately at that site; (b) contact the appropriate BLM representative, typically the Project inspector or Authorized Officer, as soon as possible; and (c) make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Work may not resume at that location until approved by the official BLM representative. In some cases, further activity at that site may be delayed until the discovered fossils are recovered, or until the Project is modified to avoid impacting the find. Upon completion of the assessment, a report documenting methods, findings, and recommendations will be prepared according to BLM guidelines and submitted to the BLM, CVMC, and Los Angeles Museum of Natural History. If paleontological materials are recovered, they would be stored at a paleontological repository that meets federal DM-411 curation standards.

3.11.5 CEQA Significance Determination

The following provides significance conclusions for the significance criteria evaluated from Appendix G of the State CEQA Guidelines:

- **Impact PAL-1:** Portions of the proposed Project, including segments of all three trails and trailheads, are located in areas sensitive for paleontological resources. However, Mitigation Measures PAL-1 and PAL-2 would minimize the potential for the Project to impact paleontological resources. Impacts would be less than significant with mitigation (Class II).

3.11.6 Alternatives Analysis

3.11.6.1 Alternative 1 – Pushawalla

Under the Pushawalla Alternative, the only components of the Project that would be implemented would be the Pushawalla Trailhead and the Pushawalla Trail, described in Sections 1.3.3 and 1.3.4. The impacts associated with trailhead and trail construction and recreation under this alternative would be reduced compared to the proposed Project. However, as existing uncontrolled recreational use of the area would continue in the East Indio Hills and Corkill project areas, this alternative has the potential to have greater impacts on paleontological resources than that of the proposed Project.

3.11.6.2 Alternative 2 – Pushawalla and East Indio Hills

Under the Pushawalla and East Indio Alternative, the proposed Corkill Trailhead and Corkill Trail would not be established, but all other aspects of the proposed Project would be implemented, including the Pushawalla Trailhead, the Pushawalla Trail, the Golf Center Parkway Trailhead, and the East Indio Hills

Trail. The impacts associated with trailhead and trail construction and recreation under this alternative would be reduced compared to the proposed Project. However, as existing uncontrolled recreational use of the area would continue in the Corkill project area, this alternative has the potential to have greater impacts on paleontological resources than that of the proposed Project.

3.11.6.3 Alternative 3 – No Action

The No Action Alternative has the potential to cause the greatest amount of impact to paleontological resources. Under the No Action Alternative, none of the proposed trailheads or trails would be constructed or improved. Existing uncontrolled recreational use of the area would continue, including hiking, mountain biking, and equestrian use. This alternative would leave paleontological resources with the least amount of protection and provide the least amount of education to the public on their importance to the community.

3.11.7 Cumulative Analysis

The purpose of this Project is to construct and improve proposed trailheads and trails in order to reduce the currently uncontrolled recreational use of the area, including hiking, mountain biking, and equestrian use. By directing these actions to these three established and maintained trails, this Project would have a positive effect on paleontological resources when considered cumulatively.

4. References

4.1 References

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4.2 Statutes

National Environmental Policy Act of 1969 (42 USC 4321 et seq.)

Federal Land Policy Management Act, as amended (43 USC 1701 et seq.). October 21, 1976. [http://www.blm.gov/flpma]

Clean Air Act of 1963, as amended (42 USC Chapter 85)

National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.)

Endangered Species Act (16 USC Sections 1531–1544)

Clean Water Act (33 USC Sections 1251–1387)

Migratory Bird Treaty Act (16 USC Sections 703–712)

Bald and Golden Eagle Protection Act (16 USC Section 668)

Plant Protection Act of 2000 (7 USCS Section 7701 et seq.)

Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Recreation and Public Purposes Act of 1954 (43 United States Code 869 et. seq.)

Paleontological Resources Preservation, Omnibus Public Lands Act, Public Law 111-011, Title VI, Subtitle D

California Environmental Quality Act of 1970 (California Public Resources Code Section 21000 et seq.)

California Clean Air Act of 1988

California Global Warming Solutions Act of 2006

California Endangered Species Act (Fish and Game Code Section 2050 et seq.)

Natural Community Conservation Planning Act (Fish and Game Code Sections 2800 et seq.)

Appendix A

Initial Study

A.1 Environmental Factors Potentially Affected

The proposed Project would not result in a "Potentially Significant Impact" to any of the environmental factors listed below. As indicated by the checklist on the following pages, all significant impacts can be reduced to less than significant with the implementation of mitigation. Section A.3 of the EA/MND provides a detailed analysis of impacts requiring mitigation.

☐ Aesthetics	☐ Agriculture & Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural & Tribal Cultural Resources	☐ Geology/Soils & Paleontology
☐ Greenhouse Gas Emissions	☐ Hazards/Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance

A.2 Environmental Determination

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed Project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Jim Karpiak, Executive Director
Coachella Valley Mountains Conservancy

Date

A.3 Environmental Checklist

A.3.1 Aesthetics

AESTHETICS Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project have a substantial adverse effect on a scenic vista?

LESS THAN SIGNIFICANT IMPACT. The proposed Project includes grading three parking areas, installing signs and trail markers, and conducting minor trail improvements along three existing unofficial trail routes. The Corkill Trail and Trailhead and the East Indio Hills Trail and Golf Center Parkway Trailhead are located in the Indio Hills, and the Pushawalla Trail and Trailhead are located in the Little San Bernardino Mountains. The general region includes features such as sand dunes and sand fields, dry desert washes, large rock outcroppings, cliffs, and desert vegetation. A major factor in the selection of the three trail and trailhead locations is their scenic value for recreationists.

The trail improvements would not change the existing visual character of the three trail routes because each trail is existing, and the trailhead construction would only include minor surface grading and vegetation clearance, as well as new signage. A few locations along the East Indio Hills Trail would require modification such as switchbacks and timber steps; however, all of these modifications would blend with the surroundings and would be constructed using natural materials. The presence of the grader and other equipment used during the construction of the trailheads would be temporary and would not have a substantial adverse effect on the scenic resources at each location. Trailhead grading would occur next to existing roadways and would not create visual contrast. The proposed signs installed at the trailhead and the trail markers would be designed to blend in with the surrounding landscape. Colors and images used on the signs would be complementary to the natural features in the area, and would have non-reflective surfaces. Any minor vegetation clearance along the proposed trail routes would not result in visual contrast or land scarring, as the majority of the trails already exist. Further, the Project is expected to have beneficial impacts on the scenic vista at each location because designating the trails as official routes, closing off existing unauthorized off-highway vehicle (OHV) routes where feasible (see Mitigation Measure REC-1 under "Recreation"), and increasing appropriate recreational uses would discourage the current ongoing degradation that is occurring at each location from widespread OHV use, trash dumping, shooting, vandalism, and other illegal activities that degrade the natural environment. Therefore, impacts to scenic vistas would be less than significant.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

NO IMPACT. The proposed Project would not be located along or near a State scenic highway. Because no part of the Project would be visible from a designated State scenic highway, no impact would occur.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

LESS THAN SIGNFICANT. The existing visual character and quality of the three trail and trailhead locations are generally high. However, the three trailhead locations and surrounding areas are currently experiencing ongoing OHV, trash dumping, and other unauthorized uses that degrade the visual character of the immediate areas. The more remote trail routes are not as affected by these activities.

Portions of the proposed Project would be on public lands managed by the BLM. By law, BLM is responsible for ensuring that the scenic values of public lands under its jurisdiction are considered before allowing uses that may have adverse visual impacts. BLM accomplishes this through its Visual Resource Management (VRM) system (BLM, 2012). BLM's VRM system provides a way to identify and evaluate scenic values to determine the appropriate levels of management. It also provides a way to analyze potential visual impacts and apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings. BLM has established VRM coordinators in each state and provides training in VRM so that this system is implemented effectively throughout the BLM lands. The VRM system consists of two stages: Inventory (Visual Resource Inventory) and Analysis (Visual Resource Contrast Rating).

The inventory stage involves identifying the visual resources of an area and assigning to them inventory classes using BLM's visual resource inventory process. The process involves rating the visual appeal of a tract of land, measuring public concern for scenic quality, and determining whether the tract of land is visible from travel routes or observation points. The results of the visual resource inventory become an important component of BLM's Resource Management Plan (RMP) for the area. Visual values are considered throughout the RMP process, and the area's visual resources are then assigned management classes with established objectives (BLM, 2012):

- **Class I Objective:** To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
- **Class II Objective:** To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.
- **Class III Objective:** To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
- **Class IV Objective:** To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

The applicable RMP for the proposed Project is the California Desert Conservation Area Plan Amendment for the Coachella Valley. The VRM classifications for the BLM lands in the Project area are Class II for all three proposed trails/trailheads (BLM, 2002).

The proposed activities are expected to result in minimal change to the existing landscape characteristic of the area. A BLM VRM Class II designation allows a low level of change in the landscape character.

As described above with respect to scenic vistas, construction of the proposed Project would be short-term and would have a temporary effect on the visual quality of the Project area. Permanent changes associated with the Project would include minor surface grading and vegetation clearance, signs that are designed to blend in with the natural surroundings, and trail markers that would be unobtrusive and made of natural materials to complement the surroundings. These activities are considered consistent with the allowable visual changes associated with the Class II designation of the Project sites.

Additionally, the Project is expected to have beneficial impacts on the visual quality at each location because designating the trails as official routes, closing off existing unauthorized OHV routes where feasible (Mitigation Measure REC-1 under "Recreation"), and increasing appropriate recreational uses would discourage the current ongoing degradation that is occurring at each location from widespread OHV use, trash dumping, shooting, vandalism, and other illegal activities that degrade the natural environment. No further analysis (visual resource contrast rating) is necessary or recommended for BLM lands. Impacts to the existing visual character or quality of the sites and their surroundings would be less than significant.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

NO IMPACT. The proposed hiking trails and trailheads would not include lights or sources of glare. Signs and trail markers would be made of non-reflective materials, and the parking areas would not have streetlights or any other light sources installed. Therefore, there would be no impacts related to substantial new sources of lights of glare.

A.3.2 Agriculture and Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-agricultural use?

NO IMPACT. Based on the County's FMMP 2012 designations, the Project site is within the "Other Land" designation which accounts for land that does not meet the criteria of any other category. Typical uses include low density rural development, heavily forested land, mined land, or government land with restrictions on use (DOC, 2012). Therefore, the Project would not convert Important Farmland to a non-agricultural use, and there would be no impact under this criterion.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

NO IMPACT. Based on a review of the land designations for the BLM, Riverside County, and City of Indio, the Project alignments and trailheads would not traverse land within an agricultural zoning designation (BLM, 2014; Riverside County, 2012; Indio, 2009). Based on the DOC's 2014 GIS data, the Project alignments would not be located on lands under a Williamson Act contract (DOC, 2014). Therefore, there would be no impact under this criterion.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

NO IMPACT. Based on a review of the land designations for the BLM, Riverside County, and City of Indio, the Project alignments and trailheads would not traverse land within a zoning designation for forest land or timberland (BLM, 2014; Riverside County, 2012; Indio, 2009). Therefore, there would be no impact under this criterion.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

NO IMPACT. The Project would not traverse land designated as forest land. Therefore, there would be no conversion of forest land and there would be no impact under this criterion.

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

NO IMPACT. The Project would not include the conversion of agricultural or forest lands. Therefore, there would be no impact under this criterion.

A.3.3 Air Quality

AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c. Result in a 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)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

LESS THAN SIGNIFICANT IMPACT. The Project would include grading and flood control construction activities that would temporarily utilize equipment that produce air emissions. While these construction activities would not exceed any daily emission thresholds set forth by the applicable Air Quality Management District (AQMD) plans, this item is further discussed within Section 3.2 of the Joint Environmental Assessment and Mitigated Negative Declaration (EA/MND).

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Less than significant impacts would occur, and this item is further discussed within Section 3.2 of the EA/MND.

c. Would the project result in a 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)?

LESS THAN SIGNIFICANT IMPACT. The Project would not exceed regional or localized emissions significance thresholds established by the SCAQMD or result in a 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. Less than significant impacts would occur. This item is further discussed within Section 3.2 of the EA/MND.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT IMPACT. The nearest receptors to the Project include only a small number of rural residences. The proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Less than significant impacts would occur, and this item is further discussed within Section 3.2 of the EA/MND.

e. Would the project create objectionable odors affecting a substantial number of people?

NO IMPACT. Some objectionable odors may be temporarily created during construction-related activities, such as from diesel exhaust during grading activities. However, any temporary odor would be short-term and likely confined to within the Project site. Beyond this distance, any construction equipment exhaust would disperse and be unnoticeable. Furthermore, the nearest receptors to the Project include only a small number of rural residences. Therefore, any minor odors from construction equipment operation would not affect a substantial number of people and would only occur proximate to the work area. No impacts related to objectionable odors would occur.

A.3.4 Biological Resources

BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project have 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Project would affect habitat for special-status species and, without mitigation, could cause take of special-status plants and animals. Potential direct and indirect effects of the proposed trails and trailheads construction include: increased use of the area by the public leading to disturbance to wildlife and habitat, potential for increased OHV use, and the spread of invasive weeds. While the increase in public use may cause increased disturbance to wildlife and habitat, the Project would focus visitors into designated areas, reducing the current dispersed disturbance. The proposed Project would also increase visitor awareness of regulations, reduce

off-road activity, and reduce littering. Participation in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) would mitigate impacts to special-status species and their habitat through off-site habitat conservation and management. The spread of weeds, if any, is expected to be minimal and weed removal would be conducted by hand as part of the Project's O&M activities; no additional weed-specific mitigation is recommended. The above impacts would be similar at each proposed trail and trailhead site. The proposed Corkill trail and trailhead is the only site where the federally endangered Coachella Valley milk-vetch and the federally threatened and state endangered Coachella Valley Fringe-toed lizard could be impacted. Mitigation measures listed and described below, including participation in the CVMSHCP, would reduce these impacts to less than significant. Special-status plants and wildlife in the Project vicinity, and potential Project impacts to them, are discussed in greater detail in Section 3.4 of the EA/MND.

Special-Status Plants

The proposed Project could directly or indirectly impact special-status plants identified as threatened, endangered, candidate, or special-status species by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS). The Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), a federally listed endangered species, is present at the Corkill trailhead and trail. No other federally or state-listed threatened or endangered plants were located or are expected to occur on any of the proposed trailheads or trails. Six other special-status plants could occur on one or more of the Project sites including: chaparral sand verbena, flat-seeded spurge, Arizona spurge, mecca aster, desert spike-moss, and slender cottonheads.

The proposed Project could adversely impact special-status plants during construction by crushing or removing plants during site preparation or trail development. Recreationists may trample plants if they leave the designated trails during the Project's O&M phase. Without mitigation, the Project's potential impacts to Coachella Valley milk-vetch could be significant, due to its status as a listed species. Impacts to the other special-status plants, if any, would be less than significant due to their lower-priority conservation status and widespread availability of similar habitat. Participation in the CVMSHCP (Mitigation Measure BIO-1) and Mitigation Measure BIO-6 would reduce impacts to Coachella Valley milk-vetch to less than significant by requiring the Project to provide a fee to fund the CVMSHCP and adhere to avoidance and minimization measures described in Section 4.4 of the CVMSHCP as well as relocating Coachella Valley milk-vetch seed pods to outside of the disturbance area. Special-status plants in the Project vicinity, and potential Project impacts to them, are discussed in greater detail in Section 3.4 of the EA/MND.

Federally or State Listed as Threatened or Endangered Wildlife

Without mitigation, the proposed Project could significantly impact federally or state-listed threatened or endangered wildlife species through removal of sensitive habitat and potential injury or mortality to individual animals. The Coachella Valley fringe-toed lizard (*Uma inornata*) is state-listed as endangered and federally listed as threatened and is present on the Corkill trail. The Mojave Desert tortoise (*Gopherus agassizii*) is state and federally listed as endangered and could occur on any of the proposed trails. The flat-tailed horned lizard (*Phrynosoma mcalli*) is a candidate for listing as endangered under the California Endangered Species Act and could potentially occur on or near any of the Project trails. Mitigation Measures BIO-1 and BIO-6 would reduce these impacts to less than significant by requiring the Project to provide a fee to fund the CVMSHCP and adhere to avoidance and minimization measures described in Section 4.4 of the CVMSHCP, as well as restricting construction activities in the vicinity of desert tortoises or Coachella Valley fringe-toed lizards. Federally or state listed threatened or endangered wildlife in the

Project vicinity, and potential Project impacts to them, are discussed in greater detail in Section 3.4 of the EA/MND.

Other Special-Status Wildlife Species

BLM sensitive species and other special-status species could occur in the Project area, including burrowing owl, Palm Springs pocket mouse, Palm Springs round-tailed ground squirrel, desert bighorn sheep, desert kit fox, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Pallid San Diego pocket mouse, San Diego woodrat, American badger, prairie falcon, loggerhead shrike, black-tailed gnatcatcher, vermillion flycatcher, LeConte's thrasher, and Crissal thrasher. Potential impacts to special-status species could include: removal of sensitive habitat and nest and foraging disturbance during construction. Measures BIO-1 through BIO-8 would reduce these impacts to less than significant by requiring the Project to provide a fee to fund the CVMSHCP (for impacts on covered lands) and adhere to avoidance and minimization measures described in Section 4.4 of the CVMSHCP (Project-wide), limit the mechanical disturbance of previously undisturbed habitats, require preconstruction surveys for special-status species and biological monitoring during construction, and ensure workers are trained in sensitive resources. Special-status wildlife in the Project vicinity, and potential Project impacts to them, are discussed in greater detail in Section 3.4 of the EA/MND.

Protected Birds

Several special-status birds could occur in the Project area. One of these, LeConte's thrasher (*Toxostoma lecontei*), is a covered species under the CVMSHCP with suitable habitat mapped on each of the proposed trails. Other special-status birds that may occur in the area, but not covered under the CVMSHCP, are loggerhead shrike (*Lanius ludovicianus*), black-tailed gnatcatcher (*Polioptila melanura),* and vermillion flycatcher (*Pyrocephalus rubinus*). The loggerhead shrike was observed at the East Indio Hills trail and the black-tailed gnatcatcher was observed at both the Pushawalla and East Indio Hills trails. The other special-status birds have a low to high potential for foraging or nesting at the proposed trails, depending on species.

The federal Migratory Bird Treaty Act (MBTA) prohibits take of any migratory bird, including active nests, except as permitted by regulation (e.g., waterfowl or upland game bird hunting). The MBTA broadly defines "migratory bird" as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species. California Fish and Game Code Section 3503 prohibits take, possession, or needless destruction of bird nests or eggs; Section 3503.5 prohibits take or possession of birds of prey or their eggs; and Section 3513 prohibits take or possession of any migratory nongame bird. With the exception of a few non-native birds such as European starling, the take of any birds or active bird nests or young is regulated by these statutes. The proposed Project may disturb nests on or near the proposed trails or in adjacent habitats. Foraging during construction activities could also be affected, although any effects would be negligible and temporary and would be less than significant. Mitigation Measure BIO-6 would reduce impacts to less than significant by requiring preconstruction surveys during the nesting season and establishing appropriate buffers around nests where no construction activities would occur. Nesting bird impacts are discussed in greater detail in Section 3.4 of the EA/MND.

Mitigation Measures

The following summarizes mitigation measures to reduce or avoid impacts to special-status plants and wildlife. See Section 3.4 of the EA/MND for the full text of the measures.

BIO-1: CVMSHCP Compliance. Implement all applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction activities.

BIO-2: Limit Disturbance Areas. At all proposed work areas, limit the mechanical disturbance of previously undisturbed habitats (including soils) to the greatest extent practicable.

BIO-3: Assign Project Biologist. An acceptable biologist will be assigned to the project to conduct preconstruction surveys and construction monitoring.

BIO-4: Preconstruction Surveys. An acceptable biologist will conduct preconstruction clearance surveys for desert tortoise, burrowing owls, nesting birds, Coachella Valley fringe-toed lizards, Coachella Valley milk-vetch, and other special-status species.

BIO-5: Construction and Maintenance Monitoring. An acceptable biologist will monitor construction activities, provide worker education programs, and supervise or perform other related actions.

BIO-6: Special-Status Species Avoidance and Minimization Measures. The Project will adhere to avoidance and minimization measures described in Section 4.4 of the CVMSHCP for special-status species.

BIO-7: Worker Training. Employees will be trained to ensure they are aware of all applicable mitigation measures.

BIO-8: Wildlife Avoidance. Workers will not be permitted to feed, harm, approach, harass, or handle wildlife at any time.

BIO-9: Trash, Refuse, Concrete, and Other Construction Materials. All trash and construction materials will be properly contained while on site.

BIO-10: Minimize Standing Water. Water applied in desert shrubland should be minimal amount to prevent puddles.

BIO-11: Water Storage. All water containers will be securely covered.

BIO-12: Speed Limit. No vehicles will be permitted to exceed 25 mph.

BIO-13: Streambed Avoidance. A qualified biologist or hydrologist will identify the jurisdictional boundaries of the unnamed wash adjacent to the proposed Corkill trailhead site, and ensure that the boundaries of work areas are clearly marked outside the jurisdictional area.

BIO-14: Operations Monitoring. Photo points shall be established for long-term photo documentation of trail condition and resource damage; these points shall be visited annually.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Project would not affect riparian habitat or other sensitive communities identified by the CDFW. However, the active and stabilized sand fields at the Corkill Trailhead and Trail, and at the East Indio Trail, are locally important habitat types supporting numerous special-status plants and animals, including the listed Coachella Valley fringe-toed lizard and Coachella Valley milk-vetch. Trailhead and parking area construction would degrade this habitat at the Corkill Trailhead site. Trail construction would have only minimal effects to sand field habitat, due to the small disturbance area and rapid replenishment of windblown sand.

Participation in the CVMSHCP (in accordance with Mitigation Measure BIO-1) would mitigate impacts to special-status species and their habitat, including active sand fields habitat, through a payment of a fee to fund the CVMSHCP or other appropriate mechanism based on the type of proposed activity as described in Section 11.7.3 of the CVMSHCP Implementing Agreement, and adherence to avoidance and minimization measures in Section 4.4 of the CVMSHCP. Additionally, any potential impacts that may occur would be reduced with Mitigation Measure BIO-2, which would limit mechanical disturbance to previously disturbed habitats (including soils) to the extent practicable to prevent impacts to sensitive communities. These impacts would be similar at each proposed trail and trailhead.

Mitigation Measures

The following summarizes mitigation measures to reduce or avoid impacts to sensitive natural communities. See Section 3.4 of the EA/MND for the full text of the measures.

BIO-1: CVMSHCP Compliance. Implement all applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction activities.

BIO-2: Limit Disturbance Areas. At all proposed work areas, limit the mechanical disturbance of previously undisturbed habitats (including soils) to the greatest extent practicable.

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. There are no wetlands on or adjacent to any of the proposed Project sites. However, the proposed Corkill trailhead site is adjacent to an unnamed wash that crosses Corkill Road just to the north. In addition, improvements to Corkill Road would be required where the dirt road passes through a sandy wash that is not currently passable to 2-wheel-drive passenger vehicles (approximately the last 0.1 mile of Corkill Road before the trailhead location). The improvements may consist of grading and placing rock similar to trailhead preparation, or other means to stabilize the road and allow access into the Corkill Road Trailhead for all passenger vehicles. The jurisdictional limit of the wash areas have not been delineated. Depending on the precise location of the jurisdictional limits, grading activities for the parking area and road improvement could alter the streambed by placing or removing fill material. This effect, should it occur, may necessitate authorization by regulatory agencies. Mitigation Measure BIO-13 (Streambed Avoidance) would ensure that no substantial fill or other streambed alterations occur at the parking area, by limiting the disturbance area at the northern boundary. Impacts to the wash would be regulated through the permitting processes identified above. Therefore, Mitigation Measure BIO-13 would reduce impacts such that only the road improvements, and not grading for the parking area, would impact jurisdictional resources. These impacts for the road crossing are expected to be 0.3 acre or less and would occur within the existing dirt road.

Each of the three trails cross numerous small washes which may meet jurisdictional criteria as waters of the state or waters of the US. The expected trail work could include streambed alterations such as placement or removal of fill material; however, these alterations (if any) would be minimal and would not be subject to permitting. The stream channel at the Corkill Trailhead site, and streambed regulation, are discussed in greater detail in Section 3.4 of the EA/MND.

Mitigation Measure

The following summarizes the mitigation measure to reduce or avoid impacts to jurisdictional waters. See Section 3.4 of the EA/MND for the full text of the measures.

BIO-13: Streambed Avoidance. A qualified biologist or hydrologist will identify the jurisdictional boundaries of the unnamed wash adjacent to the proposed Corkill trailhead site, and ensure that the boundaries of work areas are clearly marked outside the jurisdictional area.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

NO IMPACT. The proposed Project construction and trail usage would not impact wildlife movement or nursery areas. Some wildlife may avoid the area while construction activities are ongoing, although this avoidance would be temporary and have a negligible effect due to the availability of surrounding habitat. Trail and trailhead construction does not include barriers that may impede wildlife movement. Impacts are discussed further in Section 3.4 of the EA/MND.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

NO IMPACT. The proposed Project would not conflict with local policies or ordinances protecting biological resources. The proposed trail construction is a covered activity under the CVMSHCP.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Project is within the CVMSHCP area, and is subject to the CVMSHCP conservation requirements. Impacts to CVMSHCP covered species located on private lands (including MSHCP conservation lands) are authorized by USFWS and CDFW, and mitigated through the MSHCP. Any potential take of listed species on BLM lands, even within the CVMSHCP area, is not authorized through the MSHCP, and must be covered separately.

With incorporation of Mitigation Measure BIO-1, impacts to MSHCP conservations areas would be covered through payment of a fee to fund the CVMSHCP or other appropriate mechanism based on the type of proposed activity.

Mitigation Measure

The following summarizes the mitigation measure to avoid conflicts with the CVMSHCP. See Section 3.4 of the EA/MND for the full text of the measure.

BIO-1: CVMSHCP Compliance. Implement all applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction activities.

A.3.5 Cultural and Tribal Cultural Resources

CULTURAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact

a.	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c.	Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Section 21074?	☐	☒	☐	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

The Coachella Valley and surrounding hills are generally sensitive for cultural resources, due to the preservation provided by the dry climate and the presence of a prehistoric lake, Lake Cahuilla, within the valley that provided habitat for species that prehistoric inhabitants used for food. The shoreline of Lake Cahuilla was located immediately to the south of the proposed Golf Center Parkway Trailhead and East Indio Hills Trail. Additionally, freshwater periodically upwelled along the San Andreas Fault that crosses the East Indio Trail, providing prehistoric inhabitants with this important resource within the desert. Thus, the area surrounding the Golf Center Parkway Trailhead and East Indio Hills Trail is considered highly sensitive for prehistoric cultural resources. An ethnographically and archaeologically attested Cahuilla village was located at Willow Hole, approximately 2 miles west of the Corkill Trail. Edom Hill, an important place to the Cahuilla people, is located approximately 1 mile to the south of the trail. Therefore, this area is also considered sensitive for prehistoric cultural resources.

A record search for the Project area was conducted by research staff at the Eastern Information Center (EIC) of the California Historical Resources Information System (CHRIS) at the University of California Riverside on April 24, 2015. A supplemental search was conducted on August 11, 2015. The results of the record search determined that there are no historic properties or historical resources present in the Corkill or Pushawalla Areas of Potential Effects (APEs). However, the record search did come back positive for two historic properties/historical resources within the APE of the East Indio Hills Trail (see Table A-1). However, neither of these resources would be impacted by the proposed Project. Trail construction or recreational activities would not constitute an impact to the Coachella Canal due to the current existence of a bridge over the canal and the nature of the resource. Similarly, proposed Project activities would not impact the Chino-Hayfield 200kV transmission line because the trail would pass underneath the resource (Elliott and Bagwell, 2015).

Table A-1. Cultural Resources Intersecting with the East Indio Hills Trail

Resource Name (number)	Type	California Register Eligibility	Construction or Recreation Impact
Chino-Hayfield 200kV Transmission Line (P-33-15035)	Historic-era steel lattice transmission line.	Recommended ineligible through survey evaluation	No
Coachella Canal (P-33-005705)	Historic-era aqueduct	Appears eligible through survey evaluation	No

A variety of historical maps were consulted for this Project. They revealed the presence of various trails, roads, and other features in the vicinity of the Project area (Table A-2). However, the only features noted within the trail APEs were historic period roads or jeep trails within the Pushawalla and East Indio Hills trails APEs. However, these two road alignments (Aspen-CVMC-PR-1 and Aspen-CVMC-EIH-1) do not appear eligible for the California or National Registers (Elliott and Bagwell, 2015).

Table A-2. Features Depicted on Historic Maps within the Record Search Area

Map Name	Date	Findings	California Register Eligibility
USGLO Plat of T3/R5E	1856	Indian Trail	Unevaluated
USGLO Plat of T5/R8E	1914	Road alignment	Unevaluated
Edom Hill USGS	1941	Jeep trail	Unevaluated
Pinyon Well USGS Quad	1944	Jeep trail; Road alignment	Unevaluated
Lost Horse Mtn. USGS	1956	Pipeline; Transmission line; Access road; Road alignment; Structure	Unevaluated
Seven Palms Valley USGS	1958	Road alignment	Unevaluated

On August 18 and 19, 2015, Aspen cultural resource specialists conducted a pedestrian survey of all three trail APEs. Surveys were conducted by walking 15 meters (50 feet) wide transects along the length of the trails. When cultural resources were encountered, they were assigned a field number, plotted on USGS topographic maps with a Trimble GEO7 global positioning system (GPS) unit, and described in written notes. Thorough documentation of all resources was assured with the use of California Department of Parks and Recreation (DPR) series 523 field recording forms.

No National or California Register-eligible cultural resources were identified within any of the three trail APEs. However, a total of five resources were identified (Table A-3). Much of the area surveyed showed signs of considerable erosion and soil movement as well as opportunistic dumping by recent users. While no obvious signs of looting were observed, it cannot be discounted. Although no National or California Register-eligible cultural resources were identified, the artifacts and features that were identified attest to both prehistoric and historic period use of the project areas. Additional information about these resources and Aspen's detailed eligibility recommendations can be found in *Cultural Resources Identification and Evaluation for the Coachella Valley Trails Development Project Riverside County, California* (Elliott and Bagwell 2015).

Table A-3. Resources Identified through Field Survey

Aspen Field No.	Trail	Age	Description	Eligibility Recommendation
Aspen-CVMC-C-1	Corkill	Prehistoric/ Historic-era	Cairn of unknown age with two weathered cores and one historic tobacco tin.	Additional Information Needed
Aspen-CVMC-C-2	Corkill	Historic-era	US GLO Survey monument and cairn, dated 1911.	Not eligible
Aspen-CVMC-PR-1	Pushawalla Road	Historic-era	A road alignment with berms, diffuse refuse scatter, and small dam.	Not Eligible
Aspen-CVMC-EIH-1	East Indio Hills	Historic-era	A road alignment without any associated artifacts.	Not Eligible
Aspen-CVMC-EIH-ISO-1	East Indio Hills	Prehistoric	Two Salton buff prehistoric ceramic sherds.	Not Eligible

a. Would the project cause a substantial adverse change in the significance of an historical resource as defined in §15064.5 [§15064.5 generally defines* historical resource *under CEQA]?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Project would be located in areas considered highly sensitive for cultural resources. Additionally, during construction there is a possibility of unanticipated discovery of cultural resources. Implementation of Mitigation Measures CR-1 and CR-2 would reduce this impact to a less-than-significant level. This impact is analyzed in detail in Section 3.5 of the EA/MND.

Mitigation Measure for Historical Resources

The following summarizes mitigation measures to reduce or avoid impacts to historical resources. See Section 3.5 of the EA/MND for the full text of the measures.

CR-1 **Monitor Sensitive Areas for Cultural Resources.** A qualified archaeological monitor must be present for any grading work required at the Golf Center Parkway Trailhead.

CR-2 **Assess and Treat Incidental Discovery of Cultural Resources.** In the event that unanticipated cultural resources are encountered during ground disturbance, actions must be taken to assess their importance and, if necessary, protect them from any further potential adverse effects.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Project area contains no previously identified unique archaeological resources, thus no impact is expected. However, portions of the proposed Project would be located in areas considered highly sensitive for cultural resources. Project-related ground-disturbing activities have the potential to uncover prehistoric or historic period features, artifacts, or other cultural deposits that may be buried below the ground surface. Due to the sensitive nature of the area surrounding the Golf Center Parkway Trailhead, monitoring under Mitigation Measure CR-1 would be implemented. In the case of unanticipated discovery of a unique archaeological resource, Mitigation Measure CR-2 would be applied, reducing this impact to less than significant. This impact is analyzed in detail in Section 3.5 of the EA/MND.

Mitigation Measure for Previously Unidentified Archaeological Resources

The following summarizes mitigation measures to reduce or avoid impacts to previously unidentified archaeological resources. See Section 3.5 of the EA/MND for the full text of the measures.

CR-1 **Monitor Sensitive Areas for Cultural Resources.** A qualified archaeological monitor must be present for any grading work required at the Golf Center Parkway Trailhead.

CR-2 **Assess and Treat Incidental Discovery of Cultural Resources.** In the event that unanticipated cultural resources are encountered during ground disturbance, actions must be taken to assess their importance and, if necessary, protect them from any further potential adverse effects.

c. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Section 21074?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Project is not known to contain any previously identified tribal cultural resources, thus no impact is expected. However, portions of the proposed Project would be located in areas considered highly sensitive for cultural resources, which may also be considered tribal cultural resources. Project-related ground-disturbing activities have the potential to uncover prehistoric or historic period features, artifacts, or other cultural deposits that may be buried below the ground surface. With implementation of Mitigation Measures CR-1 through CR-3 the

potential for an adverse change in the significance of a tribal cultural resource would be less than significant.

Mitigation Measures for Cultural Tribal Resources

The following summarizes mitigation measures to reduce or avoid impacts to cultural tribal resources. See Section 3.5 of the EA/MND for the full text of the measures.

CR-1 **Monitor Sensitive Areas for Cultural Resources.** A qualified archaeological monitor must be present for any grading work required at the Golf Center Parkway Trailhead.

CR-2 **Assess and Treat Incidental Discovery of Cultural Resources.** In the event that unanticipated cultural resources are encountered during ground disturbance, actions must be taken to assess their importance and, if necessary, protect them from any further potential adverse effects.

CR-3 **Assess and Treat Inadvertent Discovery of Human Remains.** All human remains discovered are to be treated with respect and dignity following the guidance put forward in BLM Instruction Memorandum No. CA-2010-024. Measure outlines procedures to follow in the event that human remains are discovered in the Project work area.

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed Project is not known to contain any previously identified human remains, thus no impact is expected. However, portions of the proposed Project would be located in areas with considerable prehistoric occupation and thus are considered sensitive for encountering human remains. Project-related ground-disturbing activities have the potential to uncover human remains that may be buried below the ground surface, and recreational activities have the potential to encounter remains on the surface that were either exposed through aeolian sand movement or that were deposited in cairns or ceramic vessels on the surface. If any human remains are encountered during construction of the Project, Mitigation Measure CR-3 would be implemented, reducing the potential for the Project to impact human remains to a less-than-significant level. This impact is analyzed in detail in Section 3.5 of the EA/MND.

Mitigation Measure for Human Remains

The following summarizes mitigation measures to reduce or avoid impacts to human remains. See Section 3.5 of the EA/MND for the full text of the measures.

CR-3 **Assess and Treat Inadvertent Discovery of Human Remains.** All human remains discovered are to be treated with respect and dignity following the guidance put forward in BLM Instruction Memorandum No. CA-2010-024. Measure outlines procedures to follow in the event that human remains are discovered in the Project work area.

A.3.6 Geology, Soils, and Paleontology

GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic groundshaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

LESS THAN SIGNIFICANT IMPACT. Portions of the East Indio Hills Trail are located within the San Andreas Fault Zone, and the trail crosses a trace of the San Andreas Fault. Also, the Corkill Trail crosses an unnamed fault trace in the San Gorgonio Pass fault zone. With the exception of informational kiosks and a low post-and-beam fence around the Corkill Road Trailhead, the proposed Project would not include any structures. Trail construction workers or recreational users could be injured or killed by surface rupture of either of these faults. However, due to the short construction period for the proposed Project and the anticipated sporadic and transitory nature of recreational use during proposed Project operation, the likelihood of injury or death due to fault rupture is very low. This impact would be less than significant and no mitigation is required.

ii) Strong seismic ground shaking?

LESS THAN SIGNIFICANT IMPACT. The entire proposed Project area is traversed by the San Andreas fault zone, including the North and South Branches of the San Andreas Fault in the San Bernardino Mountains section and the San Andreas Fault in the Coachella section, which are classified as active Holocene faults exhibiting displacement in the last 11,700 years (CGS, 2015). The East Indio Hills Trail is crossed by the

Indio Hills fault zone, which contains potentially active Late Quaternary faults exhibiting displacement in the last 700,000 years (CGS, 2015). The East Indio Hills Trail crosses two Earthquake Fault Zones of Required Investigation: the Indio fault zone and the Lost Horse Mountain SW ¼ fault zone (CGS, 2015). These active and potentially active fault zones can be expected to produce strong ground shaking throughout the Project area during an earthquake.

The proposed Project would not include any housing or habitable structures. Therefore, structural damage due to strong ground shaking would not occur. The trails and trailheads would be located in areas characterized as open space and would not be subject to hazards from collapsed buildings or falling objects. Strong ground shaking could cause trail workers or recreational users to lose their footing or fall (particularly on steep sections of trail), which could result in injury or death. However, strong ground shaking during past large earthquakes in Southern California has rarely resulted in injury in the absence of structures or falling objects. Informal recreation already occurs in the proposed Project area. Due to the short construction period for the proposed Project and the anticipated sporadic and transitory nature of recreational use during proposed Project operation, the likelihood of injury or death from strong seismic ground shaking is very low. This impact would be less than significant and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

LESS THAN SIGNIFICANT IMPACT. Most of the proposed Project area is classified by Riverside County as having a moderate potential for liquefaction (County of Riverside, 2015). However, the proposed Project would not include any housing or habitable structures and the potential for injury or death due to liquefaction would be negligible. This impact would be less than significant and no mitigation is required.

iv) Landslides?

LESS THAN SIGNIFICANT IMPACT. Strong ground shaking could result in landslides or rock fall on steep slopes. Portions of the Corkill Trail and the East Indio Hills Trail would traverse steep slopes. Construction of both of these trails would include improvements to the trail tread and slope stabilization where required. These trail improvements would slightly reduce the potential for seismically induced landslide or rock fall because unstable slopes would be reinforced to resist the forces of strong ground shaking. Although seismically induced landslides could result in injury to or death of a recreational user of the improved trail system that would be constructed under the proposed Project, informal recreation already occurs in the proposed Project area. The likelihood that a hiker, mountain biker, or equestrian would be injured or killed by seismically induced landslide is very low due to the anticipated sporadic and transitory nature of recreational use of the proposed Project trail improvements. This impact would be less than significant and no mitigation is required.

b. Would the project result in substantial soil erosion or the loss of topsoil?

LESS THAN SIGNIFICANT IMPACT. Construction of the proposed Project would disturb up to 8.8 acres of soil. This disturbed soil could be subsequently eroded during a storm event and result in increased sedimentation of a nearby waterbody. However, the potential for construction of the proposed Project to result in increased erosion and sedimentation is very small due to the small amount of soil disturbance, the generally arid climate, and the generally flat terrain that surrounds the trailheads (the areas where the majority of the soil disturbance would occur). Because the proposed Project would disturb more than 1 acre in total, the CVMC may be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) to comply with Clean Water Act NPDES requirements. Compliance with these requirements would include preparation of a Storm Water Pollution Prevention Plan, which would specify Best Management Practices

to minimize erosion and to prevent the loss of topsoil. This impact would be less than significant and no mitigation is required.

c. Would the project be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

LESS THAN SIGNIFICANT IMPACT. The proposed Project is located in a seismically active area that contains several soil types and geologic formations that could become unstable. The proposed Project is located on fine to coarse sand, badlands, and rock outcrops. Most of these soils are highly susceptible to erosion. The areas of the proposed Project with steeper slopes are susceptible to landslide, especially seismically-induced landslide. A moderate potential for subsidence and liquefaction exists near the East Indio Hills Trail. The risk of damage from unstable soils or geologic units is low because the proposed Project would not include the construction of any structures (with the exception of informational kiosks and a low post and beam fence). The total amount of ground disturbance would be no more than 8.8 acres, and the majority of this ground disturbance would occur on flat ground. Therefore, the potential for proposed Project construction to result in unstable geologic units or soil is very low. Also, unstable slopes along the Corkill Trail and the East Indio Hills Trail would be strengthened or stabilized during construction of the proposed Project, which would further reduce the potential for on- or off-site landslide. This impact would be less than significant and no mitigation is required.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

NO IMPACT. With the exception of informational kiosks and a low post and beam fence, construction of the proposed Project would not include any structures. No housing or habitable structures would be built. Also, the proposed Project does not contain expansive soils (soils with high clay particle content, typically classified as Vertisols). No impact would occur.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

NO IMPACT. The proposed Project would not include the use of septic tanks or alternative wastewater disposal systems. No wastewater facilities would be constructed as part of the proposed Project. If sanitation facilities are required during the construction period, temporary portable toilets will be provided for the workers by a licensed contractor. No impact would occur.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed trails and trailheads are located in the Coachella Valley, a large northwest to southeast trending basin that is the result of the San Andreas Fault system in California. Sedimentary deposition has been slowly filling this basin since the Miocene Epoch (23.03 to 5.332 million years ago). Being an area of sedimentary deposition, there exists the potential for paleontological resources (Indio, 2015).

A geologic map review was conducted to determine the names and number of geologic formations and surficial deposits within the Project area and their geographic distribution. The geologic map reviewed for this analysis was the *Geologic map of the Thousand Palms & Lost Horse Mountain 15 minute quadrangles* (Dibblee and Minch, 2008). The geologic mapping of Dibblee and Minch (2008) was used to establish Potential Fossil Yield Classification System (PFYC) rankings for the Project areas. Additionally, the Riverside

County Land Information System was queried for paleontological sensitivity in the area of each trail and trailhead (TLMA, 2015).

The PFYC system is meant to provide baseline guidance for predicting, assessing, and mitigating paleontological resources. The classification should be considered at an intermediate point in the analysis, and should be used to assist in determining the need for further mitigation assessment or actions.

Class 1 – Very Low. Geologic units that are not likely to contain recognizable fossil remains.

Class 2 – Low. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils.

Class 3 – Moderate (3a) or **Unknown (3b)**. Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.

Class 4 – High. Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Surface disturbing activities may adversely affect paleontological resources in many cases.

Class 5 – Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils, and that are at risk of human-caused adverse impacts or natural degradation.

Table A-4 identifies the PFYC system ratings for the proposed Project.

Table A-4. Potential Fossil Yield Classification System Sensitivity

Geologic Units	PFYC Class 5 Very High	PFYC Class 4 High	PFYC Class 3a Moderate	PFYC Class 3b Unknown	PFYC Class 2 Low	PFYC Class 1 Very Low
Corkill Trailhead and Trail						
Quaternary Alluvium					X	
Quaternary sand dunes					X	
Older Quaternary Lake Sediments	X					
Lower member Ocotillo Formation				X		
Palm Spring Formation	X					
Imperial Formation	X					
Pushawalla Trailhead and Trail						
Quaternary Alluvium					X	
Gneiss						X
Golf Center Parkway Trailhead and East Indio Hills Trail						
Quaternary Alluvium					X	
Quaternary clay					X	
Ocotillo Formation				X		
Palm Spring Formation	X					
Mecca Formation	X					

Source: Aron and Kelley 2011; BLM 2008; Dibblee and Minch 2008; IID and BLM 2006; Indio 2015; and TLMA 2015

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Portions of the proposed Project, including segments of all three trails and trailheads, are located in areas sensitive for paleontological resources. Specifically, large portions of the Corkill and East Indio Hills trails traverse geologic units that have been determined to be highly sensitive (PFYC Class 5) for their potential to yield significant fossil resources due to their containing scientifically important vertebrate and invertebrate fossils. The destruction of these resources through either trail construction or through recreational activities would be a significant impact. Mitigation Measure PAL-1 would be implemented in order to identify any significant fossil resources present on the surface that could be impacted by construction or recreational activities. In the case of the discovery of a unique paleontological resource or site, or unique geologic feature, Mitigation Measure PAL-2 would be implemented. Together, Mitigation Measures PAL-1 and PAL-2 would reduce the potential for the Project to impact paleontological resources to a less-than-significant level. This impact is analyzed in detail in Section 3.11 of the EA/MND.

Mitigation Measures for Paleontological Resources

The following summarizes mitigation measures to reduce or avoid impacts to paleontological resources. See Section 3.11 of the EA/MND for the full text of the measures.

PAL-1 **Conduct a Pre-activity Paleontological Field Survey of Areas with Class 5 Fossil Yield Potential.** A qualified paleontologist will conduct a pre-activity field survey of the areas directly and indirectly impacted in areas that have been determined to have a Class 5 (very high potential) sensitivity for paleontological resources, and recommend further measures to avoid impacts as needed.

PAL-2 **Evaluate Inadvertent Discovery of Paleontological Resources.** If significant paleontological resources are discovered during surface disturbing actions or at any other time, CVMC or any of its agents must: (a) stop work immediately at that site; (b) contact the appropriate BLM representative as soon as possible; and (c) make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage.

A.3.7 Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would generate nominal quantities of greenhouse gas (GHG) emissions through construction activities. The period of construction would be short-term, with GHG emissions only occurring directly from the operation of off-road heavy-duty equipment and the on-road motor vehicles needed to mobilize crew, equipment, and materials. This item is further discussed within Section 3.3 of the EA/MND.

b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would generate nominal GHG emissions through construction activities, and it would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. This item is further discussed within Section 3.3 of the EA/MND.

A.3.8 Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h. Expose people or structures to 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?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

LESS THAN SIGNIFICANT IMPACT. Construction of the trailheads would require limited use of heavy machinery and construction equipment, such as a grader, front loader, and dump truck. The operation of these vehicles and machinery could result in a spill or accidental release of hazardous materials, including fuel, engine oil, engine coolant, and lubricants. Because the proposed Project would disturb more than 1 acre in total, CVMC may be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) to

comply with Clean Water Act NPDES requirements. Compliance with these requirements would include preparation of a Storm Water Pollution Prevention Plan, which would specify Best Management Practices to quickly contain and clean up any accidental spills or leaks. Due to the short construction period and the minimal amount of construction equipment and associated hazardous materials to be used in construction of the proposed Project, the potential for an accidental release of hazardous materials to harm the public or the environment would be minor. This potential would be further reduced through compliance with applicable regulations.

In additional to the potential spill or accidental release of hazardous materials, construction of the proposed Project could encounter or mobilize previously unidentified existing contamination. The potential for existing contamination to be encountered is small due to the small area of ground disturbance and the low risk of contamination associated with past and present land uses, including open space and rural residential development. Any previously unidentified contamination that is encountered during construction of the proposed Project would be properly handled, transported, and disposed of at an appropriate disposal facility in accordance with applicable regulations.

This impact would be less than significant and no mitigation is required.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

NO IMPACT. Other than the hazardous materials associated with construction equipment that are described above (fuel, engine oil, engine coolant, and lubricants), neither construction nor operation of the proposed Project would involve the storage or use of hazardous materials. Other than accidental spills or leaks from construction equipment as described above, there are no reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

NO IMPACT. There are no schools within 0.25 mile of the proposed Project. The closest school is Andrew Jackson Elementary School in the City of Indio, which is located approximately 1.3 miles southwest of the Golf Center Parkway Trailhead.

d. Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

NO IMPACT. The proposed Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (also known as the Cortese List). Neither construction nor operation of the proposed Project would create a significant hazard to the public or the environment due to the presence of existing hazardous materials.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

NO IMPACT. The closest airport to the proposed Project is the Bermuda Dunes Airport, which is located approximately 3.8 miles west of the Golf Center Parkway Trailhead. Construction and operation of the

proposed Project would not result in any new lighting or any new tall structures, and would not result in an air traffic safety hazard.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

NO IMPACT. The proposed Project is not in the vicinity of a private airstrip. Construction and operation of the proposed Project would not result in any new lighting or any new tall structures, and would not result in an air traffic safety hazard.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

NO IMPACT. Construction and operation of the proposed Project would not block ingress or egress on any roadway. Trail improvements, including the construction of three trailhead parking lots, would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

h. Would the project expose people or structures to 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?

LESS THAN SIGNIFICANT IMPACT. The proposed Project would increase recreational use by hikers, mountain bikers, and equestrians for several wildland areas including the Indio Hills, the San Bernardino Mountains, and Joshua Tree National Park. These wildlands are adjacent to urbanized areas in the Coachella Valley, including the cities of Desert Hot Springs, Thousand Palms, and Indio. The increase in recreational use could lead to an increase in ignition sources for wildland fires, such as improperly discarded smoking materials or illegal campfires. However, the wildland areas that would be improved by the proposed Project are already accessible by the public and it is not expected that increased recreational use on established trails would substantially increase the risk of wildland fire. Further, the proposed Project improvements are expected to result in a decrease in unauthorized OHV use. OHVs represent a potential source of wildland fire because hot engine parts and sparks from metal striking rock could come into contact with dry grass and ignite a fire. Therefore, a decrease in unauthorized OHV use would result in a reduction of wildland fire risk. Overall, this impact would be less than significant, and no mitigation is required.

A.3.9 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater discharge such that there would be a net deficit in the aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	☐	☐	☒	☐
d. 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?	☐	☐	☒	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f. Otherwise substantially degrade water quality?	☐	☐	☐	☒
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?	☐	☐	☐	☒
h. Place within 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
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.	☐	☐	☐	☒
j. Cause inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project violate any water quality standards or waste discharge requirements?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Construction of the proposed Project would disturb up to 8.8 acres of soil. This disturbed soil could be subsequently eroded during a storm event and result in increased sedimentation of a nearby waterbody. However, the potential for construction of the proposed Project to result in increased erosion and sedimentation is very small due to the small amount of soil disturbance, the generally arid climate, and the lack of nearby perennial waterbodies (with the exception of the Coachella Canal adjacent to the Golf Center Parkway Trailhead). An existing berm that separates the proposed Golf Center Parkway Trailhead from the Coachella Canal would prevent any eroded sediment from entering the canal. The use of construction equipment to prepare the trailhead sites could result in a spill or accidental release of hazardous materials, including fuel, engine oil, engine coolant, and lubricants. These hazardous materials could contaminate a nearby waterbody either directly or indirectly through subsequent transport by stormwater runoff. Contamination of a nearby waterbody by hazardous materials is unlikely due to the short construction period, the minimal amount of construction equipment and associated hazardous materials to be used in construction of the proposed Project, the generally arid climate of the region, and the lack of nearby perennial waterbodies (except for the Coachella Canal). Also, because the proposed Project would disturb more than 1 acre in total, the CVMC may be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) to comply with Clean Water Act NPDES requirements. Compliance with these requirements would include preparation of a Storm Water Pollution Prevention Plan, which would specify Best Management Practices to minimize erosion and to quickly contain and clean up any accidental spills or leaks. Implementation of

Mitigation Measures BIO-2 and BIO-13, as well as compliance with existing laws and regulations, would reduce the severity of this potential impact to less than significant and no additional mitigation is required.

b. Would the project 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 (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

NO IMPACT. The small amount of water that would be required during construction of the proposed Project (mainly for dust suppression) would be obtained from a private water purveyor or through an agreement with a local municipality. No groundwater would be extracted for construction or operation of the proposed Project. No new impermeable surfaces would be created, and neither construction nor operation of the proposed Project would interfere substantially with groundwater recharge.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off site?

LESS THAN SIGNIFICANT IMPACT. Construction of the proposed Project would involve minor alterations to the existing drainage pattern of the area. Berms would be constructed along portions of the Corkill Road and Pushawalla Trailheads to divert surface runoff from rainstorms away from the parking areas. A short section of Corkill Road, just north of the proposed trailhead site, would be improved through grading, the placement of rock or another stabilizing material, and drainage improvements to prevent erosion of the roadway. These minor alterations of the existing drainage pattern would not result in substantial erosion or siltation on- or off-site. The climate of the region is generally arid and both streamflow and overland sheet flow occur only briefly following storm events. The drainage alterations would be designed to prevent erosion on-site. Also, the minor drainage alterations would not result in increased runoff nor would they substantially concentrate sheet flow across the proposed Project sites. No substantial increase in off-site erosion or siltation due to the minor drainage pattern alterations is expected. This impact would be less than significant and no mitigation is required.

d. Would the project 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 that would result in flooding on or off site?

LESS THAN SIGNIFICANT IMPACT. As described above, the proposed minor alterations to the existing drainage pattern across the proposed Project sites would not increase the rate or amount of runoff, nor would they substantially concentrate sheet flows across the proposed Project sites. On-site flooding would be prevented or reduced by construction of berms along portions of the Corkill Road and Pushawalla Trailheads. The floodwater that would be diverted away from those trailheads would not substantially increase flooding off-site. This impact would be less than significant and no mitigation is required.

e. Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems to provide substantial additional sources of polluted runoff?

NO IMPACT. As described above, neither construction nor operation of the proposed Project would increase the rate or amount of runoff water. Existing or planned stormwater drainage systems would not be affected by construction or operation of the proposed Project, and no impact would occur.

f. Would the project otherwise substantially degrade water quality?

NO IMPACT. Neither construction nor operation of the proposed Project would substantially degrade water quality. As described above, construction of the proposed Project could result in a minor amount of erosion and a small potential for the accidental release or spill of hazardous materials. However, neither of these potential adverse effects is expected to substantially degrade water quality. No impact would occur and no mitigation is required.

g. Would the project 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. The proposed Project does not include any housing or habitable structures. No impact would occur.

h. Would the project place within a 100-year floodplain structures that would impede or redirect flood flows?

NO IMPACT. None of the proposed Project components are located within a 100-year floodplain. The Corkill Road Trailhead is located adjacent to a 100-year floodplain, but outside of the delineated floodplain boundaries. A small berm may be constructed along the north side of the trailhead to direct sheet flow around the site during flash flood events, but this minor drainage alteration would occur outside of a 100-year floodplain and would not substantially alter the existing pattern of flooding in the area. No impact would occur and no mitigation is required.

i. Would the project 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?

NO IMPACT. With the exception of informational kiosks and low post-and-beam fences around the trailheads, the proposed Project does not include any structures. The proposed Project would not alter or encroach on any dam or levee, and would not substantially alter the flood patterns in the area. Construction and operation of the proposed Project would encourage increased recreational use in the area, but the area is already used for informal recreation and the current risk of loss, injury, or death involving flooding would not increase as a result of the proposed Project. No impact would occur and no mitigation is required.

j. Would the project cause inundation by seiche, tsunami, or mudflow?

NO IMPACT. The proposed Project is not located near to an ocean or enclosed waterbody, and would not cause or be subject to inundation by tsunami or seiche. The proposed Project would not alter the rate or amount of runoff in the area, nor would it substantially alter the existing topography or soil characteristics. The proposed Project would not cause inundation by mudflow. No impact would occur and no mitigation is required.

A.3.10 Land Use and Planning

LAND USE PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒

LAND USE PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project physically divide an established community?

NO IMPACT. The Project consists of the establishment and improvements of trails and trailheads. The areas surrounding the Project sites consists of open natural space. There are no habitable structures in or near the three trailhead and trail locations, and there is no development in the vicinity of any of the sites. Therefore, there are no communities that would be directly impacted by construction or operation of the Project, so the Project would not result in a physical division of established communities. There would be no impact under this criterion.

b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

NO IMPACT. The Project would traverse land under federal, State, and local jurisdictions. The proposed trails, trailheads, and trail improvements under the Project would comply with and fulfill the applicable State and local land use plans, goals, objectives and policies that aim to provide and expand upon the existing trails. Therefore, there would be no land use impact under this criterion. Refer to Section 3.8 of the EA/MND for a detailed analysis of the Project's consistency with the applicable land use plans, policies, and regulations.

c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. This issue is addressed under the biological resources analysis; see Section A.3.4 of this Initial Study and Section 3.4 of the EA/MND.

A.3.11 Mineral Resources

MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☒	☐
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

LESS THAN SIGNIFICANT IMPACT. Both the Pushawalla Trailhead and the Pushawalla Trail would be located in an area that has been classified by the State Geologist as MRZ-2b, where geologic data indicate that significant inferred mineral resources are present. This area is shown on Plate 1 of the California Geological Survey Special Report 198, Updated Mineral Land Classification Map for Portland Cement Concrete-Grade Aggregate in the Palm Springs Production-Consumption (P-C) Region, Riverside County, California (CGS, 2007). This same area has been proposed for designation by the State Mining and Geology Board as a "regionally significant" mineral resource deposit. Although the Pushawalla Trailhead and Pushawalla trail would be located in an area that is classified as MRZ-2b and proposed for designation as "regionally significant," neither construction nor operation of the proposed Project would result in the loss of availability of a known mineral resource because no permanent structures (with the exception of an informational kiosk at the trailhead parking area) would be installed. Construction of the Pushawalla Trail would only involve the installation of intermittent signage along an existing dirt road. Construction of the trailhead parking area would include minor grading to level the site and installation of a small earthen berm for flood protection. Although the recreational use of the area that the proposed Project would encourage is not compatible with mineral resource extraction, none of the proposed Project components would permanently preclude mineral resource extraction in the area. This impact would be less than significant and no mitigation is required.

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

NO IMPACT. As stated in the March 2014 County of Riverside Environmental Impact Report No. 521 Public Review Draft, which was prepared in support of a General Plan amendment, Riverside County does not contain any "locally important mineral recovery sites." (County of Riverside, 2015). No impact would occur under this criterion.

A.3.12 Noise

NOISE Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☐	☐	☐	☒
d. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☐	☐	☒	☐
e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

f.	For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

LESS THAN SIGNFICANT IMPACT: Construction of the proposed Project would take place during daylight hours, Monday through Saturday. The Riverside County Municipal Code, Chapter 7.35, General Noise Regulations prohibits construction noise between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between 5:00 p.m. and 8:00 a.m. on Saturdays, and on Sundays and federal holidays if the noise creates a disturbance across a residential or property line or at any time exceeds the maximum permitted noise level for the underlying land use category, except otherwise authorized by variance. Because proposed Project construction would not occur during the specified hours, the Project would comply with the County's General Noise Regulations.

The Golf Center Parkway Trailhead would be located within the City of Indio. Chapter 95C (Noise Control) of the City of Indio Code of Ordinances prohibits excessive noise that would be plainly audible beyond 50 feet from the noise source. The nearest homes are approximately 300 feet from the trailhead location, behind an existing sound wall. At this distance, construction noise is expected to attenuate (lessen) to a level that would be equal or negligibly greater than existing ambient noise levels. In addition, construction at this location would be of short duration (approximately 2 days) and would be conducted during daytime hours. Therefore, the Project is not expected to violate the City of Indio noise ordinance.

Operation and maintenance of the proposed Project would not create a permanent source of noise of concern. Although construction would generate noise, the levels would not be in excess of applicable standards and impacts would be less than significant.

b. Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

LESS THAN SIGNIFICANT IMPACT: Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Typically, ground-borne vibrations generated by man-made activities attenuate rapidly with distance from the source. Ground vibrations from construction activities do not often reach the levels that can damage structures, but can achieve the audible and feelable ranges in buildings very close to the source (FTA, 2006).

Heavy equipment use (site grading activities) and loaded heavy trucks have the potential to generate localized groundborne vibration. The nearest sensitive receptors to the proposed Project are:

- Corkill Trail and Trailhead: approximately 0.25 mile (residential use)
- Pushawalla Trail and Trailhead: 1.0 mile (residential use)
- East Indio Hills Trail and Golf Center Parkway Trailhead: 300 feet (residential use behind an existing sound wall).

At these distances, any temporary vibration generated during construction would have little to no impact. Heavy equipment use for construction activities at the site would be temporary and of short duration, with an estimated 2 days of grading required at each trailhead. Furthermore, heavy truck haul trips would only utilize roads without weight or use restrictions. Therefore, any structures located proximate to those

roads are already subject to periodic vibration from heavy truck transit. Project construction would result in less than significant vibration impacts.

Once constructed, maintenance activities would not utilize heavy equipment that could generate localized vibration. The proposed Project would result in no operational vibration impacts.

c. Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

NO IMPACT: The proposed Project would not create any permanent noise sources which could result in a substantial permanent increase in ambient noise levels. Furthermore, noise resulting from the use of the proposed Project would not be substantially different from the existing noise levels. No impact would occur.

d. Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

LESS THAN SIGNIFICANT IMPACT: Trailhead construction has the potential to generate the loudest noises, as trail improvements would be conducted using hand tools. Construction at each trailhead location would occur over approximately 2 days. Construction equipment would include a grader, loader, dozer, backhoe, roller compactor, haul trucks (to import aggregate for trailhead surfacing), and an on-road water truck. These types of construction equipment generally produce noise at levels of 79 to 85 dBA at 50 feet from the noise source (FHWA, 2006). Line sources of noise, such as roadway traffic, attenuate at a rate of 3.0 dBA to 4.5 dBA per doubling of distance from the source, based on the inverse square law and the equation for cylindrical spreading of noise waves over hard and soft surfaces (FHWA, 2006). Under the same principals, point sources of noise, including stationary and idle mobile sources such as idling vehicles or on-site equipment, attenuate at a rate of 6.0 dBA to 7.5 dBA per doubling of distance from the source (FHWA, 2006).

In general, the more the level or the tonal (frequency) variations of a noise exceed the existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual. When comparing sound levels from similar sources (for example, changes in traffic noise levels), a 3 dBA increase is considered to be a just-perceivable difference, while a 5 dBA difference is clearly perceivable, and 10 dBA is considered a doubling in perceived loudness.

Typical daytime Leq noise levels in varying environments are:

- 35 dBA or below in rural and wilderness lands;
- 50 to 60 dBA in sparse residential areas, like those near the proposed trailheads;
- 75 dBA in busy urbanized areas; and
- 85 dBA near major freeways and airports.

Point sources of noise, including stationary and idle mobile sources such as idling vehicles or onsite construction equipment, attenuate at a rate of approximately 7.5 dBA per doubling of distance from the source (Caltrans, 1998). At the nearest receptor (300 feet) from temporary construction activities at the Golf Center Parkway Trailhead, maximum periodic noise levels of 79 to 85 dBA are expected to attenuate to approximately 60 to 66 dBA. These levels are likely to be on the low end of the estimated range because of the presence of an existing sound wall between the trailhead and the nearest residences. Therefore, while temporary construction activity would temporarily increase the ambient noise levels directly adjacent to the site, this impact is less than significant and no mitigation is required.

e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

NO IMPACT: The nearest civil aviation facilities to the proposed Project sites are listed below:

- Corkill Trail and Trailhead: Palm Springs International Airport, 5.8 miles.
- Pushawalla Trail and Trailhead: Bermuda Dunes Airport, 7.6 miles
- East Indio Hills Trail and Golf Center Parkway Trailhead: Bermuda Dunes Airport, 4.4 miles.

The proposed Project is not located within the airport land use boundaries of any of these aviation facilities. Additionally, due to the distance of the proposed Project to these aviation facilities, neither construction nor operation of the Project would subject workers or recreationists to excessive aviation-generated noise levels. No impact would occur.

f. For a Project within the vicinity of a private air strip, would the Project expose people residing or working in the Project area to excessive noise levels?

NO IMPACT: As described above, the closest airport to the proposed Project is the Bermuda Dunes Airport which accommodates both private and public air travel. Due to the distance of the proposed Project to this aviation facility (4.4 miles), neither construction nor operation of the Project would subject workers or recreationists to excessive aviation-generated noise levels. No impact would occur.

A.3.13 Population and Housing

POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

NO IMPACT: Construction activities would be temporary and trail improvements would be conducted by local volunteers or inmate crews. Work at the trailhead locations, including grading, laying gravel, and installing signs would be conducted by a small crew and would last about two days at each trailhead. It is expected that construction workers would commute to the proposed Project sites from surrounding communities. Therefore, proposed Project construction would not induce an increase in population levels or a decrease in available housing, and no impacts to existing or future population growth levels would occur.

During the operation period, maintenance activities would include periodic inspections of the trails and replacement of trail signs as needed to ensure that the proposed trail alignments remain clearly marked. Minor repair of the trail treads or trailhead parking areas may also be required, especially after major storm events. Trail inspections and repair work would likely be conducted by volunteers, and the Project would not create any new permanent jobs. Therefore, operation of the proposed Project would not generate a direct or indirect increase in the permanent population of the area. No impact would occur.

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

NO IMPACT: There are no habitable structures in or near the three trailheads and trails locations, and there is no development in the immediate vicinity of any of the sites. No housing would be removed or displaced due to the construction and operation of the proposed Project, and it would not necessitate the construction of replacement housing elsewhere. No impacts would occur.

c. Would the project displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

NO IMPACT: As described above, the Project trailheads and alignment would be constructed at locations without existing housing and, therefore, would not necessitate the displacement of people or necessitate the construction of new housing elsewhere. No impacts would occur.

A.3.14 Public Services

PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

a) Fire protection?

NO IMPACT: Fire suppression and emergency medical services to the Project area are provided by multiple agencies. The Project would be located near the cities of Desert Hot Springs and Indio as well as the community of Indio Hills. The proposed Project does not include any facilities or storage which would be subject to fire department regulation. No new or substantially altered fire facilities would be required to

serve the Project. Construction of the proposed Project would not affect routes used by the Fire Department to respond to emergencies. The proposed Project would not result in an impact on fire protection. No impact would occur.

b) Police Protection?

NO IMPACT: Police protection services are provided by multiple jurisdictions and the primary station varies depending on the location. No new or substantially altered police facilities would be required to serve the Project. The Project would result in an increase in recreationists in the area; however, by increasing appropriate trail usage and visibility, the proposed Project is expected to reduce unauthorized use, illegal dumping, and vandalism that is currently ongoing. This may result in a beneficial impact on police protection in the proposed Project area by reducing the need for enforcement actions and patrol requirements. No impact will occur.

c) Schools?

NO IMPACT: The proposed Project would not induce an increase in population levels that could adversely affect local school service levels or require new or expanded school facilities. There would be no impact on schools.

d) Parks?

NO IMPACT: The proposed Project would not induce an increase in population levels. Consequently, the proposed Project would not increase population in a manner that would result in additional demand for new park facilities. There would be no impacts on parks.

e) Other Public Facilities?

NO IMPACT: No additional population would be required for construction or operation and maintenance of the proposed Project. Consequently, the Project will neither substantially affect public facilities nor create the need for any new or altered public facilities such as post offices or libraries. No impact would occur.

A.3.15 Recreation

RECREATION	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☒	☐	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The primary objective/purpose of the Project is to provide non-motorized recreational opportunities, which would be beneficial to the

surrounding community. The second objective/purpose of the Project is that, by designating trails in the area, use of more sensitive habitat areas for hiking, horseback riding, and mountain biking will diminish and unauthorized uses will be discouraged by the more visible presence of outdoor recreationists. Therefore, the objectives/purposes of the Project are to increase the use of these designated trails, which will help avoid the physical deterioration of other informal trails in the surrounding area. However, construction and expansion of the trails could result in increased access to the trails by unauthorized OHV users. The use of motorized vehicles would increase the rate of physical deterioration of the trails, and would not be compatible with the intended users (hikers, mountain bikers, and equestrians). Therefore, mitigation would be required to prohibit unauthorized recreation activities. Mitigation Measure Rec-1 requires that CVMC block motorized access to trails where feasible. This measure would minimize the amount of unauthorized recreation that could degrade surrounding sensitive areas. With implementation of mitigation, this impact would be less than significant. Refer to Section 3.9 of the EA/MND for detailed analysis of this issue and full text of the recommended mitigation measure for this impact.

Over time, implementation of the Project would result in the physical deterioration of the trailhead facilities and trails associated with this Project. No motorized vehicles would be allowed on the trails, which would minimize degradation of the trails. Nonetheless, prolonged use of the facilities and trails by hikers, mountain bikers, and equestrians would result in physical deteriorations, which may include but are not limited to, the erosion of trails, vandalism, or the deterioration of signage. Impacts associated with mountain bike use would not occur on the Pushawalla Trail. This trail would not be open to mountain bikes because it accesses a trail corridor in Joshua Tree National Park on which mountain bikes are not allowed.

In order to avoid the physical deterioration that would occur as a result of the Project, the operation and maintenance activities that are included in the Proposed Action consist of regular inspections and repairs, the replacement of signage, and contact information for the public to report illegal activities or the need for maintenance. Therefore, with implementation of the proposed operation and maintenance activities, the physical deterioration of the Project sites would be less than significant and no mitigation measures are required.

Mitigation Measure

The following summarizes mitigation measure to reduce or avoid impacts from unauthorized recreational activities. See Section 3.9 of the EA/MND for the full text of this measure.

REC-1 **Prevent Unauthorized Recreation Activities.** Where feasible, the CVMC will block access to the trails that allow for unauthorized OHV use to occur.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The proposed Project consists of establishing or improving three trailheads, each with an associated recreation trail. The primary objective/purpose of the Project is to provide increased access to low-impact, mixed-use outdoor recreation opportunities for hikers, equestrians, and mountain bikers. As the Project includes the establishment or improvement of recreational facilities, which would require construction and operation activities, there may be adverse physical effects on the environment. However, the purpose of this CEQA/NEPA analysis is to identify the potential impacts and provide mitigation measures for impacts that would result in adverse effects. Therefore, implementation of the mitigation measures set forth in the EA/MND would minimize and avoid adverse physical impacts under this criterion.

A.3.16 Transportation/Traffic

TRANSPORTATION AND TRAFFIC Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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 and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b. 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?	☐	☐	☐	☒
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e. Result in inadequate emergency access?	☐	☐	☐	☒
f. Conflict with adopted policies, plans, or programs supporting regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. 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 and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

LESS THAN SIGNIFICANT IMPACT. The Project would generate temporary vehicle trips during construction from activities and worker commuter trips. Once operational, the Project would result in trips to the new trailhead locations. While the trips would not exceed any performance standard measuring effectiveness of the circulation system, this item is further analyzed within Section 3.10 of the EA/MND.

b. 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?

NO IMPACT. While construction and operation of the proposed Project may result in a small number of localized trips to access the trail and trailhead locations, only a nominal number of trips may occur on Interstate 10 (I-10). The segment of I-10 through the Coachella Valley is the only applicable roadway covered by the Riverside County Transportation Commission (RCTC) 2011 Congestion Management Program (RCTC, 2011). However, because the number of trips demonstrable to Project activities would be so nominal on I-10, they would not conflict with any performance standard identified under the 2011 Congestion Management Program (RCTC, 2011). No impact would occur.

c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

NO IMPACT. The Project does not include any structures or activities that could impede navigable airspace. No impact would occur.

d. Would the project substantially increase hazards because of a design feature or incompatible uses?

LESS THAN SIGNIFICANT IMPACT. The Project would construct three new trailheads, all of which include new traffic control features serving vehicle ingress and egress. While line-of-sight is good at all trailhead locations, necessary roadway improvements and traffic controls could potentially affect roadway conditions, access, and traffic flow. The CVMC would obtain all applicable permits and authorizations, and compliance with permit conditions would ensure trailhead ingress and egress, any roadway improvements, and proposed traffic controls do not increase roadway hazards or create an incompatible use. This item is analyzed in detail in Section 3.10 of the EA/MND. Impacts would be less than significant and no mitigation is required.

e. Would the project result in inadequate emergency access?

NO IMPACT. The Project does not include any temporary or permanent roadway encroachment or alterations that may impede emergency vehicle access and flow. No impact would occur.

f. Conflict with adopted policies, plans, or programs supporting regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

NO IMPACT. The Project does not include any temporary or permanent roadway encroachment or alterations that may conflict with existing or planned public transit, bicycle, or pedestrian facilities. Furthermore, the Project consists of the establishment or improvement of three trailhead sites, each with an associated non-motorized recreation trails in accordance with the Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP), as administered by the Coachella Valley Conservation Commission (CVCC). No impact would occur.

A.3.17 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

NO IMPACT. No wastewater will be generated during either construction or operation of the proposed Project. No housing or sanitation facilities would be constructed, and no wastewater would be discharged. If sanitation facilities are required during the construction period, temporary portable toilets will be provided for the workers by a licensed contractor.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

NO IMPACT. No new water or wastewater treatment facilities would be constructed or expanded as a result of construction or operation of the proposed Project.

c. Would the project require, or result in the construction of, new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

NO IMPACT. No new or expanded stormwater drainage facilities would be required as a result of either construction or operation of the proposed Project. The natural drainage in the proposed Project area would remain mostly unchanged, with the exception of small earthen berms around portions of the trailheads to protect against flooding and erosion from sheet flow. Minor drainage improvements may be required along Corkill Road, north of the Corkill Road Trailhead, but these minor improvements would not substantially alter the existing drainage pattern in the area nor would they require the expansion or alteration of existing stormwater drainage facilities.

d. Would the project have sufficient water supplies available to serve the proposed project from existing entitlements and resources, or would new or expanded entitlements be needed?

LESS THAN SIGNIFICANT IMPACT. Construction of the proposed Project would require a small amount of water for dust suppression and structure foundation installation. Site preparation and grading at the trailheads and access roads would require water for dust suppression. The total amount of ground disturbance at the three trailheads would be less than 1 acre. A small amount of water would also be required for concrete mixing to install footings, pads, or other foundation structures for the informational kiosks. The total amount of water required for dust suppression and structure foundation installation is not expected to exceed 3 acre-feet. This water would be obtained from a private water purveyor or through an agreement with a local municipality. The small amount of water required during construction of the proposed Project would not result in a need for new or expanded entitlements. No water would be

required during operation of the proposed Project. This impact would be less than significant and no mitigation is required.

e. Would the project result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has adequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments?

NO IMPACT. No wastewater will be generated during either construction or operation of the proposed Project. No housing or sanitation facilities would be constructed, and no wastewater would be discharged. If sanitation facilities are required during the construction period, temporary portable toilets will be provided for the workers.

f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs?

NO IMPACT. Construction of the proposed Project would generate a very small amount of solid waste. Examples of construction waste include packaging for trail signs and kiosk construction materials, and excess soil or rock from grading of the trailhead sites. Excess materials generated by grading of the trailheads would be reused on-site to the extent feasible. Any solid waste that would be generated during construction of the proposed Project would be disposed of at an acceptable solid waste disposal facility, such as the nearby privately-owned Coachella Valley Transfer Station/Materials Recovery Facility (CVTS). The CVTS accepts municipal waste, recycling, construction and demolition waste, and processes an average of 700 tons per day. The amount of waste generated by construction of the proposed Project would not adversely affect operations at the CVTS nor would it exceed the facility's permitted capacity. No solid waste would be generated during operation of the proposed Project. No impact would occur and no mitigation is required.

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

NO IMPACT. The very small amount of solid waste that would be generated during construction of the proposed Project would be properly disposed of at an appropriate facility, such as the CVTS. Solid waste disposal for the proposed Project would adhere to all federal, state, and local statutes and regulations related to solid waste.

A.3.18 Mandatory Findings of Significance

MANDATORY FINDING OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? (*Cumulatively considerable* means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐

c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. As discussed in Section A.3.4, Biological Resources, the proposed Project would have impacts on sensitive biological resources, including listed species, other special-status plants and animals, and migratory birds, but mitigation has been provided to reduce these impacts to less-than-significant levels. The Project would reduce some currently ongoing impacts to biological resources by focusing recreational use onto designated trails and away from the most biologically sensitive areas. The Project would discourage current practices such as trash dumping and unauthorized OHV use in listed and other special-status species' habitats by increasing the presence of authorized recreational users in appropriate areas, and providing information to report unauthorized uses. Periodic trail patrols would also minimize unauthorized uses that could adversely affect biological resources. After mitigation, the Project would not have the potential to degrade the quality of the environment; would not substantially reduce the habitat of a fish or wildlife species; would not cause a fish or wildlife population to drop below self-sustaining levels; would not threaten to eliminate a plant or animal community; and would not reduce the number or restrict the range of a rare or endangered plants or animals.

As discussed in Section A.3.5, Cultural Resources, impacts on human remains would be less than significant with compliance with existing regulations. Impacts on archaeological and paleontological resources would be minimized or avoided through implementation of mitigation measures during grading and other ground-disturbing activities. In addition, the Project would be sited to avoid the prehistoric trails networks in the general area. Impacts would be less than significant after mitigation. The proposed Project would not eliminate important examples of the major periods of California history or prehistory.

Implementation of the mitigation measures for biological and cultural resources and compliance with existing regulations on the disposition of human remains that may be found during excavation would result in less than significant impacts.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)

LESS THAN SIGNIFICANT. The proposed Project trails and trailheads are located in generally remote areas, and there are no known planned projects in the vicinity of any of the three Project sites. Therefore, environmental impacts of the Project would not have the potential to combine with those of any planned projects to create a cumulative effect on the environment.

Past and ongoing projects in the vicinity of the trails and trailheads include roads, transmission lines, residential developments, golf courses, and a private lake as well as park lands such as Joshua Tree National Park. The impacts of the proposed Project would be limited in both intensity and scope due to the relatively small size, scattered locations, and type of trail improvements proposed. Since Project impacts would be less than significant after mitigation, impacts associated with the proposed Project are

not expected to contribute considerably to cumulative impacts in the vicinity of the trail alignments. Cumulative impacts would be less than significant.

c. Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Project construction and trail use would not have the potential to generate significant adverse impacts on human beings, either directly or indirectly with the implementation of mitigation measures. Potential impacts related to air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, and utilities and service systems were found to be less than significant and do not warrant mitigation, or would not occur at all from the Project. Potential impacts to traffic and transportation would be avoided or reduced to less than significant levels with compliance with existing regulations and with the implementation of mitigation measures. Therefore, potential environmental impacts on human beings, either directly or indirectly, would be less than significant after mitigation.

A.3.19 References

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Appendix B

Biological Resources

Table 1. Special-status species not addressed[1]

Latin Name	Common Name	Reason for Exclusion
PLANTS		
Ayenia compacta	California ayenia	Well outside of geographic range.
Astragalus bernardinus	San Bernardino milk-vetch	No suitable Joshua tree, pinyon, or juniper woodland habitat present.
Astragalus preussii var. laxiflorus	Lancaster milk-vetch	Outside of geographic range, only known from Lancaster and Edwards Air Force Base.
Atriplex parishii	Parish's brittlescale	No vernal pool or playa habitat present.
Caulanthus simulans	Payson's jewelflower	No chaparral or coastal sage scrub habitat present.
Chorizanthe parryi var. parryi	Parry's spineflower	No chaparral, cismontane woodland, or coastal scrub habitat present.
Chorizanthe xanti var. leucotheca	White-bracted spineflower	No coastal scrub alluvial fan habitat present.
Coryphantha alversonii	Alverson's foxtail cactus	West of the geographic range.
Ditaxis serrata var. californica	California ditaxis	North and west of the geographic range.
Eremothera boothii spp. boothii	Booth's evening-primrose	No suitable Joshua tree, pinyon, or juniper woodland habitat present.
Erigeron parishii	Parish's daisy	No suitable pinyon or juniper habitat present.
Euphorbia misera	Cliff spurge	No suitable rocky, coastal bluff scrub habitat present.
Grusonia parishii (Opuntia parishii)	Parish's club-cholla	No suitable Joshua tree woodland habitat present.
Heuchera hirsutissima	Shaggy-haired alumroot	Well outside of elevation range, above 4000 ft
Lilium parryi	Lemon lily	Well outside of elevation range, above 4000 ft
Linanthus jaegeri	San Jacinto linanthus	Well outside of elevation range, above 7000 ft
Marina orcuttii var. orcuttii	California marina	Well outside of elevation range, above 3000 ft
Pseudorontium cyathiferum	Deep Canyon snapdragon	Known in California only from the Deep Canyon area.
Monardella robisonii	Robison's Monardella	No suitable pinyon or juniper woodland habitat present.
Saltugilia latimeri	Latimer's woodland-gilia	No chaparral, pinyon or juniper woodland habitat present.
Stemodia durantifolia	Purple stemodia	No suitable mesic habitat present, outside of geographic range.
Streptanthus campestris	Southern jewelflower	No chaparral, pinyon or juniper woodland, or coniferous forest habitat present.
Thelypteris puberula var. sonorensis	Sonoran maiden fern	No meadows or seeps present.
Wislizenia refracta ssp. refracta	Jackass-clover	Outside of geographic range and no suitable playas present.

Table 1. Special-status species not addressed[1]

Latin Name	Common Name	Reason for Exclusion
IIVERTEBRATES		
Calileptoneta oasa	Andreas Canyon leptonetid spider	Locally endemic to Andreas Canyon.
Dinacoma caseyi	Casey's June beetle	Outside known geographic range, locally endemic to Santa Rosa mountain bajadas.
Oliarces clara	Cheeseweed moth lacewing	No suitable streams or open water sources present.
FISH		
Cyprinodon macularius	Desert pupfish	No natural streams or springs present.
AMPHIBIANS		
Rana draytonii	California red-legged frog	Outside of geographic range.
Rana muscosa	Southern mountain yellow-legged frog	Outside of geographic range.
REPTILES		
Crotalus ruber	Red-diamond rattlesnake	No suitable chaparral, oak and pine woodlands, or rocky grassland habitat present, outside of geographic range.
Phyrnosoma blainvillii	Coast horned lizard	Outside of geographic range.
BIRDS		
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	No chaparral or coastal sage scrub present.
Cypseloides niger	Black swift	No cliffs or waterfalls present.
Dendroica brewsteri	Yellow warbler	No riparian habitat present.
Empidonax traillii extimus	Southwestern willow flycatcher	No dense riparian willow habitat present.
Vireo bellii pusillus	Least Bell's vireo	No dense riparian willow habitat present.
MAMMALS		
Ovis canadensis nelsoni pop. 2	Peninsular bighorn sheep DPS	Outside of geographic range.

[1] Special-status species reported from the region but not addressed in this report due to habitat or geographic range.

Table 2. Observed Species List

	Latin Name	Common Name	Notes	Voucher	East Indio Hills	Corkill	Pushawalla
VASCULAR PLANTS							
Dicotyledons							
EPHEDRACEAE		EPHEDRA FAMILY					
	Ephedra californica	Desert tea				X	
AMARANTHACEAE		AMARANTH FAMILY					
	Amaranthus fimbriatus	Fringed amaranth					X
	Tidestroma suffruticosa var. *oblongifolia*	Honeysweet			X		
APOCYNACEAE		DOGBANE FAMILY					
	Asclepias subulata	Rush milkweed			X		
	Funastrum hirtellum (Sarcostemma h.)	Trailing townula					X
ASTERACEAE		ASTER FAMILY					
	Ambrosia dumosa	White bur-sage			X	X	X
	Ambrosia salsola (Hymenoclea salsola)	Cheesebush			X	X	X
	Bebbia juncea var. *aspera*	Sweetbush				X	
	Chaenactis fremontii	Fremont pincushion				X	
	Dicoria canescens	Desert dicoria				X	
	Encelia farinosa	Brittlebush			X	X	X
	Geraea canescens	Desert-sunflower				X	
	Malacothrix glabrata	Desert dandelion				X	
	Palafoxia arida	Spanish needles				X	
	Pectis papposa	Manybristle chinchweed					X
	Perityle emoryi	Emory's rock daisy				X	X
	Peucephyllum schottii	Pygmy-cedar					X
	Pleurocoronis pluriseta	Arrowleaf					X
	Pluchea sericea	Arrow-weed			X		
*	*Pseudognaphalium luteoalbum* (?)	Jersey cudweed			X		
	Rafinesquia neomexicana	Desert chicory		5582		X	
	Stephanomeria pauciflora	Desert straw				X	
	Trixis californica var. *californica*	California trixis					X
BIGNONIACEAE		TRUMPET-CREEPER or JACARANDA FAMILY					
	Chilopsis linearis ssp. *arcuata*	Desert-willow					X
BORAGINACEAE		BORAGE OR WATERLEAF FAMILY					
	Cryptantha angustifolia	Narrow-leaved cryptantha		5570		X	

Table 2. Observed Species List

	Latin Name	Common Name	Notes	Voucher	East Indio Hills	Corkill	Pushawalla
	Cryptantha micrantha	Purpleroot cryptantha				X	
	Cryptantha sp.	Unid. cryptantha		5574		X	
	Heliotropium curassavicum	Seaside heliotrope			X		
	Pectocarya recurvata	Recurved pectocarya				X	
	Pectocarya sp.	Unid. comb-bur					X
	Phacelia crenulata	Heliotrope phacelia		5585		X	
	Phacelia distans	Common phacelia					X
	Tiquilia palmeri	Palmer's coldenia			X	X	
BRASSICACEAE		MUSTARD FAMILY					
*	*Brassica tournefortii*	Sahara mustard, wild turnip				X	X
CACTACEAE		CACTUS FAMILY					
	Cylindropuntia echinocarpa (Opuntia echinocarpa)	Silver cholla			X	X	X
	Ferocactus cylindraceus (F. acanthodes)	California barrel cactus					X
	Opuntia basilaris var. *basilaris*	Beavertail cactus					X
CARYOPHYLLACEAE		PINK FAMILY, CARNATION FAMILY					
	Achyronychia cooperi	Onyx flower		5584		X	
CHENOPODIACEAE		GOOSEFOOT FAMILY					
	Atriplex canescens	Four-wing saltbush			X	X	
	Atriplex hymenelytra	Desert-holly				X	
	Atriplex lentiformis	Big saltbush			X		
	Atriplex polycarpa	Allscale saltbush			X	X	
	Suaeda nigra	Bush seepweed			X		
CONVOLVULACEAE		MORNING-GLORY FAMILY					
	Cuscuta denticulata	Small-tooth dodder					X
EUPHROBIACEAE		SPURGE FAMILY					
	Croton californicus	California croton					X
	Ditaxis neomexicana	Common ditaxis					X
*	*Euphorbia maculata*	Spotted spurge	Localized in irrigated lawn		X		
	Euphorbia micromera	Desert spurge				X	X
	Euphorbia setiloba	Yuma sandmat					X
	Stillingia spinulosa	Annual stillingia		5583		X	
FABACEAE		LEGUME FAMILY, PEA FAMILY					
	Acmispon strigosus (Lotus strigosus)	Desert lotus		5578		X	
	Astragalus didymocarpus	Two-seeded milkvetch				X	

Table 2. Observed Species List

	Latin Name	Common Name	Notes	Voucher	East Indio Hills	Corkill	Pushawalla
**	*Astragalus lentiginosus var. coachellae*	Coachella Valley milkvetch				X	
	Dalea mollis	Silk dalea				X	
	Hoffmannseggia microphylla	Wand holdback			X		
	Lupinus arizonicus	Arizona lupine		5580		X	
*	*Parkinsonia aculeata*	Mexican palo verde				X	
	Psorothamnus emoryi (Dalea emoryi)	Emory indigo-bush				X	
	Psorothamnus schottii (Dalea schottii)	Indigo-bush			X	X	X
	Psorothamnus spinosus (Dalea spinosa)	Smoke tree			X	X	X
	Senegalia greggii (Acacia greggii)	Catclaw acacia					X
GERANIACEAE		GERANIUM FAMILY					
*	*Erodium cicutarium*	Redstem filaree				X	
KRAMERIACEAE		RHATANY FAMILY, KRAMERIA FAMILY					
	Krameria bicolor (K. grayi)	White rhatany				X	
LAMIACEAE		STICK-LEAF FAMILY					
	Condea emoryi (Hyptis e.)	Desert lavender					X
	Salvia columbariae	Chia					X
LOASACEAE		STICK-LEAF FAMILY					
	Mentzelia albicaulis (?)	White-stemmed stick-leaf				X	
	Mentzelia involucrata	Sand blazing star		5576		X	
	Petalonyx thurberi	Sandpaper-plant				X	
MALVACEAE		MALLOW FAMILY					
	Eremalche exilis	Trailing mallow		5575		X	
MOLLUGINACEAE		CARPET WEED FAMILY					
	Mollugo cerviana	Carpet weed					X
NYCTAGINACEAE		FOUR O'CLOCK FAMILY					
	Abronia villosa var. villosa	Sand verbena				X	
	Alliona incarnata (?)	Trailing windmills				X	X
	Boerhavia wrightii	Wright's boerhavia					X
	Mirabilis laevis (M. bigelovii)	Desert wishbone bush					X
ONAGRACEAE		PRIMROSE FAMILY					
	Camissonia cardiophylla ssp. *cardiophylla*	Heartleaf sun cup		5572		X	

Table 2. Observed Species List

	Latin Name	Common Name	Notes	Voucher	East Indio Hills	Corkill	Pushawalla
	Chylismia claviformis (Camissonia c.)	Clavate evening primrose		5581		X	
	Eremothera boothii ssp. *condensata (Camissonia b.* ssp. *c.)*	Booth's sun cup			X		
	Oenothera deltoides ssp. *deltoides*	Devil's lantern		5586		X	
OROBANCHACEAE		BROOMRAPE FAMILY					
	Orobanche cooperi	Burroweed strangler		5577		X	
PAPAVERACEAE		POPPY FAMILY					
	Eschscholzia minutiflora	Small-flowered poppy		5571		X	
	Eschscholzia parishii (?)	Parish's gold poppy					X
PLANTAGINACEAE		PLANTAIN FAMILY					
	Plantago ovata	Desert plantain				X	
POLEMONIACEAE		PHLOX FAMILY					
	Loeseliastrum schottii	Schott gilia				X	
POLYGONACEAE		BUCKWHEAT FAMILY					
	Chorizanthe brevicornu	Brittle spineflower				X	
	Eriogonum inflatum	Desert trumpet			X	X	
	Eriogonum thomasii	Thomas' wild buckwheat				X	
SOLANACEAE		NIGHTSHADE FAMILY					
	Lycium andersonii	Anderson box-thorn					X
	Lycium brevipes var. *brevipes*	Desert thorn			X		
TAMARICACEAE		TAMARISK FAMILY					
*	*Tamarix ramosissima*	Salt cedar	Localized in irrigated lawn		X		
VISCACEAE		MISTLETOE FAMILY					
	Phoradendron californicum	Desert mistletoe					X
ZYGOPHYLLACEAE		CALTROP FAMILY					
	Larrea tridentata	Creosote bush	Abundant		X	X	X
Monocotyledons							
CYPERACEAE		SEDGE FAMILY					
	Cyperus rotundus	Nutgrass	Localized in irrigated lawn		X		
POACEAE		GRASS FAMILY					
	Bouteloua aristidoides	Needle grama					X
	Bouteloua barbata	Sixweeks grama					X
*	*Cynodon dactylon*	Bermuda grass	Localized in irrigated lawn		X		
	Hilaria rigida (Pleuraphis rigida)	Big galleta		5573		X	

Table 2. Observed Species List

	Latin Name	Common Name	Notes	Voucher	East Indio Hills	Corkill	Pushawalla
*	*Polypogon monspeliensis*	Annual beard grass	Localized in irrigated lawn		X		
*	*Schismus barbatus*	Mediterranean schismus				X	X
	Stipa hymenoides (Achnatherum h.)	Indian rice grass				X	
	Stipa speciosa (Achnatherum speciosum)	Desert needle grass					X
VERTEBRATE ANIMALS							
AVES		BIRD CLASS					
ANATIDAE		DUCKS, GEESE AND SWANS					
	Anas platyrhynchos	Mallard				X	
APODIDAE		SWIFT FAMILY					
	Aeronautes saxatalis	White-throated swift			X	X	
ARDEIDAE		HERONS					
	Casmerodius albus	Great egret				X	
	Nycticorax nycticorax	Black-crowned night heron				X	
COLUMBIDAE		PIGEON AND DOVE FAMILY					
	Zenaida macroura	Mourning dove			X	X	X
CORVIDAE		JAYS, MAGPIES, AND CROW FAMILY					
	Corvus corax	Common Raven			X	X	X
CUCULIDAE		CUCKOO FAMILY					
	Geococcyx californianus	Greater roadrunner			X	X	
EMBERIZIDAE		SPARROWS, WARBLERS, TANAGERS					
	Artemisiospiza sp.	Sage sparrow				X	
	Chondestes grammacus	Lark sparrow				X	
	Passerculus sandwichensis	Savannah sparrow				X	
FALCONIDAE		FALCONS					
	Falco sparverius	American kestrel				X	
HIRUNDINIDAE		SWALLOW FAMILY					
	Stelgidopteryx serripennis	Northern rough-winged swallow			X		
LANIIDAE		SHRIKE FAMILY					
	Lanius ludovicianus	Loggerhead shrike			X		
MIMIDAE		MOCKINGBIRD AND THRASHER FAMILY					
	Oreoscoptes montanus	Sage thrasher				X	
ODONTOPHORIDAE		QUAIL FAMILY					
	Callipepla gambelii	Gambel's quail					X
REMIZIDAE		VERDIN FAMILY					

Table 2. Observed Species List

	Latin Name	Common Name	Notes	Voucher	East Indio Hills	Corkill	Pushawalla
	Auriparus flaviceps	Verdin			X		
SYLVIIDAE		OLD WORLD WARBLER AND GNATCATCHER FAMILY					
**	*Polioptila melanura*	Black-tailed Gnatcatcher			X		X
TROCHILIDAE		HUMMINGBIRDS					
	Calypte anna	Anna's hummingbird				X	X
TROGLODYTIDAE		WREN FAMILY					
	Campylorhynchus brunneicapillus	Cactus wren			X		
TYRANNIDAE		TYRANT FLYCATCHER FAMILY					
	Sayornis saya	Say's Phoebe			X		
REPTILIA		REPTILE CLASS					
PHRYNOSOMATIDAE		SPINY LIZARDS AND RELATIVES					
	Callisaurus draconoides	Zebra-tailed lizard					X
	Uta stansburiana	Common side-blotched lizard			X	X	X
**	*Uma inornata*	Coachella Valley fringe-toed lizard				X	
TEIIDAE		WHIPTAILS					
	Cnemidophorus tigris	Western whiptail				X	X
MAMMALIA		MAMMAL CLASS					
CANIDAE		FOXES AND WOLVES FAMILY					
	Canis latrans	Coyote (tracks and scat)			X	X	X
FELIDAE		CAT FAMILY					
	Lynx rufus	Bobcat (tracks and scat)			X		
	Puma concolor	Mountain lion (scat)			X		
CRICETIDAE		MICE AND RAT FAMILY					
	Neotoma lepida	Desert woodrat			X		X
ACTINOPTERYGII		RAY-FINNED FISH CLASS					
CYPRINIDAE		FRESHWATER FISH AND TRUE MINNOW FAMILY					
	Cyprinus carpio	Common Carp	Observed in canal that trail crosses.		X		

Appendix C

Biological Assessment

Coachella Valley Trails Development Project
Riverside County, California

BIOLOGICAL ASSESSMENT

Prepared for:

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April 2016

CONTENTS

TABLES

ATTACHMENTS

I. Introduction

The Coachella Valley Mountains Conservancy (CVMC) proposes to develop or improve three trailhead sites, each with an associated non-motorized recreation trail. The three trails would be mostly on conservation land previously acquired in accordance with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), as administered by the Coachella Valley Conservation Commission (CVCC). Some portions of the trails and trailheads are also located on federal land administered by the Bureau of Land Management (BLM) or Bureau of Reclamation (BOR), non-federal land owned or managed by several state and local agencies, and on several privately owned parcels. Collectively, the three trailheads and trails are known as the Coachella Valley Trails Development Project. The proposed federal action is authorization for trail and trailhead project components located on federal land.

The purpose of this Biological Assessment (BA) is to review the proposed Coachella Valley Trails Development Project in sufficient detail to determine to what extent the proposed action may affect any of the threatened, endangered, proposed, or candidate species and designated or proposed critical habitats listed below. Note, however, that no candidate species or species proposed for listing are known from the region; therefore, this BA addresses only federally listed species. In addition, the following information is provided to comply with statutory requirements to use the best scientific and commercial information available when assessing the risks posed to listed and/or proposed species and designated and/or proposed critical habitat by proposed federal actions. This BA is prepared in accordance with legal requirements set forth under regulations implementing Section 7 of the Endangered Species Act (50 CFR 402; 16).

Federally Listed Species

The proposed action may affect the following listed species:

Plants:	
Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*)	Endangered
Reptiles:	
Desert tortoise, Mojave population (*Gopherus agassizi*)	Threatened
Coachella Valley fringe-toed lizard (*Uma inornata*)	Threatened

The proposed action would **not** affect the following listed species:

Mammals:	
Peninsular bighorn sheep (*Ovis canadensis nelsoni* pop. 2)	Endangered
Triple-ribbed milk-vetch (*Astragalus tricarinatus*)	Endangered

Critical Habitat

The proposed action would not be located within designated or proposed critical habitat for any listed species. USFWS has not designated critical habitat for triple-ribbed milk-vetch. The nearest critical habitat for desert tortoise is approximately 7 miles east of the proposed East Indio Hills trail. Designated critical habitat for the Coachella Valley fringe-toed lizard is restricted to the Coachella Valley Wildlife Refuge which is approximately 6 miles west of the East Indio Hills trail (USFWS 1980). For Coachella Valley milk-vetch, the nearest critical habitat to the Corkill trail is in Unit 3 near Willow Hole, more than one mile southwest of the trail. The nearest Coachella Valley milk-vetch critical habitat to the East Indio

Hills Trail is Unit 4 within the Coachella Valley National Wildlife Refuge approximately 6 miles west of the trail. All designated critical habitat for the Peninsular bighorn sheep is within the Peninsular Ranges, south of the freeway; all three trails are north of the Interstate-10 Freeway. The Project is not expected to adversely modify designated critical habitat for any species (see Section IV, below).

II. Consultation to Date

The proposed action has been informally discussed among the CVMC, BLM, CVAG, and USFWS, including during a site visit to the Corkhill Trail in the fall of 2014.

III. Description of the Proposed Action

The CVMC, a California state agency established in 1991, proposes to develop a series of recreational trails in the Coachella Valley area of Riverside County through the Coachella Valley Trails Development Project. This Project consists of three separate trails and associated trailhead and parking areas. The proposed trails and trailheads are the Corkill Road Trailhead and Corkill Trail, the Pushawalla Trailhead and Pushawalla Trail, and the Golf Center Parkway Trailhead and East Indio Hills Trail. Each trailhead / parking area would be 0.09 acres; the trail lengths vary for each project (see Table 1). Each trailhead / parking area would have a visitor information kiosk with a map of the authorized trails in the area, trail names, applicable regulations such as OHV prohibition, contact information to report unauthorized activity, and information about sensitive resources in the area. In addition, each trailhead / parking area would have a low post and beam barricade around the perimeter to delineate its boundaries and discourage off-road vehicle use; and a stop sign at the entry/exit. Vehicle traffic for the project would be limited to existing roads and to the trailhead / parking areas described above. There would be no off-road vehicle use for trail work. These project components are described in the Environmental Assessment/ Mitigated Negative Declaration (EA/MND) prepared for the proposed Project. Most of the trails and trailheads would be located on non-federal land, but portions of each trail or trailhead would be located on BLM lands, and one portion of the East Indio Hills Trail would cross BOR lands leased to the Coachella Valley Water District. No ground-disturbing activities would occur on BOR lands.

Operation and maintenance of the Project would include regular inspections and repair as needed, particularly after storms, when surface runoff could erode trails, trailheads, or parking areas. All three trails consist mainly of existing, informal or unmarked trails where little or no new disturbance for trail construction or improvement would be needed. The Corkill and East Indio Hills trails will require improvements to portions of the designated trails at inaccessible areas. The Pushwalla Trail would require only minimal improvement. For this analysis, the disturbance area is calculated as 6 feet wide over the full length of all three trails (see Table 1, below). However, this estimate is conservative because most of the trail routes are existing footpaths that would need minimal work (primarily installation of trail markers at locations where other footpaths intersect the proposed routes). Therefore, the acreage of disturbance analyzed in this BA is a worst-case scenario. For the Corkill and Pushwalla trailheads, an approximate 0.09 acres (3,750 square feet) of natural vegetation will be cleared to provide parking for vehicles and horse trailers at each location. At the Golf Center Parkway Trailhead / East Indio Hills Trail, the proposed trailhead site is already covered with rough rock and gravel, which may need to be replaced or reinforced to compensate for the generally soft substrate in the area, but there would be no new impact to natural habitat. Total disturbance area calculations and trail lengths are summarized in Table 1 below.

Action Area

The Service defines an *action area* as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area is not based simply on the Federal action and should not be limited to the location of the Federal action. Based upon this definition, the Project action area as defined here includes the three trails and trailheads as well as a 500-meter (1,640 feet) buffer surrounding them (Figures 1, 2, and 3; all figures located in Attachment 1). This is the estimated distance over which the physical, chemical, and biological changes resulting from the proposed action may affect listed species or designated critical habitat. Based on the 500-meter buffer distance, the total Project action area is 3,790 acres, including 1,316 acres on BLM lands and 152 acres on BOR lands. Note, however, that the acreage of ground disturbing activities would be no more than 8.4 acres, including about 2.85 acres on BLM land and none on BOR land. Table 1 summarizes acreage totals for the proposed Project. Linear distances in Table 1 represent the entire lengths of the trails, although little or no new disturbance for trail construction or improvement would be needed over most of their lengths.

The action area is within the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) area. The CVMSHCP provides long-term conservation and habitat protection for 27 covered species of special-status plants and animals, including the listed species addressed in this BA. Much of the project area is within CVMSHCP Reserve Lands, subject to patrol on a regular basis to ensure that visitors stay on trails and observe all other rules and guidelines established to protect the natural resources. Ongoing MSHCP land use management will be applicable to the trails. For non-federal lands within the Plan area, the CVMSHCP provides Endangered Species Act (ESA) and California Endangered Species Act (CESA) take authorization of covered species for conforming projects, subject to the Plan's administrative and mitigation requirements and US Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) take authorizations. The CVMSHCP includes maps of suitable habitat within the plan area for the federally listed species addressed in this BA. Table 2 lists the acreage of project impacts to habitat for each federally listed species on federal and non-federal lands combined. The CVMSHCP is managed by the Coachella Valley Conservation Commission (CVCC), a joint powers authority of elected representatives, and funded through a combination of development impact fees, open space trust funds, and funding from permittees for infrastructure projects. The project components located on non-federal lands would be subject to CVMSHCP authorization; for these project components, participation in the CVMSHCP would effectively offset many of the expected impacts to biological resources through habitat compensation and protection. The BLM and BOR support the CVMSHCP's overall management and implementation, but USFWS and CDFW take authorization are not applicable on federal lands.

BLM land management in the project area is subject to the CDCA Coachella Valley Land Use Plan Amendment (BLM 2002) and associated Biological Opinion (USFWS 2010a). The effects of non-motorized recreation have not been monitored and are generally unknown; they are addressed qualitatively in both documents. The CDCA Coachella Valley Land Use Plan Amendment and BO do not quantify impacts to listed species habitat in terms of acreage, but the level of impact on BLM lands for the proposed project is consistent with the qualitative analysis.

Table 1. Potential Trail and Trailhead Disturbance Areas Totals				
	Corkill Trail	Pushawalla Trail	Golf Center Pkwy / East Indio Hills Trail	Total
Total trail length	4.5 mi / 23,760 ft	1.4 mi / 7390 ft	4.5 mi / 23,760 ft	10.4 mi / 54,900 ft
Parking/Trailhead disturbance area	0.09 acre	0.09 acre	0 acres	0.18 acre
Approximate new trail disturbance area[1]	3.9 acres	1.0 acres	3.3 acres	8.2 acres
Trail length on BLM lands	1.4 mi / 7390 ft	0.08 mi / 420 ft	2.3 mi / 12,140 ft	3.78 mi / 19,960 ft
Trail length on BOR[2] lands	0 mi / 0 ft	0 mi / 0 ft	0.84 mi / 4,430 ft	0.84 mi / 4,430 ft
Parking/trailhead disturbance area on BLM lands	0 acres	0.09 acres	0 acres	0.09 acres
Parking/trailhead disturbance area on BOR lands	0 acres	0 acres	0 acres	0 acres
Approximate trail disturbance area on BLM lands[1]	1.0 acres	0.06 acres	1.7 acres	2.76 acres
Approximate trail disturbance area on BOR[2] lands	0 acres	0 acres	0 acres	0 acres
Federal action area[3] on BLM Lands	528.3 acres	262.2 acres	525.9 acres	1,316.4 acres
Federal action area[3] on BOR Lands	0 acres	0 acres	152 acres	152 acres
Federal action area on non-federal Lands	1,107.4 acres	614.9 acres	751.0 acres	2,473.3 acres
Total federal action area	1,635.7 acres	877.1 acres	1,276.9 acres	3,789.7 acres

1 The acreage of disturbance for trail improvements was conservatively estimated as a 6-foot wide buffer along the proposed trail centerline, as this is the area that could be subject to disturbance. The majority of trail work would be limited to placement of trail markers, and soil and rock movement to improve existing trail treads where needed or to clearly delineate the route in areas where the trail is not obvious. Therefore, the acreage of disturbance reported overestimates the actual ground disturbance that would be required.

2 No ground-disturbing activity is proposed on BOR lands due to presence of available informal trails and routes; project activity on BOR lands will be limited to trail marking.

3 Federal action area defined as the trails, trailheads, and surrounding 500 m buffer.

Table 2. Impacts to CVMSHCP Suitable Habitat (acres)				
	Corkill Trail	Pushawalla Trail	Golf Center Pkwy / East Indio Hills Trail	Total
Coachella Valley milk-vetch	Federal: 0.4 Non-federal: 2.1 Total: 2.5	0	0	Federal: 0.4 Non-federal: 2.1 Total: 2.5
Triple-ribbed milk-vetch	0	0	0	0
Desert tortoise	0	Federal: 0.06 Non-federal: 0.94 Total: 1.0	0	Federal: 0.06 Non-federal: 0.94 Total: 1.0
Coachella Valley fringe-toed lizard	Federal: 0.23 Non-federal: 0.14 Total: 0.37	0	0	Federal: 0.23 Non-federal: 0.14 Total: 0.37
Peninsular bighorn sheep	0	0	0	0

IV. Status of the Species and Critical Habitat

Coachella Valley Milk-Vetch (Endangered)

Species Status: Coachella Valley milk-vetch is endemic to windblown sand habitat in the Coachella Valley from Cabazon to Indio, below about 1,200 feet elevation. Occurrences reported in the Chuckwalla Valley to the east (CDFW 2015) are a separate subspecies, speckled milk-vetch, with no special conservation status (USFWS 2009a; 2011a). Coachella Valley milk-vetch is an annual or short-lived perennial with a deep taproot. It dies back to ground level in summer. The first leaves appear in late winter or early spring. Coachella Valley milk-vetch may flower as early as February or as late as May (Munz 1974), depending on rainfall and temperature. In drought years, it may not come up at all. After flowering, the leaves dry and fall. The plant may be recognized for a short period in early summer by its swollen pods, but they soon mature and disperse.

Monitoring data are scarce, but non-motorized recreational human activity is presumably relatively low in Coachella Valley milk-vetch habitat due to the difficulty of walking across soft sand with hummocks. The USFWS (2010a) believes that recreationists will infrequently encounter milk-vetch on BLM lands and does not anticipate that non-motorized recreational activities on BLM lands have an appreciable effect on milk-vetch.

Field Surveys and Results

East Indio Hills Trail: On March 24, 2015 Justin Wood and Rosina Goodman of Aspen Environmental Group (Aspen) surveyed the trail and trailhead. The route for the East Indio Hills Trail was modified slightly after the completion of spring surveys, and Aspen biologists Justin Wood and Jennifer Lancaster conducted a reconnaissance survey of the revised route segment on August 27, 2015. During both surveys, the biologists mapped all special-status plant and wildlife locations they observed with GPS units and maintained lists of all species observed. Field methods are described further under the Environmental Baseline section below. Although no Coachella Valley milk-vetch were observed at the East Indio Hills Trail, they may be present in years with at least average rainfall in areas with suitable sandy substrates.

Corkill Trail: On March 26, 2015 Wood surveyed the trail and trailhead. He mapped all special-status plant and wildlife locations observed with GPS units and maintained lists of all species observed. Field methods are described further under the Environmental Baseline section below. Coachella Valley milk-vetch plants were found in patches throughout much of the Corkill Trail. They were most frequently found in areas with fine wind-blown sand, mapped by the CVMSHCP as active sand fields or Sonoran creosote bush scrub. A total of 32 plants were mapped on BLM lands (Figure 4). Most of the plants observed were seedlings that appeared to have germinated in late 2014 or early 2015. Most of the 32 plants had no flowers or fruit present; however, one plant was in fruit, one plant had already dropped its fruit, and at least three plants were in flower. During a year with average or above-average rainfall, Coachella Valley milk-vetch is likely to be much more abundant at the Corkill Trail and Trailhead.

Pushawalla Trail: On March 31, 2015 Wood and Goodman surveyed the trail and trailhead. They mapped all special-status plant and wildlife locations they observed with GPS units and maintained lists of all species observed. Field methods are described further under the Environmental Baseline section below. No Coachella Valley milk-vetch were observed at the Pushawalla trail and they are not expected to be present due to lack of suitable habitat.

Critical Habitat: No critical habitat for Coachella Valley milk-vetch is located within the action area. The nearest critical habitat to the Corkill Trail is in Unit 3 near Willow Hole, over one mile southwest of the trail. The nearest critical habitat to the East Indio Hills Trail is Unit 4 within the Coachella Valley National Wildlife Refuge, approximately 6 miles west of the trail (USFWS 2013).

Triple-Ribbed Milk-Vetch (Endangered)

Triple-ribbed milk-vetch occurs in Whitewater Canyon of the eastern San Bernardino Mountains, and in nearby canyons, hills, and mountains to the east (Spellenberg 1993) including Morongo Canyon and Mission Canyon (USFWS 1998). It occurs in sandy or gravelly soils of dry washes, bases of slopes, and steep decomposed granite. Its core populations are apparently on upland sites, while the occurrences on alluvial fans and colluvial slopes are probably intermittent, originating from seed periodically transported downslope. It is very rare, and even several known locations consist of only a single plant. It is an erect, bushy perennial, ranging from a few inches to about a foot tall (Munz 1974; Shreve and Wiggins 1964). It dies back to the ground each year and may not come up at all in some years (USFWS 1998). It flowers between February and May, presumably depending on temperatures and precipitation. No triple-ribbed milk-vetch was observed during field surveys on any trail and is not expected due to the lack of suitable habitat. Field methods are described further under the Environmental Baseline section below.

Desert Tortoise, Mojave Population (Threatened)

***Species Status*:** The Mojave population of desert tortoise (i.e., west of the Colorado River) is listed as threatened under the ESA. All wild desert tortoises in Nevada and California are part of the listed Mojave population. The USFWS reviewed desert tortoise biology and population status in the Revised Recovery Plan (USFWS 2011c). The following summary is based on that review and literature cited therein. Tortoises are long-lived and grow slowly. They require 13 to 20 years to reach sexual maturity. They spend much of their lives in burrows. They enter hibernation during autumn. They emerge in late winter or early spring, and typically remain active or partially active through fall. Activity decreases in summer, but tortoises often emerge after summer rain storms. They may become dormant during extended periods of summer heat and dryness. A single tortoise may have a dozen or more burrows within its home range, and different tortoises may use these burrows at different times. Even during their active seasons, they are inactive during much of the day or night, within burrows or at “palettes” (partially sheltered flattened areas, often beneath shrubs or large rocks) or other shaded sites.

Desert tortoise habitats include many desert landforms and vegetation types, except the most precipitous slopes. Friable soils, such as sand and fine gravel, are important for burrow excavation. Male tortoises’ home ranges can be as large as 200 acres, while females’ long-term home ranges may be less than half that size. Over its lifetime, a desert tortoise may use more than 1.5 square miles of habitat and may make periodic forays of several miles at a time.

Desert tortoise populations are threatened by several factors, each of which tends to be exacerbated by the others. Threats include habitat degradation and loss, vehicle collisions, upper respiratory tract disease, environmental toxins leading to cutaneous dyskeratosis (abnormal hardening of skin cells due to keratin formation), drought, non-native invasive plant species, predation by coyotes and domestic and feral dogs, and for juvenile tortoises, predation by ravens.

The effects of non-motorized recreational uses on tortoises in the Coachella Valley have not been monitored and are generally unknown (USFWS 2010a). There are few records of desert tortoise in the

CVMSHCP area, and they probably only seldom encounter recreationists. The majority of recreation encounters with desert tortoises in the area are presumed to be in the vicinity of designated open vehicle routes.

Field Surveys and Results

East Indio Hills Trail: On March 24, 2015 Justin Wood and Rosina Goodman of Aspen surveyed the trail and trailhead. The route for the East Indio Hills Trail was modified slightly after the completion of spring surveys, and Aspen biologists Justin Wood and Jennifer Lancaster conducted a reconnaissance survey of the new route segment on August 27, 2015. Field methods are described further under the Environmental Baseline section below. Aspen's field surveys were not USFWS protocol desert tortoise surveys (USFWS 2010); however, all three field biologists are familiar with desert tortoise sign and survey methods. The surveys were completed during the desert tortoise spring activity period, and field methods covered all habitats throughout the proposed trail and trailhead. Two class 5 burrows were recorded along the proposed East Indio Hills Trail (Figure 6). Class 5 burrows are described as old inactive burrows in poor condition that were possibly excavated by desert tortoise (USFWS 2009b). Both of the burrows were on Bureau of Reclamation land. No other sign (shells, bones, scutes, limbs, scats, pallets, tracks, egg fragments, courtship rings, drinking sites, mineral licks, etc.) of desert tortoise were found on the proposed trail. While no definitive desert tortoise sign was found, tortoises may occur at very low density in the general area or captive tortoises may be released illegally in the vicinity. We conclude there is a moderate potential for desert tortoise to be present on the East Indio Hills trail.

Corkill Trail: On March 26, 2015 Wood surveyed the trail and trailhead. Field methods are described further under the Environmental Baseline section below. Aspen's field surveys were not USFWS protocol desert tortoise surveys (USFWS 2010); however, Wood is familiar with desert tortoise sign and survey methods. The surveys were completed during the desert tortoise spring activity period, and field methods covered all habitats throughout the proposed trail and trailhead. No sign (shells, bones, scutes, limbs, scats, pallets, tracks, egg fragments, courtship rings, drinking sites, mineral licks, etc.) of desert tortoise was found on the proposed trail. While no desert tortoises were found, wild desert tortoises may occur at very low density in the general area or captive tortoises may be released illegally in the vicinity. We conclude there is a low probability for desert tortoise to occur at the Corkill Trail.

Pushawalla Trail: On March 31, 2015 Wood and Goodman surveyed the trail and trailhead. Field methods are described further under the Environmental Baseline section below. Aspen's field surveys were not USFWS protocol desert tortoise surveys (USFWS 2010); however, field biologists Wood and Goodman are familiar with desert tortoise sign and survey methods. The surveys were completed during the desert tortoise spring activity period, and field methods covered all habitats throughout the proposed trail and trailhead. No sign (shells, bones, scutes, limbs, scats, pallets, tracks, egg fragments, courtship rings, drinking sites, mineral licks, etc.) of desert tortoise was found on the proposed trail. While no desert tortoises were found, wild desert tortoises may occur at very low density in the general area or captive tortoises may be released illegally in the vicinity. We conclude there is a moderate potential for desert tortoise to be present at the proposed Pushawalla trail.

***Critical Habitat*:** Critical habitat for the Mojave Desert tortoise population was designated by USFWS in 1994. The project site is not within designated critical habitat for the desert tortoise. The nearest designated desert tortoise critical habitat is the Chuckwalla Unit, approximately 7 miles east of the East Indio Hills Trail (USFWS 1994).

Coachella Valley Fringe-Toed Lizard (Threatened)

***Species Status*:** The Coachella Valley fringe-toed lizard is state listed as endangered under the CESA and federally listed as threatened under the ESA. It has lost approximately 75 percent of its habitat to human activities such as urban and agricultural development. It is restricted to fine, windblown sands of dunes, flats, riverbanks, and washes in some of the most arid parts of the desert (Stebbins 1985). Vegetation, consisting of creosote bush and other shrubs, is usually sparse. The Coachella Valley fringe-toed lizard occupies sand deposits of the Coachella Valley in Riverside County, from near sea level to approximately 1600 feet.

Monitoring data are scarce, but non-motorized recreational human activity is presumably relatively low in Coachella Valley fringe-toed lizard habitat due to the difficulty of walking across soft sand with hummocks. The USFWS (2010a) believes that fringe-toed lizards will infrequently encounter such recreationists on BLM lands and does not anticipate that non-motorized recreational activities on BLM lands have an appreciable effect on fringe-toed lizards.

Field Surveys and Results

East Indio Hills Trail: On March 26, 2015 Justin Wood and Rosina Goodman of Aspen surveyed the trail and trailhead. The route for the East Indio Hills Trail was modified slightly after the completion of spring surveys, and Aspen biologists Wood and Jennifer Lancaster conducted a reconnaissance survey of the new route segment on August 27, 2015. Field methods are described further under the Environmental Baseline section below. No Coachella Valley fringe-toed lizards were observed on the proposed East Indio Hills Trail. Although Coachella Valley fringe-toed lizards were not observed there is a low potential for them to be present in portions of the trail with suitable sandy substrates.

Corkill Trail: On March 26, 2015 Wood surveyed the trail and trailhead. Field methods are described further under the Environmental Baseline section below. Three Coachella Valley fringe-toed lizards were observed and mapped on the proposed Corkill Trail route in or near areas mapped as active sand fields (Figure 4) and on BLM Lands. Suitable habitat is present throughout the mapped sandfields (active and stabilized) and within other vegetation or habitat types in smaller patches of sand too small for mapping at this scale.

Pushawalla Trail: On March 31, 2015 Wood and Goodman surveyed the trails and trailheads. Field methods are described further under the Environmental Baseline section below. No Coachella Valley fringe-toed lizards were observed and they are not likely to be present at the proposed trail or trailhead due to lack of suitable habitat.

***Critical Habitat*:** No critical habitat for Coachella fringe-toed lizard is located within the action area for the Project. Designated critical habitat is restricted to the Coachella Valley Wildlife Refuge approximately 6 miles west of the East Indio Hills Trail (USFWS 1980).

Peninsular Bighorn Sheep (Endangered)

The Peninsular bighorn sheep's range extends from the Interstate-10 Freeway south through the San Jacinto Mountains, Santa Rosa Mountains, and southern Peninsular Ranges into Baja California. The geographic range of the Peninsular bighorn sheep does not extend north of I-10 and is therefore outside of the action area for the Project as all trails and trailheads are north of I-10. The Nelson's bighorn sheep population that could occur in the project area is not state or federally listed, but all bighorn sheep are fully protected in California with the exception of legal sport hunting in specific areas.

V. Conservation Measures

Based on the biological resources of the Project area and action area, CVMC will implement Mitigation Measures BIO-1 through BIO-13, also specified in the project's Environmental Assessment, to minimize adverse project impacts to those resources.

MM BIO-1: **CVMSHCP Compliance.** All applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction and O&M activities on federal lands. For O&M activities the CVMC shall ensure that personnel are instructed to be alert for listed wildlife species. If a desert tortoise or Coachella Valley fringe-toed lizard is spotted, activities adjacent to its location will be halted and the animal will be allowed to move away from the activity area. In addition, consistent with Section 7.3.4.2 of the CNMSHCP, trails and facilities will be designed to be consistent with CVMSHCP Conservation Goals and Objectives, to avoid or minimize impacts to habitat occupied by Covered Species, and to discourage intrusion into environmentally sensitive areas. Interpretive facilities, access control, and signage will encourage proper resource usage, and adverse effects of passive recreation, such as trampling vegetation and erosion, will be minimized.

MM BIO-2: **Limit Disturbance Areas.** At all work areas, mechanical disturbance of previously undisturbed habitats (including soils) will be limited to the minimum area necessary. Project disturbance areas will be sited on previously disturbed areas to the extent feasible.

MM BIO-3: **Assign Project Biologist.** The CVMC will assign one or more acceptable biologists (according to CVMSHCP requirements) to conduct pre-construction surveys and construction monitoring as described in Mitigation Measures BIO-4 and BIO-5. An "acceptable biologist" means a biologist whose name is on a list, maintained by the Coachella Valley Conservation Commission (CVCC), of biologists who are acceptable to CVCC, CDFW, and USFWS for purposes of conducting surveys for Covered Species.

MM BIO-4: **Preconstruction Surveys.** An acceptable biologist (according to CVMSHCP requirements) will conduct pre-activity clearance surveys for desert tortoise and their burrows, burrowing owls (year-round), nesting birds (at trail and trailhead sites where construction or maintenance activities are scheduled from January 1 to August 31), Coachella Valley fringe-toed lizards, Coachella Valley milk-vetch, and other special-status species. Construction or maintenance activities outside of the breeding season for nesting birds would not require nesting bird surveys. Surveys for desert tortoise, burrowing owl, LeConte's thrasher, and crissal thrasher will be conducted according to the avoidance and minimization measures in Section 4.4 of the CVMSHCP. Pre-activity surveys will be conducted no more than 7 days in advance of any ground- or vegetation-disturbing activities in any location. For construction or maintenance activities planned between February 15 and November 15 at the Corkill Trail and Trailhead, all work sites will be surveyed by an acceptable biologist prior to any ground disturbing activities to avoid take of Coachella Valley fringe-toed lizards.

MM BIO-5: **Construction and Maintenance Monitoring.** An acceptable biologist (according to CVMSHCP requirements) will monitor construction and maintenance activities, provide worker education programs, and supervise or perform other related actions. The Biological Monitor will be authorized to temporarily halt construction or maintenance

activities if needed to prevent potential harm to these and any other special-status species. Project activities may not disturb an active bird nest. If an active bird nest is located on or adjacent to the work site, a Biological Monitor will designate and flag an appropriate buffer area around the nest where construction or maintenance activities will not be permitted. The buffer area will be based on the bird species and nature of the construction activity. The work supervisor will coordinate with the Biological Monitor on planned or ongoing construction or maintenance activities and any specific pre-activity surveys or monitoring requirements for each activity in those areas.

MM BIO-6: **Special-Status Species Avoidance and Minimization Measures.** The acceptable biologist (according to CVMSHCP requirements) and all workers shall regularly observe the work areas for Coachella Valley milk-vetch, desert tortoise, fringe-toed lizards, and burrowing owl. The Project will adhere to avoidance and minimization measures for sensitive species as described in Section 4.4 of the CVMSHCP. For desert tortoise, installing exclusionary fencing per CVMSHCP guidelines for trailhead or trail construction would be infeasible. Instead, if a desert tortoise or fringe-toed lizard is observed, it will be left to move away from the work site on its own. Burrowing owl measures include establishing appropriate buffers, depending on the season, where no construction or maintenance activities may occur; and coordinating with Wildlife Agencies on appropriate eviction/passive relocation procedures. If any Coachella Valley milk-vetch are found within the disturbance area, the biological monitor will relocate its seed pods, if present, to outside of the disturbance area as feasible.

MM BIO-7: **Worker Training.** Employees will be trained to ensure that all workers on site (including contractors) are aware of all applicable mitigation measures for biological resources. Specifically, workers will be required to (1) limit all activities to approved work areas; (2) report any desert tortoise, Coachella Valley fringe-toed lizard, burrowing owl, or other special-status species, or bird nest observation in the work areas and access routes to the supervisor or Biological Monitor; (3) avoid contact with any wildlife that may approach a work area, and be aware of potential venomous reptile bites from carelessness or unnecessary harassment; (4) pick up and properly dispose of any food, trash, or construction refuse; and (5) report any spilled materials (oil, fuel, solvent, engine coolant, raw concrete, or other material potentially hazardous to wildlife) to the supervisor or on-site Biological Monitor. During the training, the instructor will briefly discuss special-status species that may occur in the work areas, their habitats, and requirements to avoid or minimize impacts. In addition, all workers will be informed of civil and criminal penalties for violations of the federal ESA, CESA, the Migratory Bird Treaty Act, relevant sections of the California Fish and Game Code, and the Bald and Golden Eagle Protection Act.

MM BIO-8: **Wildlife Avoidance.** Workers will not be permitted to feed, harm, approach, harass, or handle wildlife at any time, except to move animals out of harm's way, and only as directed by a supervisor. Listed species will not be handled; if a desert tortoise or Coachella Valley fringe-toed lizard enters a work area, it will not be disturbed and will be allowed to leave on its own. This condition will not exempt workers, including the Biological Monitor, from any safety policies with regard to venomous reptiles.

MM BIO-9: **Trash, Refuse, Concrete, and Other Construction Materials.** All trash and food materials will be properly contained within vehicles or closed refuse bins while on any site, and

will be regularly removed from the site (at least on a weekly basis) for proper disposal. All refuse from construction or maintenance activities will be removed from each work site upon completion of work. No raw cement, concrete or washings thereof, asphalt, paint, oil, solvents, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, shall be disposed of on-site or allowed to spill onto soil. Cleanup of any spilled material shall begin immediately.

MM BIO-10: **Minimize Standing Water.** Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards, to prevent the formation of puddles, which could attract wildlife to construction sites.

MM BIO-11: **Water Storage.** All water containers (i.e. tanks or trailers) will be securely covered to prevent wildlife from entering the containers and becoming trapped.

MM BIO-12: **Speed Limit.** To minimize potential impacts to special-status wildlife, no vehicles will be permitted to exceed 15 mph while traveling on dirt access roads, and vehicle use will be limited to the access routes and parking/trailhead areas. There will be no off-road vehicle use.

MM BIO-13: **Streambed Avoidance.** A qualified biologist or hydrologist will identify the jurisdictional boundaries of the unnamed wash adjacent to the proposed Corkill Trailhead site, and ensure that the boundaries of work areas are clearly marked outside the jurisdictional area. No work activities will be authorized outside the flagged work area boundaries.

MM BIO-14: **Operations Monitoring**. The CVMC, in coordination with the BLM and USFWS, will identify a series of "photo points" on each trail, trailhead, and parking area, for long-term photo documentation of trail condition and resource damage (if any). The photo points will be located at representative sites likely to sustain high use (e.g., parking areas), likely to support listed species (e.g., habitat identified in the attached figures) or vulnerable to resource damage (e.g., steep trail segments). Each photo point will be visited and photographed at least annually. Based on the documentation, CVMC will determine and implement appropriate follow-up action (e.g., trash cleanup, trail or kiosk maintenance, or new signage). In addition, CVMC will provide annual documentation to the BLM and USFWS of the photo-point monitoring and follow-up measures.

VI. Environmental Baseline and Cumulative Effects

Environmental Baseline

Available literature was reviewed to identify special-status plants, wildlife, and vegetation communities known from the vicinity of each proposed trail. Information sources included resource data supplied by the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) and the U.S. Fish and Wildlife Service (USFWS). These materials included searches of the California Natural Diversity Database (CNDDB; CDFW 2015) for the following USGS 7½-minute topographic quads: Cathedral City, Desert Hot Springs, East Deception Canyon, Indio, Keys View, La Quinta, Malapai Hill, Myoma, Palm Springs, Rockhouse Canyon, Seven Palms Valley, Thermal, and West Berdoo Canyon (Attachment 2). The California Native Plant Society (CNPS) *On-line Electronic Inventory* (CNPS 2015) was reviewed for the same quads. The Consortium of California Herbaria (CCH 2015) was

queried for data in and near the action area, and the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP; CVAG 2007) was reviewed for local and regional biological resources information.

Rainfall over the two years prior to field work has been below average in the Coachella Valley. The average annual rainfall for the Coachella Valley is approximately 6 inches per year (Dawson and Belitz 2012). Precipitation recorded at the Chino Canyon weather station (Station No. KCAPALMS10) from April 16, 2014 through April 16, 2015 was 1.96 inches (WUI 2015).

On March 24, 26, and 31, 2015 Aspen biologists surveyed the trails and trailheads. The route for the East Indio Hills Trail was modified slightly after the completion of spring surveys, and Aspen biologists Justin Wood and Jennifer Lancaster conducted a reconnaissance survey and habitat assessment of the new route segment on August 27, 2015. During the surveys, the biologists mapped all special-status plant and wildlife locations they observed with GPS units and maintained lists of all species observed. Plants, wildlife, and wildlife sign (e.g., scat, tracks, and burrows) were identified in the field using binoculars and field guides. All plant species observed were identified in the field or collected for later identification. Plants were identified using keys, descriptions, and illustrations from sources such as Baldwin et al. (2012), Baldwin et al. (2002), and other regional references.

The field surveys were conducted in accordance with rare plant survey guidelines recommended by BLM (2009), CNPS (2001), and CDFW (CDFG 2009). The field surveys were “floristic in nature” (i.e., designed to find and identify all plants on the site, regardless of conservation status). The field surveys were “full coverage” and were completed within the documented flowering season for most special-status plants of the area. However, due to poor rainfall, some plants may have been undetectable during spring and summer 2015. A Coachella Valley milk-vetch reference location was visited by Senior Aspen Biologist Scott White in late February 2015 and plants were present.

The Coachella Valley Trails Development Project action area crosses five vegetation or habitat types that are mapped by the MSHCP (Figures 4, 5, and 6) and described in the following paragraphs. The vegetation maps provided with this report conform to the vegetation mapping presented in the CVMSHCP for all trails.

Sonoran Creosote Bush Scrub. This natural community is the most widespread in the Colorado Desert and is the dominant community for each Project trail. Sonoran creosote bush scrub is characterized by its dominant species creosote bush (*Larrea tridentata*) and develops best on coarse, well-drained soils. At the Corkill Trail and Trailhead, this community occupied the majority of the site including rocky areas with white bur-sage (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), white rhatany (*Krameria bicolor*), and numerous other annuals. At the East Indio Hills Trail, the sandy flats were dominated by creosote bush, and in the washes smoke tree (*Psorothamnus spinosus*), indigo bush *(Psorothamnus schottii*), cheesebush (*Ambrosia salsola*), and creosote bush were present. The rocky hillsides of the trail were sparsely vegetated with creosote bush and brittlebush. Sonoran creosote bush scrub was also present on the southern trail end and trailhead for the Pushawalla Trail. These areas were dominated by creosote bush, desert lavender (*Hyptis emoryi*), and various cacti (*Opunitia* sp.).

Sonoran Mixed Woody and Succulent Scrub. Sonoran mixed woody and succulent scrub is located on the western edge of the Corkill Trail and Trailhead. This natural community is similar in composition to Sonoran creosote bush scrub but is more varied, with a substantial proportion of cacti and other stem succulents which included silver cholla (*Cylindropuntia echinocarpa*) at the Corkill Trail.

Active Sand Fields. Active sand fields are characterized by active sand movement with little to no vegetation, but not to a great enough depth to form sand dunes. This natural community is present at

the Corkill Trail although the majority of the site is dominated by creosote bush scrub. In these active sand areas, species such as Sahara mustard (*Brassica tournefortii*), Coachella Valley milk-vetch (*Astragulus lentiginosus coachellae*), big galleta (*Hilaria rigida*), desert dicoria (*Dicoria canescens*), and many other annuals and perennials were present.

Stabilized Desert Sand Fields. This natural community is characterized by sand formations that lack dunes. Stabilized desert sand fields are present at the Corkill Trail at the far eastern edge. The trailhead area also contains some small inclusions of this community within the greater Sonoran mixed woody and succulent scrub mapped there. The trailhead and mapped area of the trail are dominated by allscale saltbush (*Atriplex polycarpa*) and bush seepweed (*Suaeda nigra*).

Mojave Mixed Woody Scrub. This natural community is characterized by very shallow, overly drained, and often rolling to steep soils, usually derived from granitic parent materials (CVAG, 2007). This natural community is present at the northern end of the Pushawalla Trail. Within this community are areas of broad alluvial fans that may be better classified as desert dry wash woodland. These areas are dominated by cheesebush, smoketree, and catclaw acacia (*Acacia greggii*).

Streambeds. The proposed Corkill Trailhead site is located on the sandy bajada south of the Little San Bernardino Mountains. It is adjacent to an unnamed wash that crosses Corkill Road just to the north. During heavy summer rains in 2014, the wash flooded over its banks, leaving evidence of sheet flow near the northern portion of the proposed parking area. The sheet flow area appears to have been above the channel's normal bed and banks, and above the ordinary high water mark. However, the jurisdictional limits of the channel that may be subject to state or federal regulation under California Fish and Game Code Section 1600 or the federal Clean Water Act Sections 401 and 404 have not been delineated. In addition, each of the three trails cross numerous small washes which may meet jurisdictional criteria as waters of the state or waters of the US.

Cumulative Effects

For purposes of this Biological Assessment, cumulative effects will use the definition at 50 CFR 402.02. That is, "... those effects of future Tribal, State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation."

Cumulative impacts to biological resources throughout the Coachella Valley are the result of many past, present, and reasonably foreseeable projects. Examples of cumulative projects in the region include residential, commercial, and industrial development, transportation and infrastructure projects, and renewable energy projects. In general, these impacts have been significant. The Project's impacts to biological resources would be minor, and would be mitigated through several measures (above) including participation in the CVMSHCP. Moreover, the CVMSHCP serves to mitigate ongoing cumulative impacts of most current and future land use projects in the Coachella Valley by preserving and managing significant habitat areas to offset resource impacts. Therefore, with mitigation measures incorporated, the project would not contribute considerably to any cumulatively significant impacts to biological resources in the Coachella Valley.

VII. Effects of the Action

Analysis of the Proposed Action

The project would affect habitat for listed species and, without mitigation, could cause take of listed plants or animals. Direct impacts would include removal of habitat though the grading of the Corkill and

Pushawalla trailheads and parking areas, and trail improvements for each trail (see Table 2). Potential indirect effects of trail construction include increased use of the trails and trailheads by the public, potential for increased OHV use, and the spread of invasive weeds. The increase public use may cause increased disturbance to wildlife and habitat, but it may also focus visitors into designated areas thereby reducing the current dispersed disturbance. However, the Project is also expected to increase visitor awareness of regulations, reduce off-road activity, and reduce littering by providing informational kiosks, signage, and perimeter fencing.

Operation and maintenance (O&M) activities would include routine trail inspections and patrols to identify any maintenance needs and unauthorized uses. Inspections would also be conducted following major storms, to assess any damage and to temporarily close trails and trailheads, if needed, until repair activities are complete. Routine trail maintenance and emergency repairs would be conducted with hand tools, similar to the construction phase. Signs and trail markers would be repaired or replaced as needed. Trailhead parking areas would be re-graded as needed to maintain a level surface accessible to 2-wheel drive vehicles and repair any erosion that may occur after storms. O&M activities would also include removing any weeds along the trails and at the trailheads. Weed removal would be done by hand, and no herbicide use is proposed. The effect of the spread of weeds, if any, is expected to be minimal and no weed-specific mitigation is recommended.

Coachella Valley Milk-Vetch: A total of 32 Coachella Valley milk-vetch plants were found in patches on or near much of the Corkill Trail route. None were located at the Corkill parking area or at the other two project sites. Most of the plants observed were seedlings that appeared to have germinated in late 2014 or early 2015. Coachella Valley milk-vetch is a facultative annual or short-lived perennial. That is, it may complete its life history in a single growing season and then die, or it may persist through one or more summers. The 32 plants observed during the field surveys may or may not still be present when trail construction proceeds. Depending on weather, the number of plants may increase or decrease and their locations may change. If present they would be located within similar habitat and probably near the locations where they were observed in 2015. Without the proposed conservation measures, Coachella Valley milk-vetch plants could be crushed or uprooted by project-related foot traffic or trail work, during initial project construction or during subsequent trail use or maintenance. Increased visitor use could cause increased foot traffic in occupied habitat, possibly damaging or killing Coachella Valley milk-vetch plants on or near the trails. However, signage and improved public awareness are intended to focus visitor use onto designated trails, reducing foot traffic and OHV activities in the surrounding area, and thus reducing adverse effects to Coachella Valley milk-vetch. The project's operational impacts to Coachella Valley milk-vetch are comparable to the existing non-motorized recreation conditions as described by the CDCA Plan Amendment (BLM 2002) and association Biological Opinion (USFWS 2010a). Conservation Measures BIO-4 and BIO-5 (pre-construction surveys and biological monitoring) would ensure that any living Coachella Valley milk-vetch plants are located and avoided by the trail crews. Due to this plant's occurrence on windblown sand, no trail construction work would be required in occupied habitat and trail crews could simply avoid its locations while walking to the work areas. Additionally, these measures and participation in the CVMSHCP (Mitigation Measure BIO-1) and Mitigation Measure BIO-6 would reduce or mitigate potential impacts of the proposed action on non-federal land by supporting funding for the CVMSHCP, and relocating Coachella Valley milk-vetch seed pods to outside of the disturbance area. There would be no effect to the Coachella Valley milk-vetch at the Pushawalla and East Indio Hills trails as no suitable or occupied habitat is present at either trail.

Desert Tortoise, Mojave Population: No desert tortoises were observed along the trail routes or trailheads, although there is low to moderate probability they may occur at any of the proposed trails. Without avoidance measures, construction of the Project could affect desert tortoises including injury or

mortality to tortoises (e.g., if a tortoise or its burrow is crushed, damaged, or injured during construction or subsequent maintenance activities). Increased visitor use could cause increased foot traffic in occupied habitat, possibly damaging burrows or causing desert tortoise injury or mortality. However, signage and improved public awareness are intended to focus visitor use onto designated trails, reducing foot traffic and OHV activities in the surrounding area, and thus reducing adverse effects to desert tortoise. The project's operational impacts to desert tortoise would be comparable to the existing conditions for non-motorized recreational use as described by the CDCA Plan Amendment (BLM 2002) and association Biological Opinion (USFWS 2010a). In combination, Conservation Measures BIO-1 through BIO-14 will prevent desert tortoise take, and will minimize or mitigate project impacts to desert tortoise habitat on federal land. Additionally, these measures and participation in the CVMSHCP (Mitigation Measure BIO-1) would reduce or mitigate potential impacts of the Project on non-federal land by supporting funding for the CVMSHCP.

Coachella Valley Fringe-Toed Lizard: Coachella Valley fringe-toed lizards could occur within suitable habitat on the proposed Corkill Trail parking area (on non-federal land) or trail (partially on federal land). Without avoidance measures, construction of the Project could affect them by causing injury or mortality (e.g., crushing by vehicle traffic or hand tools during construction or subsequent maintenance activities). Increased visitor use could cause increased foot traffic in occupied habitat, possibly causing desert Coachella Valley fringe-toed lizard injury or mortality. However, signage and improved public awareness are intended to focus visitor use onto designated trails, reducing foot traffic and OHV activities in the surrounding area, and thus reducing adverse effects to Coachella Valley fringe-toed lizard. The project's operational impacts to Coachella Valley fringe-toed lizard are comparable to the existing non-motorized recreation conditions as described by the CDCA Plan Amendment (BLM 2002) and association Biological Opinion (USFWS 2010a). In combination, conservation measures listed above (MM-BIO-1 through MM-BIO-14 will prevent Coachella Valley fringe-toed lizard take on federal land, and will minimize or mitigate project impacts to its habitat on federal land. Additionally, these measures and participation in the CVMSHCP (Mitigation Measure BIO-1) would reduce or mitigate potential impacts of the Project on non-federal land by supporting funding for the CVMSHCP. There would be no effect to the Coachella fringe-toed lizard at the Pushawalla and East Indio Hills trails as no suitable or occupied habitat is present at either trail.

VIII. Conclusion

Listed Species

Not Likely To Adversely Affect

The proposed action may affect, but is not likely to adversely affect, the desert tortoise (Mojave population), Coachella Valley fringe-toed lizard, and Coachella Valley milk-vetch. With implementation of the mitigation described above, impacts would be avoided or minimized through on-site monitoring and other measures. Remaining impacts, if any, would be insignificant and discountable. For project components on non-federal lands, habitat impacts to these species would be offset through participation in the CVMSHCP.

No Effect

The proposed action would not affect triple-ribbed milk-vetch or Peninsular bighorn sheep.

Critical Habitat

No Effect

The proposed action would not adversely modify designated critical habitat for any federally listed species.

IX. List of Documents

Environmental Assessment/Mitigated Negative Declaration for the Coachella Valley Trails Development Project. Prepared by Aspen Environmental Group for Coachella Valley Mountains Conservancy. February 2016.

Initial Study for the Coachella Valley Trails Development Project. Prepared by Aspen Environmental Group for Coachella Valley Mountains Conservancy. February 2016.

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XI. List of Contacts/Contributors/Preparers

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Appendix D

US Fish & Wildlife Service Informal Section 7 Consultation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262

In Reply Refer To:
FWS-ERIV-16B0339-16I0834

August 17, 2016
Sent by Email

Memorandum

To: Field Manager, Bureau of Land Management, Palm Springs-South Coast Field Office, Palm Springs, California

From: for Assistant Field Supervisor, Palm Springs Fish and Wildlife Office
Palm Springs, California

Subject: Informal Section 7 Consultation for the Coachella Valley Trails Development Project, Riverside County, California (6840 (P) CAD060.80)

We received your letter on June 7, 2016, requesting concurrence with your determination the Coachella Valley Trails Development Project (Project) is not likely to adversely affect the federally endangered Coachella Valley milk-vetch *(Astragalus lentiginosus* var. *coachellae)*, the threatened Coachella Valley fringe-toed lizard (*Uma inornata*), and the threatened desert tortoise (*Gopherus agassizii*), in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq*.). No designated critical habitat for the aforementioned species occurs in the action area. All three species are "Covered Species" under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

Based on information in your letter and the Project's biological assessment (Aspen 2016), the Coachella Valley Mountains Conservancy (CVMC) proposes to develop or improve three separate trails and associated trailhead sites and parking areas. The three trails would be mostly on conservation land previously acquired in accordance with the CVMSHCP, as administered by the Coachella Valley Conservation Commission (CVCC). About 34 percent of the trails and trailheads (see table below) are located on Federal land administered by the Bureau of Land Management (BLM).

The proposed trails and trailheads are the Corkill Road Trailhead and Corkill Trail, the Pushawalla Trailhead and Pushawalla Trail, and the Golf Center Parkway Trailhead and East Indio Hills Trail. Each trailhead and parking area would be about 0.09 acre. The trail lengths vary for each proposed trail (see table below). Each trailhead and parking area would have a visitor information kiosk with a map of the authorized trails in the area, trail names, applicable regulations (such as off-highway vehicle prohibition), contact information to report unauthorized activity, and educational information about federally listed species and sensitive resources in the area. In addition, each trailhead and parking area would have a stop sign at the entry/exit and a low post and beam barricade around the perimeter to delineate its boundaries and discourage off-

road vehicle use. Vehicle traffic for trail and trailhead construction would be limited to existing roads and to the trailhead and parking areas described above. There would be no off-road vehicle use for trail improvements/construction. The majority of trail work would be limited to placement of trail markers and soil and rock movement to improve existing trail treads where needed or to clearly delineate the route in areas where the trail is not obvious.

All three proposed trails mostly follow existing informal or unmarked trails where little or no new disturbance for construction or improvement would be needed. The Corkill and East Indio Hills trails will require improvements to portions of the designated trails at inaccessible areas. The Pushawalla Trail would require only minimal improvement. Analysis of effects used a disturbance area calculated as 6 feet wide over the full length of all three trails. However, this estimate is conservative because most of the trail routes are existing footpaths that would need minimal work (as stated above). Therefore, the acreage of disturbance analyzed in the biological assessment is a worst-case scenario. For the Corkill and Pushawalla trailheads, an approximate 0.09 acre (3,750 square feet) of natural vegetation will be cleared to provide parking for vehicles and horse trailers at each location. At the Golf Center Parkway Trailhead/East Indio Hills Trail, the proposed trailhead site is already covered with rough rock and gravel, which may need to be replaced or reinforced to compensate for the generally soft substrate in the area, but there would be no new impact to natural habitat. Operation and maintenance of the Project would include regular inspections and repair as needed, particularly after storms, when surface runoff could erode trails, trailheads, or parking areas.

The CVMSHCP developed spatial models of suitable habitat within the Project area to evaluate effects to covered species associated with that plan. Based on those suitable habitat models, there will be small disturbances to modeled habitat for Coachella Valley milk-vetch, Coachella Valley fringe-toed lizard, and desert tortoise with implementation of the proposed Project. The table below lists the acreage impacts to modeled habitat for each species.

The trail and trailhead project components located on BLM land are classified as either Class M (moderate use) areas that are managed to provide for a wide variety of present or future uses that include mining, livestock grazing, and recreation or Class L (limited use) lands that are managed to provide lower-intensity, carefully controlled multiple use of resources while ensuring that sensitive values are not significantly diminished. Additionally, one segment of the Corkill Trail is located on land classified as an Area of Critical Environmental Concern (ACEC).

The proposed Project is in conformance with the approved land use plans that guide public use of the affected lands. These plans include the California Desert Conservation Area (CDCA) Plan (1980) as amended, the CDCA Plan Amendment for the Coachella Valley (2002), and the Coachella Canal Area Resource Management Plan (2006). Although the proposed trails are not mentioned specifically in these plans, each plan includes objectives to provide public recreational opportunities while protecting natural and cultural resources. The proposed Project would meet these objectives.

Table 1. Potential Trail and Trailhead Disturbance Areas Totals

	Corkill Trail	Pushawalla Trail	Golf Center Pkwy / East Indio Hills	Total
Total trail length	4.5 miles	1.4 miles	4.5 miles	**10.4 miles**
Parking/trailhead construction area	0.09 acre	0.09 acre	0 acres	**0.18 acre**
Approximate new trail improvement area	3.9 acres	1.0 acres	3.3 acres	**8.2 acres**
Trail length on BLM lands	1.4 miles	0.08 mile	2.3 miles	**3.78 miles**
Parking/trailhead construction area on BLM lands	0 acre	0.09 acre	0 acres	**0.09 acre**
Approximate trail improvement area on BLM lands	1.0 acres	0.06 acres	1.7 acres	**2.76 acres**
Coachella Valley milk-vetch modeled habitat on BLM Lands	0.4 acre	0 acre	0 acre	**0.4 acre**
Coachella Valley fringe-toed lizard modeled habitat on BLM Lands	0.23 acre	0 acre	0 acre	**0.23 acre**
Desert tortoise modeled habitat on BLM Lands	0 acre	0.06 acre	0 acre	**0.06 acre**

The BLM will ensure the following measures are implemented to avoid or reduce the potential impacts to Coachella Valley milk-vetch, Coachella Valley fringe-toed, and desert tortoise to ensure these resources are protected.

1. All applicable avoidance and minimization measures as described in Section 4.4 of the CVMSHCP will be observed during construction and operations and maintenance activities on Federal lands. For operations and maintenance activities, the CVMC shall ensure that personnel are instructed to recognize and be alert for listed wildlife species. If a desert tortoise or Coachella Valley fringe-toed lizard is spotted, activities adjacent to its location will be halted and the animal will be allowed to move away from the activity area. In addition, consistent with Section 7.3.4.2 of the CVMSHCP, trails and facilities will be designed to be consistent with CVMSHCP Conservation Goals and Objectives, to avoid or minimize impacts to habitat occupied by Covered Species, and to discourage intrusion into

environmentally sensitive areas. Interpretive facilities, access control, and signage will encourage proper resource usage, and adverse effects of passive recreation, such as trampling vegetation and erosion, will be minimized.

2. At all work areas, mechanical disturbance of previously undisturbed habitats (including soils) will be limited to the minimum area necessary. Project disturbance areas will be sited on previously disturbed areas to the extent feasible.

3. The CVMC will assign one or more acceptable biologists (according to CVMSHCP requirements) to conduct pre-construction surveys and construction monitoring as described in measures 4 and 5 below. An "acceptable biologist" means a biologist whose name is on a list, maintained by the CVCC, of biologists who are acceptable to the CVCC, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service (Service) for purposes of conducting surveys for Coachella Valley milk-vetch, Coachella Valley fringe-toed lizard, and desert tortoise.

4. An acceptable biologist will conduct pre-activity clearance surveys for desert tortoise and their burrows, Coachella Valley fringe-toed lizards, and Coachella Valley milk-vetch. Surveys for desert tortoise will be conducted according to the avoidance and minimization measures in Section 4.4 of the CVMSHCP. Pre-activity surveys will be conducted no more than 7 days in advance of any ground- or vegetation disturbing activities in any location. For construction or maintenance activities planned between February 15 and November 15 at the Corkill Trail and Trailhead, all work sites will be surveyed by an acceptable biologist prior to any ground disturbing activities to avoid take of Coachella Valley fringe-toed lizards.

5. An acceptable biologist will monitor construction and maintenance activities, provide worker education programs, and supervise or perform other related actions. The acceptable biologist will be authorized to temporarily halt construction or maintenance activities if needed to prevent potential harm to these and any other special-status species.

6. The acceptable biologist and all workers shall regularly observe the work areas for Coachella Valley milk-vetch, Coachella Valley fringe-toed lizards, and desert tortoise. For desert tortoise, installing exclusionary fencing per CVMSHCP guidelines for trailhead or trail construction would be infeasible. As an alternative, if a desert tortoise or fringe-toed lizard is observed, it will be left to move away from the work site on its own. If any Coachella Valley milk-vetch plants are found within the disturbance area, and cannot be avoided, the acceptable biologist will collect and distribute its seed pods, per the Service's guidance, to outside of the disturbance area as feasible.

7. Construction workers and other contractors will be trained to ensure they are aware of all applicable avoidance and minimization measures for biological resources. Specifically, workers will be required to: (1) limit all activities to approved work areas; (2) report any desert tortoise, Coachella Valley fringe-toed lizard, or other special-status species, to the supervisor or acceptable biologist; (3) avoid contact with any wildlife that may approach a

work area, and be aware of potential venomous reptile bites from carelessness or unnecessary harassment; (4) pick up and properly dispose of any food, trash, or construction refuse; and (5) report any spilled materials (oil, fuel, solvent, engine coolant, raw concrete, or other material potentially hazardous to wildlife) to the supervisor or on-site acceptable biologist. During the training, the instructor will briefly discuss special-status species that may occur in the work areas, their habitats, and requirements to avoid or minimize impacts. In addition, all workers will be informed of civil and criminal penalties for violations of the Federal Endangered Species Act, the California Endangered Species Act, the Migratory Bird Treaty Act, relevant sections of the California Fish and Game Code, and the Bald and Golden Eagle Protection Act.

8. All trash and food materials will be properly contained within vehicles or closed refuse bins while on any site, and will be regularly removed from the site (at least on a weekly basis) for proper disposal. All refuse from construction or maintenance activities will be removed from each work site upon completion of work. No raw cement, concrete or washings thereof, asphalt, paint, oil, solvents, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, shall be disposed of on-site or allowed to spill onto soil. Cleanup of any spilled material shall begin immediately.

9. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards, to prevent the formation of puddles, which could attract wildlife to construction sites.

10. All water containers (i.e., tanks or trailers) will be securely covered to prevent wildlife from entering the containers and becoming trapped.

11. To minimize potential impacts to special-status wildlife, no vehicles will be permitted to exceed 15 mph while traveling on dirt access roads, and vehicle use will be limited to the access routes and parking/trailhead areas. There will be no off-road vehicle use.

12. The CVMC, in coordination with the BLM and Service, will identify a series of photo points on each trail, trailhead, and parking area, for long term photo documentation of trail condition and resource damage (if any). The photo points will be located at representative sites likely to sustain high use (e.g., parking areas), likely to support listed species or vulnerable to resource damage (e.g., steep trail segments). Each photo point will be visited and photographed at least annually. Based on the documentation, CVMC will determine and implement appropriate follow-up action (e.g., trash cleanup, trail or kiosk maintenance, or new signage). In addition, CVMC will provide annual documentation to the BLM and Service of the photo-point monitoring and follow-up measures.

Based on the information provided in your letter and biological assessment and summarized above, we do not anticipate measurable adverse effects to Coachella Valley milk-vetch, Coachella Valley fringe-toed lizard, or desert tortoise during construction, operations, or maintenance of trailheads and trail improvements. We are basing this determination on the implementation of the above

avoidance and minimization measures, which include pre-construction surveys, worker education training, resource monitoring along the trails, and consistency with the CVMSHCP. Therefore, we concur with your determination that the proposed Project is not likely to adversely affect Coachella Valley milk-vetch, Coachella Valley fringe-toed lizard, or desert tortoise.

The interagency consultation requirements of section 7 of the Act have been satisfied. Although our concurrence ends informal consultation, obligations under section 7 of the Act will be reconsidered if new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered, or this action is subsequently modified in a manner that was not considered in this assessment.

Thank you for your coordination on the Coachella Valley Trails Development Project. If you have any questions regarding this memorandum, please contact Felicia Sirchia of my staff at 760-322-2070.

LITERATURE CITED

[Aspen] Aspen Environmental Group. 2016. Coachella Valley Trails Development Project Riverside County, California, Biological Assessment. Prepared for: the Bureau of Land Management, Palm Springs South Coast Field Office, Palm Springs, California.