

**U.S. Department of the Interior
Bureau of Land Management**

**Draft Williams Hill Off-
Highway Vehicle Recreation
Plan and Environmental
Assessment**

DOI-BLM-CA-C090-2021-0014-EA

Central Coast Field Office, California



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1. Introduction

1.1. Title, EA number, and type of project:

Draft Williams Hill Off-Highway Vehicle Recreation Plan

#DOI-BLM-CA-C090-2021-0014-EA

1.1.1. Location of Proposed Action:

The proposed undertaking is located on public land in southern Monterey, California.

Sections (multiple), T. 23 S., R. 9 E.

1.1.2. Name and Location of Preparing Office:

Central Coast Field Office

940 2nd Ave., Marina, CA 93933

1.1.2.1. Lead Office - and number

Central Coast Field Office, CACO9200

1.1.3. Identify the subject function code, lease, serial, or case file number:

California State Parks Off-Highway Motor Vehicle Recreation Division Project Agreement G19-01-01-P01

1.1.4. Applicant Name:

Bureau of Land Management

1.2. Purpose and Need for Action:

The purpose of the proposed action is to design an off-highway vehicle (OHV) trail network and other potential recreation improvements, including staging areas and campgrounds, at the Williams Hill Special Recreation Management Area in southern Monterey County.

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The need for the proposed action is based on a planning grant from the California State Parks' Off-Highway Motor Vehicle Recreation Grants and Cooperative Agreements Program to evaluate existing OHV trails and explore opportunities to expand routes.

1.3. Scoping, Public Involvement and Issues:

1.3.1 Scoping Period

The public scoping period was announced by the BLM's Central Coast Field Office on June 4, 2021 and ended on July 6, 2021. The BLM received twelve unique comments in response to the announcement. Half of the comments were from OHV recreationists in support of the proposal. Two environmental organizations and several adjacent landowners also provided input and recommendations to address potential impacts of increased OHV recreation opportunities in the Williams Hill Special Recreation Management Area. A summary of the issues and concerns raised by the OHV community, residents, the Sierra Club, and Defenders of Wildlife is provided below.

OHV Community

Concern: Lack of trail riding availability for how much public land the region contains. Communicate with Hollister SVRA. Please build a mix of beginner-friendly and expert rider (a.k.a. black diamond) trails so that the whole family can ride and advanced riders don't get bored.

Issue: Registrations for OHV units are on a resurgence thanks to COVID and more riding areas will only help these folks ride legally, safely, and prevent overcrowding of other parks. Good family riding areas would include safe and easy trails for kids to ride and a great camping [area] for the younger ones.

Residents

Concern: Trespass on adjacent lands. Ensure the OHV users are well aware of the park boundaries with physical barriers erected to keep them on designated trails. What are the plans to clearly designate the park boundaries? Will physical barriers be erected to dissuade OHV's from exiting the designated trail system?

Issue: Illegal hunting (poaching). Install signage that highlights the illegality of hunting off BLM land. Establish agreements with local law and game enforcement that rapid response to such illegal activities is required.

Concern: Increased chance for human caused wildfires. Pursue all [project design features] and enforce regulations reduce risk of wildfire.

Issue: Impacts to historic property on neighboring lands. Will there be recreational closures during fire season?

Concern: Increase visitor conflicts.

Issue: Target shooting and OHV use areas increase likeliness of conflicts. Consider an alternative to a mixed [target shooting and OHV] use area, or at least, clearly designate and identify the when and where for each activity.

Concern: Increased accidents and emergency response.

Issue: Hills have limited cell reception to call for help. King City's first responders need to plan and be equipped accordingly to address the inevitable accidents that happen at OHV parks.

Defenders of Wildlife (Defenders)

Concern: Update inventory of special status species of both plants and animals, and their habitats occurring within the Williams Hill area.

Issue: Potential impacts to these species from existing and expanded OHV activities.

Concern: Planning for potential expansion of the designated OHV route network should be integrated with BLM's regulation and policy for achieving and maintaining rangeland health. For resource conditions that fail to meet health standards, the assessment team should identify the factors or stressors responsible for deteriorated resource conditions and actions necessary to restore healthy conditions.

Issue: Potential impacts to rangelands from expanded OHV activities.

Ventana Chapter Sierra Club

Concern: Impacts on Rivers and Washes.

Issue: Impacts of ORVs on habitat and wildlife in this arid region. The [OHV trails] should avoid crossing streams. The EA should say where stream banks will be hardened to reduce impacts and where BLM will rehabilitate existing impacts caused by vehicles in streams and washes.

Concern: Weed proliferation

Issue: The spread of exotic weeds is prevalent in areas with ORV use. Weeds are often more flammable than native species and can contribute to wildfire danger.

Concern: ORV threats to wildlife.

Issue: Disturbance and fragmentation of habitat for foraging, creating noise pollution to scare off animals, and disruption of nesting sites. There are several federally listed species of special concern in South Monterey County including San Joaquin kit fox and Arroyo toad.

1.3.2 Draft Plan Comment Period

The BLM has released this Draft Environmental Assessment for a 30-day public comment period. The availability of the document for public review and comment will be announced through a press release and other means, including direct mailings to interested parties. Following the close of the public comment period, the BLM will analyze public comments and issue a final decision.

1.4. Land Use Plan Conformance

The proposed action is subject to the Resource Management Plan (RMP) for the Southern Diablo Mountain Range and Central Coast of California, approved September 2007. This plan has been reviewed, and it has been determined that the proposed action conforms with the land use plan, terms, and conditions as required by 43 CFR 1610.5.

The RMP's Area-wide Recreation Management Actions pertaining to Williams Hill include 1) Designating Williams Hill as a Special Recreation Management Area [SRMA] (REC-USE-COM1; REC-USE-C20) and 2) Providing motorized recreational opportunities in the Williams Hill SRMA (REC-USE-C22).

1.5. Relationships to Statutes, Regulations, and Other Plans

Endangered Species Act

The Endangered Species Act of 1973 (ESA) requires federal agencies to complete formal consultation with the United States Fish and Wildlife Service (FWS) for any action that "may affect" federally listed species or critical habitat. The ESA also requires federal agencies to use their authorities to carry out programs for the conservation of endangered and threatened species. BLM completed formal consultation with the FWS for the RMP for the Southern Diablo Mountain Range and Central Coast of California (BLM 2007). For more information, refer to FWS Biological Opinion 1-8-07-F-19.

National Historic Preservation Act of 1966

Section 106 of the National Historic Preservation Act (NHPA) requires agencies to make a reasonable and good faith effort to identify historic properties that may be affected by an agency's undertakings and take those effects into account in making decisions. The BLM process for implementing this NHPA requirement

is set forth in the *State Protocol Agreement among the California State Director of the Bureau of Land Management and the California State Preservation Officer and the Nevada State Historic Preservation Officer* (2019).

Consistent with the Protocol Agreement, the BLM will complete a cultural resources inventory for locations that could be directly or indirectly affected by the proposed project. This inventory is currently underway and will be completed prior to the issuance of a decision record for this project.

Paleontological Resources Protection Act (PRPA) of 2009

Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa - 470aaa-11. Section 6306 of PRPA states that a person may not “excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any paleontological resources located on Federal lands unless such activity is conducted in accordance with this Act.” Section 6302 dictates that “the Secretary shall manage and protect paleontological resources on Federal land using scientific principles and expertise. The Secretary shall develop appropriate plans for inventory, monitoring, and the scientific and educational use of paleontological resources, in accordance with applicable agency laws, regulations, and policies. These plans shall emphasize interagency coordination and collaborative efforts where possible with non-Federal partners, the scientific community, and the general public.”

County General Plans

The Monterey County General Plan defines open space and conservation policy and the associated EIR characterizes resources in the region surrounding the Williams Hill SRMA.

Accordingly, BLM has drawn upon both 2010 Draft EIR and the approved 2016 General Plan and Final EIR to determine the consistency of the proposed action with the existing (and proposed) decisions in the Monterey “South County Area Plan”, as identified in these documents.

2. Range of Management Alternatives

The range of alternatives considered in this EA is described in detail in Sections 2.1 to 2.3 and depicted on figures provided in the appendices. Alternatives are not management decisions, but instead represent a reasonable approach to managing resources and resource uses.

The BLM used several sources of input to develop alternatives, including existing decisions in the Approved Resource Management Plan for the Southern Diablo Mountain Range and Central Coast of California (BLM 2007). The public scoping process described in Section 1.3 was open from June 4, 2021 to July 6, 2021 to provide an opportunity for interested members of the public, local governments, and other resource and land management agencies to comment on the planning process and/or management concerns. From the comments received, the BLM identified the issues to be addressed in the EA and incorporated them into the range of alternatives.

Menu of Options for the Preferred Alternative

The three alternatives analyzed in detail in this EA present a range of reasonable management actions that were analyzed to assist decision-makers and the public in understanding the potential environmental consequences of each alternative. The three alternatives considered in this EA are distinguished by the type and degree of constraints described as allowable uses undertaken to achieve the desired outcomes.

The BLM has chosen not to identify an agency preferred alternative at this time. Instead, the BLM will develop a preferred alternative following a **(minimum) 30-day** public comment period. The BLM may choose a preferred alternative that consists of elements [i.e. allowable uses, management activities] from across the range of reasonable management alternatives. In other words, the details of each alternative, including the acres/miles of trails that would be open or closed to recreation opportunities and the restrictions applicable to management actions under that alternative may serve as a “menu” of options that could be rearranged to identify a preferred alternative for the **final** EA.

This menu of options for land use planning allows the BLM to consider variations on the range of alternatives, as long as they are within the spectrum of management options already analyzed, or comprise a combination of alternatives already analyzed (BLM Handbook H-1790-1, p. 29), and meet the purpose and need for this EA. This approach also allows for greater public involvement in the development of a preferred alternative by the BLM.

Following public comments on the draft range of alternatives, the BLM will identify a preferred alternative that may include further analysis of specific management actions based on coordination with the OHV

Division to support construction, operations, and maintenance. Figures in **Appendix A** illustrate the major management elements of each alternative.

Management Common to All Alternatives

Management guidance established in the Approved RMP (BLM 2007) will be applied regardless of the alternatives for OHV plan grant. For example, the following land use decisions would remain applicable to the Williams Hill SRMA:

- i. Air Quality: Manage motorized vehicle travel on dirt roads to minimize air pollution from dust and exhaust by restricting vehicle types and seasons when vehicles could be used (AIR-COM2).
- ii. Soil Resources: Manage soil to maintain functional biological and physical characteristics that are appropriate to soil type, climate and landform. Meet objectives that will 1) control erosion and sediment transport; 2) maintain vegetation cover at or above the level necessary to stabilize soils; and 3) protect and restore biological soil crusts on watersheds (Soil Resources, Goals and Objectives).

The following RMP-wide soil management actions apply as well: 1) Close roads and trails to public use during periods of extreme wet weather in areas where sustained public use may compromise the integrity of the road or trail surface (SOIL-COM3); 2) Implement soil loss assessment procedures for road and trail maintenance (SOIL-COM4); and 3) Implement best management practices for non-point source pollution control (SOIL-COM5).

- iii. Recreation Management: RMP Recreation Management Goals and Objectives aim to
 - (1) provide a variety of experiences and settings for a diversity of users and to meet potential changes in demand while minimizing conflicts with adjacent property owners and among user groups; (2) provide a range of recreational use opportunities while protecting sensitive natural and cultural resources from human intrusion.
- iv. Transportation and Travel Management: Williams Hills SMRA is a “Limited” area designation.

The following management actions also apply to all alternatives in this EA:

- (1) All new trails will be built to 5-6' width to accommodate dirt bikes, ATVs and average sized UTVs (60 – 66 inches wide, 115 – 150 inches long). The BLM will install physical barriers at trail entrances and intersections to limit trail use to the recommended vehicle width.
- (2) Vehicle barriers would be installed at strategic locations to prevent off-route travel and vehicular trespass onto private lands where existing vegetation doesn't serve as an effective barrier (see Appendix A). These barriers could consist of steel pipe barriers, fencing, earthen material and/or accumulated down/dead woody vegetative material.
- (3) Where trails cross ephemeral [i.e. intermittent] drainages, these crossings would be hardened with rocks or culverts to prevent erosion during storm events (see Maps A and B in Appendix A).
- (4) Establish signage with recommended directional use of specific route, where feasible, to reduce the likelihood of vehicle collisions. Signage will also include difficulty levels and vehicle width limitations. Incorporate these recommendations into all interpretive materials for the management area (e.g. maps in brochures, interpretive kiosks).

Habitat Management Plan

Consistent with the requirements of Project Agreement G19-01-01-P01, the BLM will incorporate a Habitat Management Plan into the final Environmental Assessment for this project.

Soil Conservation Plan

Consistent with the requirements of Project Agreement G19-01-01-P01, the BLM will incorporate a Soil Conservation Plan into the final Environmental Assessment for this project.

Project Design Features

Under all alternatives, the BLM will incorporate Project Design Features to minimize adverse impacts on resources and other existing uses consistent with current laws, regulations, and BLM policies. The purpose for these project design features is to avoid or reduce impacts of development of trails and other facilities to support OHV recreation to less than significant levels. **Appendix B** contains project design features that would apply to all alternatives.

2.1. Alternative A

Under this alternative, the BLM would focus new OHV developments on the north side of Lockwood-San Ardo Road (see **Appendix A**). To minimize potential conflict with recreational target shooting visitors in

this area, trail development would be focused on the east side of BLM route W1. Under Alternative A, OHV opportunities south of Lockwood-San Ardo Road would be limited to the existing BLM route W1.

Management Actions

MA-REC-OHV-001: Establish Staging Area 1 for OHV Recreation Opportunities, as described below:

Staging Area 1 would repurpose 5.54 acres of previously disturbed land at a reclaimed stone quarry. The staging area would include a vehicle turnaround, delineated parking sites, a vault toilet restroom, information/interpretive kiosks, a practice track, and picnicking sites. This area would be managed for day-use only. Welded steel pipe barrier fencing would be installed around the perimeter of the site to discourage off-route travel. To facilitate entry to the staging area for vehicles hauling long trailers, the existing intersection of W4 and Lockwood-San Ardo Road would be widened to approximately 40' - 55'. The BLM would install interpretive signage around the staging area.

MA-REC-OHV-002: Establish Staging Area 2 for OHV Recreation Opportunities, as described below:

Staging Areas 2 would be a primitive staging area located at an existing vehicle pullout. The total area of this site is 0.28 acres. Some basic grading would be done to accommodate day-use parking of trailers. This staging area would be available for overnight use for dispersed camping. Developments at this site would consist of welded steel pipe barrier fencing and interpretive kiosks.

MA-REC-OHV-003: Establish Staging Area 3 for OHV Recreation Opportunities, as described below:

Staging Areas 3 would be a primitive staging area located at an existing vehicle pullout. The total area of this site is 1.10 acres. Some basic grading would be done to facilitate use by trailers. This staging area would be available for overnight use for dispersed camping. Developments at this site would consist of welded steel pipe barrier fencing and interpretive kiosks.

MA-REC-OHV-004: Establish Staging Area 4 for OHV Recreation Opportunities, as described below:

Staging Areas 4 would be a primitive staging area located at an existing vehicle pullout. The total area of this site is 0.47 acres. Some basic grading would be done to accommodate day-use parking of trailers. This staging area would be available for overnight use for dispersed camping. Developments at this site would consist of welded steel pipe barrier fencing and interpretive kiosks.

MA-REC-OHV-005: Authorize the development, construction, and use of the route labelled "North Loop" on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative A] for OHV recreation

use. The approximate 3.32 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles. Install one (new) gate and signage at the public land boundary along the North Loop route to keep vehicles on the designated open route.

MA-REC-OHV-006: Authorize the development, construction, and use of the route labelled “Barrel Canyon Loop” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative A] for OHV recreation use. The approximate 4.06 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles.

MA-REC-OHV-007: Authorize the development, construction, and use of the route labelled “W1 Bypass” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative A] for OHV recreation use. The approximate 0.45 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles.

MA-REC-USE-008: Authorize the development, construction, and use of a 0.40-mile length (non-motorized) hiking trail near the existing Williams Hill Campground to provide additional non-motorized recreation opportunities.

2.2. Alternative B

Under this alternative, the BLM would construct new OHV developments on both north and south sides of Lockwood-San Ardo Road (W2). Alternative B would include all the same staging areas and proposed OHV routes from Alternative A, plus additional management actions to authorize the development and use of more OHV recreation facilities on the south side of W2.

Two new systems of routes would extend to the east and southwest to complete stacked loops along the main W1 route. Development would be completed in a phased manner, with development on the north end of the property occurring first, followed by development on the south end of the property. Refer to the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B].

Management Actions

MA-REC-OHV-009: Authorize the development, construction, and use of the route labelled “W1 Alternative/W3” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B] for

OHV recreation use. The approximate 1 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles.

MA-REC-OHV-010: Authorize the development, construction, and use of the route labelled “East Inner Loop” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B] for OHV recreation use. The approximate 3.13 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles. Install one (new) gate and signage at the public land boundary along the East Inner Loop route to keep vehicles on the designated open route.

MA-REC-OHV-011: Authorize the development, construction, and use of the route labelled “East Loop Connection” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B] for OHV recreation use. The approximate 2.55 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles. Install multiple (new) gates and signage at various (approximately four) locations along the East Loop Connection route to keep vehicles on the designated open route.

MA-REC-OHV-012: Authorize the development, construction, and use of the route labelled “East Loop” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B] for OHV recreation use. The approximate 2.70 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles. install (new) gates and signage along the East Loop route to keep vehicles on the designated open route.

MA-REC-OHV-013: Authorize the development, construction, and use of the route labelled “South Loop” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B] for OHV recreation use. The approximate 3.33 mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles. Install two (new) gates and signage at the public land boundary along the South Loop route to keep vehicles on the designated open route.

MA-REC-OHV-014: Authorize the development, construction, and use of the route labelled “South Tower Reroute” on the BLM Map in Appendix A [i.e. Williams Hill Recreation Area Alternative B] for OHV recreation use. The approximate 0.46-mile length route would be designated “open” to motorized vehicle use for UTVs, ATVs, and motorcycles. Install one (new) gate and signage along the South Tower Reroute to keep vehicles on the designated open route.

MA-REC-OHV-015: Install one (new) gate at the intersection of W1 and the proposed South Loop route to keep vehicles on the designated open routes. Designate the existing roads (W1 and W9) to the south of the proposed gate as “closed” to motorized vehicle use to reduce potential conflicts with the communication towers and other facilities located at Williams Hill peak. The W1/W9 route proposed to be designated closed is approximately 0.25 mile.

MA-REC-OHV-016: Authorize the development, construction, and use of approximately 5 additional campsites west of W1 where dispersed camping occurs near the Williams Hill campground.

2.3. Description of the No Action Alternative:

The proposed action would not be undertaken. Existing management and use of the site would continue subject to applicable statutes, regulations, policy and land use plans.

The BLM would continue to manage the SRMA for hunting, target shooting, and camping as the predominant recreation activities on the public lands at Williams Hill. Limited opportunities for OHV and other recreational uses (e.g., hiking, equestrian use, mechanized uses), would be allowed on 15 miles of designated open routes in the area.

2.4. Alternatives Considered but not Analyzed in Detail

Scoping comments from the Sierra Club suggest developing an alternative to enhance opportunities for solitude and primitive recreation. They recommended putting the emphasis on foot trails, with well-built trailhead parking areas and with discreet trail signs to help people find their way in the backcountry. Alternative A would concentrate OHV riding opportunities on the north end of the management area. This alternative also proposes establishment of a non-motorized trail on the south end of the management area. However, an alternative that would emphasize opportunities for solitude and primitive recreation in the entire management area does not meet the purpose and need for this project. Therefore, it was considered but not analyzed in detail.

Scoping comments from neighboring landowners (Rancho San Lucas) noted that Williams Hill is also a popular spot for hunting and target shooting. To avoid an increase in user conflicts they recommended the BLM consider an alternative that would clearly designate target shooting areas and separate them from designated OHV use areas. They also suggest making sure they are well-marked on maps and signage, so visitors know where and/or when each activity is allowed. The BLM has not developed an alternative that

would designate target shooting areas. However, the OHV route concepts being considered are designed to avoid areas that are currently popular for recreational target shooting. Current management includes restrictions on target shooting within 150 yards of developed recreation sites, and the BLM would use maps and other information to educate visitors about responsible OHV use and target shooting practices in the SRMA to minimize conflicts.

2.5. Summary of OHV Routes in the Range of Management Alternatives

Alternative A

New Route Name	Route Class	Route Mgt. Objective (RMO)	Vehicle Type (= Limited OHV)	Length (miles)
Motocross staging to W1 bypass	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	0.45
Barrell Canyon Loop	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	4.06
North	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	3.32
SUB-TOTAL				7.83
Existing Route Name	Route Class	Route Mgt. Objective (RMO)	Vehicle Type (= Limited OHV)	Length (miles)
W1	Road	Access, Connectivity	All Vehicle Sizes	8.58
W2	Road	Access, Connectivity	All Vehicle Sizes	1.19
W4	Road	Access, Connectivity	All Vehicle Sizes	0.40
W8	Road	Access, Connectivity	All Vehicle Sizes	1.22
W9	Road	Access, Connectivity	All Vehicle Sizes	0.65
W15	Road	Access, Connectivity	All Vehicle Sizes	3.15
SUB-TOTAL				15.19
TOTAL				23.01

Alternative B

New Route Name	Route Class	Route Mgt. Objective (RMO)	Vehicle Type (= Limited OHV)	Length (miles)
Motocross staging to W1 bypass	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	0.45
North Loop (Barrell Canyon)	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	4.06
North	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	3.32
East Inner Loop	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	3.13
East Loop Connection	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	2.55
East Loop	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	2.70
South Loop	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	3.33
South Tower Reroute	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	0.46
W1 Alternate/W3	Trail	OHV Recreation	(UTV/ATV/Motorcycle)	1.00
SUB-TOTAL				21.00
Existing Route Name	Route Class	Route Mgt. Objective (RMO)	Vehicle Type (= Limited OHV)	Length (miles)
W1	Road	Access, Connectivity	All Vehicle Sizes	8.48
W2	Road	Access, Connectivity	All Vehicle Sizes	1.19
W4	Road	Access, Connectivity	All Vehicle Sizes	0.40
W8	Road	Access, Connectivity	All Vehicle Sizes	1.22
W9	Road	Access, Connectivity	All Vehicle Sizes	0.5
W15	Road	Access, Connectivity	All Vehicle Sizes	3.15
SUB-TOTAL				15.00
TOTAL				36.00

No Action Alternative

Route Name	Route Class	Route Mgt. Objective (RMO)	Vehicle Type (= Limited OHV)	Length (miles)
W1	Road	Access and Connectivity	All Vehicle Sizes	8.58
W2	Road	Access and Connectivity	All Vehicle Sizes	1.19
W4	Road	Access and Connectivity	All Vehicle Sizes	0.40
W8	Road	Access and Connectivity	All Vehicle Sizes	1.22
W9	Road	Access and Connectivity	All Vehicle Sizes	0.65
W15	Road	Access and Connectivity	All Vehicle Sizes	3.15
TOTAL				15.19

3. Affected Environment and Environmental Effects:

This chapter briefly describes the resource elements (existing setting or baseline conditions) that may be affected by the proposed action and analyzes the potential environmental consequences (impacts or effects) that would occur as a result of management alternatives being considered in this EA.

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

Vegetation

Geology and Soils

Wildlife

Special Status Species

Noxious Weeds and Invasive Plants

Air Quality and Atmospheric Conditions

Cultural and Heritage Resources

Water Quality

Recreation

Traffic and Transportation

Lands and Realty

Social and Economic Conditions

Environmental Justice

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 descriptions of the resource conditions are quantitative where possible, and of sufficient detail to measure the potential effects of the range of alternatives being considered in this EA. The affected environment also identifies past and present (i.e. ongoing) actions that contribute to existing conditions and provides a baseline for the analysis of direct, indirect, and cumulative effects of management alternatives being considered in this EA.

Only information relevant to understanding the potential effects of the range of alternatives is included in the affected environment sections of this EA. Refer to the 2006 PRMP/FEIS for additional information about existing conditions of resources on BLM public lands.

Topics dismissed from detailed analysis in this EA are identified below. The rationale for the dismissal of certain disciplines is discussed under each issue area.

Table 3-1. Issues Not Analyzed in Detail

Reason dismissed from detailed analysis:	Resource does not exist in the analysis area;	Likelihood of impacts are not reasonably expected (i.e., no measurable effects)	No controversy on the subject or reasons to otherwise include the topic.
Aesthetics (Visual Resources),		No new outdoor lighting. No new sources of glare. PDF's consistent with VRM Class III.	
Agriculture (Prime Farmland) and Forestry Resources,	Public lands are not open to entry under the agricultural laws and no potential forestry exists.		
Floodplains,	No floodplains occur in the analysis area.		
Hazards and Hazardous Materials,		No new source of hazardous materials would be generated in the analysis area. PDF's consistent with OSHA to minimize potential releases of hazardous materials.	
Mineral Resources,		Reasonably foreseeable development scenario for mineral resources is low to none.	
Noise,		Low potential for noise related to construction and operations due to remote area location.	

Reason dismissed from detailed analysis:	Resource does not exist in the analysis area;	Likelihood of impacts are not reasonably expected (i.e., no measurable effects)	No controversy on the subject or reasons to otherwise include the topic.
Population and Housing,	No potential for induced growth or other effects on this element due to rural, remote area location.		
Public Services		Potential for increase demand for emergency response services would be coordinated with local law enforcement, fire, and hospital services in rural locations.	
Riparian/Wetlands,	No riparian areas of wetlands occur in the analysis area.		
Utilities and Service Systems		Potential increased demand for utilities and service systems would be coordinated with local government agencies, fire, and hospital services in rural locations.	
Wilderness/Lands with Wilderness Character	No designated wilderness or lands with wilderness character occur in the analysis area.		

Table 3-2. Estimates and Assumptions

Staging Areas		Condition	Size (estimate)	Acres
MA-REC-OHV-001	Staging Area 1	existing/disturbed	241,322 sq.ft.	5.54
MA-REC-OHV-002	Staging Area 2	existing/in-use	12,196 sq. ft.	0.28
MA-REC-OHV-003	Staging Area 3	existing/in-use	47,916 sq. ft.	1.10
MA-REC-OHV-004	Staging Area 4	existing/in-use	20,473 sq. ft.	0.47
Subtotal				7.39

Vehicle Routes		Condition	Size (estimate)	Acres
MA-REC-OHV-005	North	new/undisturbed	12 ft.	4.84
MA-REC-OHV-006	Barrell Canyon Loop	new/undisturbed	12 ft.	5.9
MA-REC-OHV-007	Motocross staging to W1 bypass	new/undisturbed	12 ft.	.65
MA-REC-OHV-009	W1 Alternate/W3	existing/in-use	12 ft.	1.47
MA-REC-OHV-010	East Inner Loop	new/undisturbed	12 ft.	4.94
MA-REC-OHV-011	East Loop Connection	existing/disturbed	12 ft.	5.35
MA-REC-OHV-012	East Loop	new/undisturbed	12 ft.	4.48
MA-REC-OHV-013	South Loop	new/undisturbed	12 ft.	4.86
MA-REC-OHV-014	South Tower Reroute	existing/in-use	12 ft.	.67
Subtotal				33.19
Total				40.58

Table 3-3 Estimates and Assumptions (cont.)

Condition of Disturbance Area (Estimated Acres)	
new/undisturbed	existing/disturbed
21.02	19.55

3.1. Geology and Soils

A. Current Conditions:

The terrain of Williams Hill consists of steep hills. Most of the slopes are 30 – 70%. The underlying primary geologic formation is the Monterey Shale Formation (Dibblee and Minch 2006a,b,c,d). The white, siliceous, diatomaceous, marine shale is thin bedded, platy, and brittle. It is light, porous, and highly fractured. The diatomaceous marine shale generates a fine white powder on road surfaces that is extremely dusty.

The soil series derived from the Monterey Shale is primarily of the Santa Lucia – Reliz association (Cook 1978; SoilWeb 2021). The dominant soil texture is a shaly, light clay loam. The soil is relatively shallow (< 20 inches) and well-drained because the underlying shale is very fractured and porous. Runoff is rapid and the NRCS official erosion hazard rating for the soil series is high. However, field observations suggest the soil erosion hazard is less of a concern because there is little evidence of current or historic erosion, even on very steep, barren slopes.

B. Effects:

Alternative A:

Under Alternative A, 7.82 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 7.82 miles of new OHV routes represent long-term (semi-permanent), localized impact to soil and bedrock, since vegetation, soil, and soft shale bedrock is bladed off (side cast) during route construction. Bare surfaces of trails could erode and result in further erosion damage of vegetation, soil, and bedrock both above and below the trail. Project Design Features for trails should minimize soil erosion. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 20.96 miles of new OHV routes represent long-term (semi-permanent), localized impact to soil, since vegetation, soil, and bedrock is bladed off (side cast) during route construction. The effects to vegetation, soil, and bedrock will be substantially greater for Alternative B than Alternative A. Bare surfaces of trails could erode and result in further erosion damage of vegetation, soil, and bedrock both above and below the trail. Project Design Features for trails should minimize soil erosion. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed, therefore, there would be no change from existing vegetation, soil, and bedrock conditions.

Cumulative Effects:

Since the impacts related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts on geology and soils.

3.2. Vegetation

A. Current Conditions:

The climate at Williams Hill is Köppen Csa hot-summer Mediterranean with annual average winter precipitation of 14 inches. Winters are cool and wet and summers are hot and dry. The semi-arid climate and shallow and well-drained soil supports primarily drought tolerant vegetation types including chaparral, coastal scrub, knobcone pine forest, and minor extent of annual grassland (Sawyer et al. 2009). Dominant vegetation alliances in decreasing order of abundance include Chamise chaparral (*Adenostoma fasciculatum* – *Arctostaphylos glandulosa* – *Ceanothus cuneatus*), Tucker oak chaparral (*Quercus john-tuckeri* – *Adenostoma fasciculatum*), California buckwheat scrub (*Eriogonum fasciculatum* – *Artemisia californica* - *Lotus scoparius*), Knobcone pine forest (*Pinus attenuata*), Foothill pine woodland (*Pinus sabiniana*), Wild oats grasslands (*Avena barbata* – *Bromus hordeaceus*), and Annual brome grasslands (*Bromus diandrus* – Mixed herbs; Sawyer et al. 2009, CDFW 2019). Woody vegetative cover is dense, which largely prevents soil erosion, even on very steep slopes.

Fire Management

The BLM coordinates with CALFIRE to maintain a fuel break on the ridgeline at Williams Hill. The BLM's approach emphasizes the immediate need for the BLM to remove hazards to people and critical infrastructure (e.g., roads, private property, recreation areas, energy/water infrastructure, etc.) associated with dead and dying trees and excess fuel loading.

Tree mortality near critical infrastructure poses risks to public health and safety directly as falling hazards and by increasing surface fuel loads. As dead trees decay, they are more likely to fall in whole or in part causing injury to individuals using public lands or damaging infrastructure and increasing surface fuel loads. Increased fuel loads result in more rapid spread of fire and higher fire intensity. As a result of the

unprecedented levels of tree mortality from drought and rising temperatures, falling trees and the resulting increased fuel loading are hazards to public health and safety (TMTF 2017).

B. Effects:

Alternative A:

Under Alternative A, 7.82 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). The 7.82 miles of new OHV routes represent long-term (semi-permanent), localized impact to vegetation and soil, since both vegetation and soil is bladed off (side cast) during route construction. Bare surfaces of trails could erode and result in further erosion damage of vegetation and soil both above and below the trail. Project Design Features for trails should minimize soil erosion. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion.

OHV routes and Staging Areas can be both sources of wildfire ignition (campfires), but also act as fuel breaks, since the vegetation along them is cleared. Currently, there is one primary fuel break along the ridgeline of Williams Hill. Construction of new OHV routes and Staging Areas will effectively create new, secondary, semi-permanent fuel breaks. These new OHV routes will also serve to provide vehicle access to areas of Williams Hill that are not currently vehicle accessible, in order to suppress wildfires or conduct other resource management activities such as removal of dead or dying trees to reduce fuel load.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). The 20.96 miles of new OHV routes represent long-term (semi-permanent), localized impact to vegetation and soil, since both vegetation and soil is bladed off (side cast) during route construction. The effects to vegetation and soil will be substantially greater for Alternative B than Alternative A. Bare surfaces of trails could erode and result in further erosion damage of vegetation and soil both above and below the trail. Project Design Features for trails should minimize soil erosion. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion.

OHV routes and Staging Areas can be both sources of wildfire ignition (campfires), but also act as fuel breaks, since the vegetation along them is cleared. Currently, there is one primary fuel break along the ridgeline of Williams Hill. Construction of new OHV routes and Staging Areas will effectively create new, secondary, permanent fuel breaks. These new OHV routes will also serve to provide vehicle access to areas

of Williams Hill that are not currently vehicle accessible, in order to suppress wildfires or conduct other resource management activities such as removal of dead or dying trees to reduce fuel load.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed, therefore, there would be no change from existing vegetation and soil conditions. No new disturbances of vegetation or soil would occur.

No new OHV routes would be constructed which would have otherwise provided BLM vehicle access to currently inaccessible areas. In the event of a wildfire, there would be less ability to access the area with vehicles in order to combat the fire.

Cumulative Effects:

Since the impacts related to the range of alternatives are minor, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts on wildfire risks.

3.3. Wildlife

A. Current Conditions:

Terrestrial wildlife species typical of chaparral and oak woodland/grassland habitats in the California inner coastal ranges are expected on the site, including Columbia black tailed deer (*Odocoileus hemionis*), red-tailed hawk (*Buteo jamaicensis*), mountain lion (*Puma concolor*), coyote (*Canis latrans*) and various small mammals, songbirds, reptiles, and insects. The area also includes habitat of value to raptors. Specific raptor species that may utilize habitats present on this site might include: golden eagle, hawks (red-tailed, red-shouldered, Swainson's, ferruginous, and sharp-shinned), northern harrier, prairie falcon, American kestrel, and owls. Threats to raptors include vehicle collisions, habitat loss, illegal hunting, poisoning, illegal trading and egg collecting, falconry, a reduced prey base, and disturbance of nesting and roosting sites.

B. Effects:

The impacts of OHV activities on wildlife and their habitats are documented in a recent literature review completed by USGS titled "Report on OHV Effects on Wildlife on BLM Lands" (2018). Networks of roads and trails fragment habitat, reduce patch size, and increase the ratio of edge to interior. Fortunately, the BLM does not anticipate serious consequences for area species from fragmentation because the region contains large blocks of habitat or corridors linking habitat patches for wildlife to carry out certain aspects of their life cycles, predator-prey relationships, and overall population dynamics.

Of course, OHV recreation can contribute directly to mortality (and possible population declines) of wildlife species through collisions with vehicles, nest destruction, and collapsing burrows. Thus, habitats containing roads may represent population sinks for any species that commonly attempts to move from one habitat fragment to another by crossing roads (Kline and Swann, 1998).

Direct and indirect effects of constructing OHV routes on these species include breaking shrubs containing nests (nests, eggs, or nestlings destroyed) and diminished cover when shrubs are reduced or eliminated, mortality due to vehicle impact (especially ground-dwelling animals), and collapse of burrows due to OHV traffic (Bury et.al. , 1977).

Another indirect effect of OHV activity on wildlife mortality is the proliferation of routes that provide greater access to remote places by hunters, poachers, and people seeking several forms of nonconsumptive recreation (Boyle and Samson, 1985; Andrews, 1990). Boyle and Samson (1985) also report a variety of nonconsumptive recreation impacts on wildlife, including flushing animals off nests; unnecessary energy expenditures; and displacement of animals from food, shelter, and other vital resources.”

Vehicular traffic is also a source of noise and other stimuli that have the potential for disturbing wildlife along any type of road or trail (Singer, 1978; van der Zande, 1980; Brattstrom and Bondello, 1983; Bowles, 1995; Reijnen and others, 1995, 1996; Bowles, 1995; Kaseloo and Tyson, 2004). Noise, lights, and other disturbances associated with OHV activities also have the potential for eliciting stress responses from a broad spectrum of wildlife taxa. These factors may result in diminished body mass, reduced productivity, and/or poor survivorship.

For example, radio-collared mule deer disturbed by ATVs altered their patterns of foraging and spatial use of habitat; deer in undisturbed areas, however, exhibited no such changes (Yarmoloy and others, 1988). In addition, Yarmoloy and others (1988) found that harassment of deer resulted in diminished reproductive output in the following fawning season, whereas deer that were not harassed experienced no change in reproduction.

Studies reviewed by USGS (2018) demonstrate wildlife species differ in their ability to become habituated to human presence. In general, human presence has a less adverse impact on wildlife when it is temporally and spatially predictable. Recreationists who stay on existing trails have a lesser negative impact on wildlife than recreationists who wander from the trail. For example, mule deer, which may be found at Williams Hill, respond more negatively to off-trail recreationists than to on-trail recreationists (Taylor and Knight 2003). Wildlife may be able to become more habituated to on-trail recreation because it is more predictable, occurring frequently and along a predictable spatial line (Knight and Cole 1995a, Whittaker and Knight

1999, Talor and Knight 2003). Ungulates, including mule deer, may also be more adversely impacted by recreationists approaching from above than by recreationists approaching from the same or a lower level of terrain (Taylor and Knight 2003).

Like mule deer, many passerine species show a lesser response to recreationists who are on established trails than to recreationists off of official trails (Miller et al. 2001). In general, birds that forage or nest on the ground have greater responses to the presence of recreationists than birds who forage or nest higher in the canopy (Soulard 2017). Birds may avoid nesting near trails although it is unclear whether this is a result of the presence of the trails or whether it is a result of increased human disturbance along the trail (Miller et al. 1998).

Raptors are commonly known to inhabit the SRMA; however, no direct or indirect effects from project activities are expected with the implementation of a buffer around active nests. The CDFW usually accepts a 50-100 foot radius buffer around passerine and non-passerine nests, and 300-500 foot radius for raptors. PDF's. The direct impacts of construction and vehicle use will be limited to staging areas and the designated open routes. Consequently, project-related activities outside of the project areas are expected to be minimal and no direct disturbance or indirect destruction of nesting bird habitat is anticipated.

Impacts to habitat on public lands would depend on the native vegetation type and the topography of the proposed trails. The locations of these trails contain a combination of grassland, shrubland and woodland vegetation communities. Habitat disturbance in grasslands generally has less of an impact than disturbance in shrublands and woodlands since shrubs and trees take longer to become re-established. Shrublands and woodlands also support a greater diversity and number of wildlife species as shrubs provide a high variety of food and cover. As the diversity of habitat structure increases from grassland to shrubland to woodland, so does the wildlife species richness. Thus, there is typically more potential for impacts to wildlife in shrubland and woodland communities, than in grassland communities. However, the lack of availability of water in much of Williams Hill is likely a limiting factor on wildlife species populations and richness. The impacts associated with proposed staging areas and roads, however, would be very site-specific and are not expected to significantly affect these habitats at the community scale because the footprint of the disturbance is also expected to be a small proportion of the habitat area.

Topography can play a role in the amount of surface disturbance that results from building parking areas and new road construction. Flat areas will require little or no cut and fill, and road routes are not constrained by topography. In hilly areas, cut and fill may be required which disturbs additional land. Roads routes may have to travel longer distances to meet engineering requirements and may also require cut and fill.

Areas lacking prior developments will have more disturbance, as the entire access route will need to be constructed rather than just a short spur route from an existing road.

Summary of Effects

Both alternatives would increase visitor use through the development and use of trails. This increase in use is anticipated to have adverse impacts on sensitive and other wildlife species that utilize the area. The degree of impact is relative to the degree of recreational use, the types of uses authorized, and the specific areas in which each use will be authorized. For Williams Hill, an increase in OHV trails and usage is predicted to increase the direct impacts to wildlife in the form of collisions with wildlife on OHV trails, as well as off-trail if OHVs are going off-trail. Indirect impacts are anticipated to be highest at or near the trails or other areas with OHV usage.

There are five main ways that recreationists influence wildlife: 1) harvesting (i.e. hunting and poaching); 2) habitat modification; 3) pollution (litter and human food waste); 4) disturbance (via coming close to wildlife, entering animal's field of view, causing noise near animals); 5) introduced species and pathogen introduction (Knight and Cole 1991; Soulard 2017).

Potential impacts to animals include direct mortality or injury, loss of dens or burrows, displacement, and human disturbance. Roads and large areas of disturbance can also be a barrier to movement for some animal species. Direct mortality or injury could result from vehicle strikes, or from collapsed dens and burrows resulting in animals being crushed or entombed. Burrows and dens could be destroyed or damaged by vehicle traffic, particularly heavy equipment. Animals could be displaced during project activities. Such displacement of animals into unfamiliar areas could increase the risk of predation and increase the difficulty of finding required resources such as food and shelter. Human disturbance could result in displacement of animals, even though dens and burrows may not be directly impacted. Human disturbance also might alter the behavior of animals (e.g., activity periods, space use) resulting in increased predation risk, reduced access to resources, and reduced breeding success. Project activities during the spring breeding season could increase the potential for adverse impacts.

Short-term and temporary effects, such as noise from construction and maintenance, generally would not have important or lasting effects on wildlife movement and habitat fragmentation if adequate PDFs and BMPs are implemented.

A variety of project design features and minimization measures are also employed to reduce impacts to individual animals and populations. Typical measures are described below.

- Speed limits and employee education are employed to reduce the likelihood of vehicle strikes.
- Dens are monitored and when vacant, excavated or temporarily blocked to prevent entrapment of animals. Pipes and culverts are searched before being moved or sealed.

Alternative A:

Under Alternative A, 7.82 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. With additional trail construction and usage as compared to the No Action Alternative, a higher degree of direct and indirect impact to wildlife is anticipated. In general, Alternative A is predicted to have a higher degree of impact to wildlife as described in the previous section than the No Action Alternative, but a lower degree than Alternative B. However, the concentration of new trail development in the north half of Williams Hill under this alternative would limit the geographic scope of new wildlife impacts under this alternative.

Alternative A is expected to result in more visitors coming to Williams Hill than under the No Action Alternative, which will result in greater impacts to wildlife.

The siting of new staging areas at sites of existing disturbance would likewise minimize the impacts of new construction. However, the construction of Staging Area 1 would introduce a high concentration of recreationists in an area that does not currently receive frequent visitation.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). In general, Alternative B is predicted to have a higher degree of impact to wildlife as described in the previous section than Alternative A or the No Action Alternative. The geographic scope of impacts would be greater under Alternative B than Alternative A because there are new OHV opportunities included in the southern portion of the SRMA.

Alternative B is expected to result in more visitors coming to Williams Hill than under Alternative A or the No Action Alternative, which will result in greater impacts to wildlife. For example, the impacts of increased noise would be greater under Alternative B than Alternative A because there are more OHV opportunities included in the southern portion of the SRMA.

Similar to Alternative A, the siting of new staging areas at sites of existing disturbance would minimize the impacts of new construction. However, the construction of Staging Area 1 would introduce a high

concentration of recreationists in an area that does not currently receive frequent visitation. The expansion of Williams Hill Campground would likewise expand the impacts of this campground on wildlife.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed, therefore, there would be no change from existing conditions. No new disturbances to wildlife would occur beyond those expected to take place given than current onsite activities. However, visitor use is still anticipated to increase under this alternative, with greater (albeit less than Alternatives A and B) impacts on wildlife.

No new OHV routes would be constructed and therefore the probability of vehicle collisions or other disturbances to wildlife would not increase or decrease.

Cumulative Effects:

Since the impacts related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts on wildlife or their associated habitats.

3.4. Special Status Species

A. Current Conditions:

This section describes the BLM's assessment of species listed under the Federal or California State Endangered Species Acts, as well as BLM sensitive species and other species considered by the State of California to have heightened conservation status. Available literature was reviewed to identify special-status plants, wildlife, and vegetation communities known from the vicinity of Williams Hill SRMA. Data reviewed during the literature review includes information provided by the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS). These materials included searches of the California Natural Diversity Database (CNDDDB; CDFW, 2022). Additionally, for plants, information sources included the California Consortium of California Herbaria (CCH2; 2022), Calflora (2022, and iNaturalist (2022). A table of special status species that are within 5km of the Williams Hills SRMA is provided below.

Table 3-4. Special Status Species within 5 km radius

Common name	Species	Family	Annual/Perennial (plant)	Status	Habitat	Located within project area?
FISH						
Monterey hitch	<i>Lavinia exilicauda harengus</i>	Cyprinidae	N/A	Federal Status:None. State Status: Moderate Concern. Natureserve status: Vulnerable.	Freshwater - rivers, streams, and associated pools	No
AMPHIBIANS						
Arroyo toad	<i>Anaxyrus californicus</i>	Bufoidea	N/A	FE; CSSC: Federal Status: Endangered. State Species of Special Concern.	Freshwater systems - rivers, streams, associated pools, and associated upland habitat (sandbars, alluvial terraces, and streamside benches)	Unlikely/No
California red-legged frog	<i>Rana aurora draytonii</i>	Ranidae	N/A	FT; Federal Status: Threatened	Breeding sites in aquatic habitats including pools and backwaters within streams and creeks, ponds, springs, and artificial impoundments such as stock ponds. Upland habitats downed woody vegetation, leaf litter, and small mammal burrows; habitats that provide protection from predators and prevent desiccation (drying)	Unlikely/No
REPTILES						
California legless lizard	<i>Anniella pulchra</i>	Anniellidae	N/A	CSSC: Federal Status: Not Listed. State: Species of Special Concern	Coastal dunes, sandy washes and grasslands	Potential in valley bottoms in sandy habitats
BIRDS						
California condor	<i>Gymnogyps californianus</i>	Cathartidae	N/A	FE: Federal Status: Endangered.	California condors require large areas of remote country for foraging, roosting, and nesting. Condors roost on large trees or snags, or on isolated rocky outcrops and cliffs. Nests are located in shallow caves and rock crevices on cliffs where there is minimal disturbance. Foraging habitat includes open grasslands and oak savanna foothills that support populations of large mammals such as deer and cattle. Condors are known to fly 150 miles a day in search of food.	Some potential to forage in project area as one small part of their broad geographic range in this region.
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Vireonidae	N/A	FE: Federal Status: Endangered.	Requires riparian habitats for nesting, vireos also occur in upland habitats adjacent to breeding areas	No/ Unlikely for nesting or foraging.

Tricolored blackbird	<i>Agelaius tricolor</i>	Icteridae	N/A	Federal Status: Not Listed.	Cattail or tule marshes; forages in fields, farms. Breeds in large freshwater marshes, in dense stands of cattails or bulrushes. At all seasons (including when breeding), does most of its foraging in open habitats such as farm fields, pastures, cattle pens, large lawns.	Potential. Marsh habitat not onsite, possible use as foraging habitat.
MAMMALS						
Monterey dusky-footed woodrat	<i>Neotoma macrotis luciana</i>	Cricetidae	N/A	Federal Status: Not Listed.	Common to abundant in forest habitats of moderate canopy and moderate to dense understory. Can be abundant in chaparral.	Unlikely
American badger	<i>Taxidea taxus</i>	Mustelidae	N/A	Federal Status: Not Listed.	Dry, open grasslands, fields, and pastures. They can also live in deserts and marshes. They are found from high alpine meadows to sea level.	Potential presence in valley bottoms at Williams Hill
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Canidae	N/A	FE: Federal Status: Endangered.	Grasslands and scrublands, many of which have been extensively modified.	No
PLANTS						
Straight awned spineflower	<i>Chorizanthe rectispina</i>	Polygonaceae	Annual	CRPR 1B.3; BLM Sensitive	Gravelly or sandy soil. Chaparral.	Yes
San Antonio collinsia	<i>Collinsia antonina</i>	Plantaginaceae	Annual	CRPR 1B.2; BLM Sensitive	Monterey shale talus. Chaparral.	Yes
Jolon clarkia	<i>Clarkia jolonensis</i>	Onagraceae	Annual	CRPR 1B.2; BLM Sensitive	Uplands. Woodland and Chaparral.	Yes
Umbrella larkspur	<i>Delphinium umbracolorum</i>	Ranunculaceae	Perennial	CRPR 1B.3; BLM Sensitive	Oak woodland.	Yes
Carmel Valley bush mallow	<i>Malacothamnus involucratu</i>	Malvaceae	Perennial	CRPR 1B.2; BLM Sensitive	Valleys. Chaparral.	Yes
Davidson's bush mallow	<i>Malacothamnus davidsonii</i>	Malvaceae	Perennial	CRPR 1B.2; BLM Sensitive	Slopes, washes	Not suspected
Lemmon's wild cabbage	<i>Caulanthus lemmonii</i>	Brassicaceae	Annual	CRPR 1B.2; BLM Sensitive	Grassland, chaparral, scrub.	Not suspected
Pale yellow layia	<i>Layia heterotricha</i>	Asteraceae	Annual	CRPR 1B.1; BLM Sensitive	Clay soil. Grassland.	Not suspected
Dwarf calycadenia	<i>Calycadenia villosa</i>	Asteraceae	Annual	CRPR 1B.1; BLM Sensitive	Gravelly knolls, openings in foothill woodland.	Not suspected
Prostrate navarretia	<i>Navarretia prostrata</i>	Polemoniaceae	Annual	CRPR 1B.2; BLM Sensitive	Floodplains, vernal pools	Not suspected
Yellow flowered eriastrum	<i>Eriastrum luteum</i>	Polemoniaceae	Annual	CRPR 1B.2; BLM Sensitive	Sandy soils. Slopes.	Not suspected
Mason neststraw	<i>Stylocline masonii</i>	Asteraceae	Annual	CRPR 1B.1; BLM Sensitive	Sandy soils.	Not suspected
Abbott's bush mallow	<i>Malacothamnus abbottii</i>	Malvaceae	Perennial	CRPR 1B.1; BLM Sensitive	Sandy soils, streambanks, chaparral.	Not suspected
Hardham's evening-primrose	<i>Camissoniopsis hardhamiae</i>	Onagraceae	Annual	CRPR 1B.2; BLM Sensitive	Sandy soils.	Not suspected

Plants

Special Status Plant Species present in the Williams Hill area include the annual species straight awned spineflower (*Chorizanthe rectispina*, CRPR list 1B.3); Jolon clarkia (*Clarkia jolonensis*, CRPR list 1B.2); and San Antonio collinsia (*Collinsia antonina*, CRPR list 1B.2). Perennial Special Status Plant Species present in the Williams Hill area include umbrella larkspur (*Delphinium umbraculorum*, CRPR list 1B.3); Davidson's bush mallow (*Malacothamnus davidsonii*, CRPR list 1B.2); and Carmel Valley bush mallow (*Malacothamnus palmeri* var. *involucratus*, CRPR list 1B.2) (Calflora 2021; CNDDDB 2021). No Federally listed plant species are known or suspected to occur at Williams Hill (Calflora 2021; CNDDDB 2021). The only species known to occur within the Project Area is *Chorizanthe rectispina*. A small population of less than 50 individuals was observed in 2019 in the wide fuel break around the Williams Hill peak communications tower (Calflora 2022; Point Observation po134739). Additionally, an herbarium specimen of the species was collected in 1990 from along the ridge between Lockwood-San Ardo Road and Williams Hill peak (CCH 2022; herbarium specimen H-4235). This specimen was most likely collected along the BLM route W1 road edge or from within the ridgeline fuel break.

All of these Special Status Plant Species occur on well-drained soils derived from the Monterey Shale. The habitat is subject to much natural disturbance from slope colluvium movement and erosion along toeslopes and drainages (Jepson Flora Project 2021). All of the species occur in open shrub gaps of the dense chaparral. The open shrub gaps (potential habitat) are the result of disturbances that reduce the density of the chaparral. The disturbances that create open shrub gaps and potential habitat for the species can be either natural (e.g. natural soil erosion, landslide, or wildfire) or anthropogenic (e.g. mechanical woody vegetation clearing). All of the Special Status Plant Species are adapted to occasional vegetation and soil disturbance, and all respond positively to such disturbances, regardless of whether the disturbance is natural or anthropogenic.

Animals

San Joaquin kit fox (*Vulpes macrotis mutica*) was historically widespread in the Salinas Valley but documented sightings have decreased over the past five decades such that virtually no individuals have been observed outside of Camp Roberts since the 1970's. The California Natural Diversity Database (CNDDDB) also shows two records of sightings near Unit 2 and two sightings near Unit 3 in the Salinas Valley from the early 1970's. The CNDDDB shows two additional occurrences near the Salinas River from 1999 and 2002 that are approximately 5 miles east of Unit 1. Within Camp Roberts, no kit foxes have been observed since 2007 (M. Moore, Camp Roberts biologist, pers. comm.. to BLM, 2011).

The San Joaquin kit fox was listed as Federally Endangered without critical habitat designation in 1967 and is listed under the CESA as Threatened. Loss of native habitat to various kinds of agriculture (especially irrigated, row-cropping), and residential and commercial developments remain the principal threats to this species. A recovery plan for the species was approved in 1983, and it is further addressed in the 1998 Recovery Plan for Upland Species of the San Joaquin Valley (USRP). Within Table 5 and on p. 133 of the USRP, the Salinas Valley is identified as a key recovery area for delisting the species.

Any kit foxes associated with the Salinas Valley satellite population would be most likely to inhabit grazed, non-irrigated grasslands, agricultural fields, orchards, or vineyards and remnant portions of native grasslands in the region. Although kit fox dens are typically found in loose-textured soils, it is not uncommon to find dens in nearly every soil type, particularly when interspersed with sandy-gravelly substrate.

California condors (*Gymnogyps californianus*) was listed as Endangered on March 11, 1967; the California condor is critical habitat designated and listed by the State of California as Endangered. The California condor declined quickly over the past century; the last wild condor was captured in 1987 and the United States Fish and Wildlife Service (USFWS) has raised young birds in captivity and reintroduced them into the wild in western Monterey County, eastern San Luis Obispo County, and eastern Santa Barbara County in California.

This species occurred historically in the San Joaquin, Central Coast, San Benito, and Salinas management areas. The variety of threats faced by these birds included collection by Native Americans, shooting by later settlers, collisions with power lines, incidental poisoning (from coyote control programs) and other threats created by humans. In recent years, the leading threat appears to be from lead poisoning. The source of this toxin is from animal carcasses (such as deer and feral pigs) shot with lead bullets. Condors feeding on animals wounded by hunters ingest these lead bullets and are subsequently poisoned.

The USFWS and the National Park Service have established condor release sites at the Pinnacles National Monument and the Los Padres National Forest in Monterey County. The condors released from these sites tend to concentrate their activities in the local region, but are gradually increasing their range throughout the central and southern California.

It is possible California condors may utilize the site as one part of their broad geographic area for foraging on any available wildlife carcasses, though nesting is not known to occur onsite.

Least Bell's Vireos (*Vireo bellii pusillus*) was listed as Federally Endangered in 1986 and State Endangered in 1980. Federal "Critical Habitat" has been designated for upper Sweetwater Reservoir and immediately

upstream habitat. The Least Bell's vireo primarily inhabits riparian woodlands, scrub, and thickets for breeding. Population declines are due to urban and agricultural development, habitat alteration, and brood parasitism by the brown-headed cowbird. Rangewide, brown-headed cowbird control (trapping and nest monitoring) have resulted in a nearly 10-fold population expansion over the last decade. The species is not present in the project area but the Draft Recovery Plan for the species includes a Salinas River population as a necessary criterion for delisting.

California red-legged frogs (*Rana aurora draytonii*) were Federally listed as Threatened on May 23, 1996. The historic range of this species extended along the coast from the vicinity of Point Reyes National Seashore, Marin County, California, and inland from the vicinity of Redding, Shasta County, California, southward to northwestern Baja California, Mexico. Within the remaining distribution of the species, only isolated populations have been documented in the Sierra Nevada, northern Coast, and northern Transverse ranges. The species is believed to be extirpated from the southern Transverse and Peninsular ranges, but is still present in Baja California, Mexico.

California red-legged frogs occupy generalized slow-water habitats, including slow-moving streams, stock ponds and reservoirs.

The California red-legged frog has sustained a restriction in its geographic range in California as a result of several factors acting singly or in combination. Habitat loss and alteration, combined with over-exploitation and the introduction of exotic predators, were significant factors in its decline in the early to mid-1900s. It is threatened within its remaining range by a wide variety of human impacts, including urban encroachment, construction of reservoirs and water diversions, land conversions, industrial and non-industrial forest practices, introduction of exotic predators and competitors, livestock grazing, and habitat fragmentation.

The California red-legged frog was likely common in low-gradient riparian habitat throughout the Salinas Valley and surrounding hills. Red-legged frogs are known to occur in the Salinas River watershed and could be present in minor intermittent creeks and drainages, but there have been no sightings of red-legged frogs in the vicinity of the Williams Hill SRMA for over a decade. Given the paucity of known occurrences in the region, the probability that red-legged frogs are actually present on or near the areas being considered for development of OHV opportunities is low.

The red-legged frog also has limited potential to occur on the areas being considered in this EA because ponds are not common in this rugged terrain.

California tiger salamanders (*Ambystoma californiense*) was Federally listed throughout its range on August 4, 2004 as a Threatened species and is also listed as a California Species of Special Concern. The

range is restricted to California in disjunct remnant vernal pool complexes in Sonoma and Santa Barbara counties, in vernal pool complexes and isolated ponds scattered mainly along narrow strips of rangeland on each side of the Central Valley from southern Colusa County south to northern Kern County, and in sag ponds and human-maintained stock ponds in the coast ranges from Suisun Bay south to the Temblor Range. It has been eliminated from an estimated 55 to 58 percent of its historic breeding sites and has lost an estimated 75 percent of its habitat.

The primary cause of the decline of California tiger salamander populations is the loss and fragmentation of habitat from human activities and the encroachment of non-native predators. Federal, State and local laws have not prevented past and ongoing losses of habitat. All of the estimated seven genetic populations of this species have been significantly reduced because of urban and agricultural development, land conversion, and other human-caused factors.

While CTS were not historically known from the immediate region around Williams Hill, the area broadly falls within the range of the species. Populations in the north Salinas Valley have been compromised by the introduction of nonnative Eastern tiger salamanders, which hybridize with natives. The nearest known populations are in the rift valley to the east of the project area, which probably constitute the southwestern most populations of salamanders in the region (excepting the disjunct population near Santa Maria far to the south). It is possible, but unlikely, that tiger salamanders or their habitat are present because ponds are not common in this rugged terrain.

B. Effects:

Impacts Common to Alternatives

The proposed action would have no effects on Federal or State listed (candidate, threatened, or endangered) plant species because none are known or suspected to occur on the BLM public lands at Williams Hill based upon CNDDDB data and proximity of suitable habitats, and previously recorded occurrences of the species.

Alternative A:

Under Alternative A, 7.82 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). The 7.82 miles of new OHV routes represent long-term (semi-permanent), localized impact to vegetation and soil, since both vegetation and soil are bladed off (side cast) during route construction. Bare surfaces of trails could erode and result in further erosion damage of vegetation and soil both above and below the trail. Soil erosion could result in increased sediment transport to drainages and adversely affect surface water quality. Project Design Features for trails should minimize soil erosion and minimize potential adverse effects to surface water quality. Additionally, the

Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion and potential adverse impacts to Special Status Plant and Animal species habitat.

All of the Special Status Plant Species within the Project Area are adapted to occasional soil disturbance, such as that along fuel breaks and road and trail edges. All of these species only occur in open shrub gaps where the chaparral density has been reduced by either natural causes or anthropogenic causes. Construction of new OHV routes through the currently dense chaparral is anticipated to have no effect to beneficial long-term effect on the Special Status Plant Species, through the creation of more open shrub gap potential habitat.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). The 20.96 miles of new OHV routes represent long-term (semi-permanent), localized impact to vegetation and soil, since both vegetation and soil are bladed off (side cast) during route construction. The effects to vegetation and soil will be substantially greater for Alternative A than Alternative B. Bare surfaces of trails could erode and result in further erosion damage of vegetation and soil both above and below the trail. Soil erosion could result in increased sediment transport to drainages and adversely affect surface water quality. Project Design Features for trails should minimize soil erosion and minimize potential adverse effects to surface water quality. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion and potential adverse impacts to Special Status Plant and Animal species habitat.

All of the Special Status Plant Species within the Project Area are adapted to occasional soil disturbance, such as that along fuel breaks and road and trail edges. All of these species only occur in open shrub gaps where the chaparral density has been decreased by either natural causes or anthropogenic causes. Construction of new OHV routes through the currently dense chaparral is anticipated to have no effect (neutral) to beneficial long-term effect on the Special Status Plant Species, through the creation of more open shrub gap potential habitat. The long-term neutral to beneficial effects on Special Status Plant Species is anticipated to be substantially greater for Alternative B than Alternative A.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed, therefore, there would be no change from existing vegetation and soil conditions. No new disturbances of vegetation or soil would occur.

No new OHV routes would be constructed which would have otherwise created new open gaps (potential habitat) in the dense chaparral for the Special Status Plant Species.

Cumulative Effects:

Potential cumulative impacts on wildlife habitat and species include reduced habitat quality from clearing vegetation, increased potential for soil erosion and sediment transport to off-site streams, and altering topography. In addition, construction of new roads and increased vehicles may impact habitat continuity, increase wildlife disturbance, and increase the potential for human and wildlife interaction.

Loss, degradation and fragmentation of habitat have resulted in population declines for many Salinas Valley species. Development for agriculture, energy production, and urban areas, and recreational activities such as off-highway vehicles, has resulted in loss of habitat.

Other BLM resource management programs with the most potential to impact listed species and their habitats include: Lands & Realty, Livestock Grazing, Energy & Minerals, Recreation, and Fire Management. Impacts to listed species from these management programs are analyzed in the 2006 PRMP/FEIS.

Past, present, and future state or private activities, not involving Federal activities that are reasonably foreseeable may include unauthorized fires, unauthorized livestock grazing, and motorized vehicle access in sensitive habitat or outside of approved routes.

3.5. Noxious and Invasive Plants (Weeds)

A. Current Conditions:

Noxious and invasive plants are sparse within the project area and primarily limited to disturbed areas including road edges, fuel breaks, and quarries. Noxious and invasive weeds of greatest concern that are present in some disturbed soil areas include tocalote (*Centaurea melitensis*) and Russian thistle (*Salsola tragus*). Stinkwort (*Dittrichia graveolens*) is a noxious weed species of concern that has not yet been observed at Williams Hill, but is rapidly spreading in the region. Primary vectors of weed introduction Williams Hill include import of weed seed contaminated materials including soil, roadbase aggregate (gravel), rock (armoring), straw, and mud stuck to vehicles and animals. For weeds already established at

Williams Hill, local seed dispersal (spread) occurs primarily through road grading (soil movement) and mud stuck to vehicles and animals.

B. Effects:

Alternative A:

Under Alternative A, 7.82 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). Construction of new OHV routes requires the use of heavy equipment, transported to the construction site from other distant locations. Materials such as roadbase aggregate and rock for trail armoring will be imported. Soil may be moved around locally through blading. Additionally, the 7.82 miles of new OHV routes represent long-term (semi-permanent), localized paths of dispersal for weeds, and the disturbed soil of routes provides optimal weed habitat. There is much potential for the spread of existing weeds at Williams Hill and the introduction of new weed species.

Project Design Features pertaining to Noxious and Invasive Plant Species (Weeds) will limit the spread of existing weed species and the introduction of new weed species. The Project Design Features include: 1) monitoring and treatment (herbicide) of weeds, and 2) inspection of equipment and materials for weed seed contamination by the BLM Natural Resource Specialist, prior to approval for import and use on the Project Area.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes (No Action Alternative). Construction of new OHV routes requires the use of heavy equipment, transported to the construction site from other distant locations. Materials such as roadbase aggregate and rock for trail armoring will be imported. Soil may be moved around locally through blading. Additionally, the 20.96 miles of new OHV routes represent long-term (semi-permanent), localized paths of dispersal for weeds, and the disturbed soil of routes provides optimal weed habitat. There is much potential for the spread of existing weeds at Williams Hill and the introduction of new weed species. The long-term risk of weed spread and introduction of new weed species will be substantially greater for Alternative B than Alternative A.

Project Design Features pertaining to Noxious and Invasive Plant Species (Weeds) will limit the spread of existing weed species and the introduction of new weed species. The Project Design Features include: 1) monitoring and treatment (herbicide) of weeds, and 2) inspection of equipment and materials for weed seed contamination by the BLM Natural Resource Specialist, prior to approval for import and use on the Project Area.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed, therefore, there would be no change from existing weed conditions. No new disturbances of vegetation or soil would occur.

Cumulative Effects:

Since the impacts related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts on noxious plants.

3.6. Water Resources

A. Current Conditions:

Based on United States hydrography data, there are no perennial or major intermittent creeks on BLM-administered lands in the Williams Hill SRMA.

Habitat in the minor intermittent drainages of the SRMA are composed of seasonally dry creek beds interspersed with seasonal instream pools. No permanent pooling is likely to occur in any of these drainages. No significant presence of vegetation specific to riparian zones is expected to occur in any of the drainages.

Nonetheless, the SRMA is part of the Salinas River watershed which plays an important role in recharging freshwater aquifers, San Antonio Lake, and the Salinas River.

Monterey County's EIR notes the quality of surface and ground water in South County varies but "there is generally very good quality surface water draining from the Santa Lucia Range into the Nacimiento and San Antonio Rivers, and eventually into their reservoirs to supply good quality water into the Upper Salinas River."

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, trails crossing small drainages may meet jurisdictional criteria as waters of the state or waters of the US.

Improvements would be required where the OHV routes passes through drainages that are not currently passable to passenger vehicles. The improvements may consist of grading and placing rock or other means to stabilize the road and allow OHV's across seasonal drainages. The jurisdictional limits of these wash

areas have not been delineated. Depending on the precise location of the jurisdictional limits, grading activities for these improvements could alter the drainage (i.e. 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.

To minimize impacts to jurisdictional waters, streambed avoidance measures could be pursued to ensure that no substantial fill or other streambed alterations occur at the parking area. This entails requiring a jurisdictional delineation at the ephemeral streambed and requiring the OHV route disturbance area to remain outside of the jurisdictional limit of the state or US waters.

B. Effects:

Alternative A:

Under Alternative A, 7.83 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 7.83 miles of new OHV represent the potential for increased sedimentation and pollution into minor intermittent drainages. Alternative A includes 7 identified crossings of minor intermittent drainages. Increased sedimentation would be caused by increased erosion on bare trails which could adversely impact drainages. The direct impacts of construction, and indirect effects of use and maintenance of these crossing are expected to remain within the estimated 12' disturbance area of the OHV routes. Implementing Project Design Features (see Appendix B) to minimize soil erosion will decrease the potential for increased sedimentation in drainages. Project Design Features such as water breaks and armoring intermittent drainage crossing will reduce the downstream impact on the drainage channels during both normal annual precipitation conditions and during storm events. An increase in motorized traffic raises the potential for hydrocarbons (oil, gasoline, diesel, etc) to be spilled onto trail surfaces which could then wash into drainages causing adverse impacts. Trail Condition Evaluation monitoring will be able to detect the presence of Petroleum Contaminated Soil (PCS) and respond with removal prior to any impact to drainages.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 20.96 miles of new OHV routes represent the potential for increased

sedimentation and pollution into minor intermittent drainages. Alternative B includes 14 identified crossings of minor intermittent drainages. The direct impacts of construction, and indirect effects of use and maintenance of these crossing is greater under this alternative, but they are still expected to remain within the estimated 12' disturbance area of the OHV routes. Increased sedimentation would be caused by increased erosion on bare trails which could adversely impact drainages. Implementing Project Design Features to minimize soil erosion will also decrease the potential for increased sedimentation in drainages. Project Design Features such as water breaks and armoring intermittent drainage crossing will reduce the downstream impact on the drainage channels during both normal annual precipitation conditions and during storm events. An increase in motorized traffic raises the potential for hydrocarbons (oil, gasoline, diesel, etc) to be spilled onto trail surfaces which could then wash into drainages causing adverse impacts. Trail Condition Evaluation monitoring will be able to detect the presence of Petroleum Contaminated Soil (PCS) and respond with removal prior to any impact to drainages.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed so there would be no change to water resources. No new ground disturbance would occur so no new impacts or effects on water resources would occur.

Cumulative Effects:

Since the impacts related to the range of alternatives are minor, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable water quality impacts.

3.7. Air Quality and Atmospheric Conditions

A. Current Conditions:

The Monterey Bay and Salinas Valley area is characterized by a Mediterranean climate with warm, dry summers and cool, moist winters. Daily variations in the valley climate are influenced by the interaction between ocean and land air masses that create on-shore (up-valley) winds in the daytime and weak offshore (down-valley) breezes at night. Inversion layers, which tend to aggravate pollution problems created by automobile emissions, are present in the valley a significant part of the year. However, meteorological conditions in Monterey County are generally favorable in terms of maintaining relatively good air quality because onshore winds across Monterey Bay normally bring clean air into the region. Nonetheless, degraded air quality may sometimes be experienced due to the dust and odor may be experienced around agricultural operations or other localized sources.

At the National Climate Data Center (NCDC) station in Monterey, on the basis of a 50-year record, the average annual temperature is 57° F, and the average annual precipitation is 20 in., occurring as rain during the winter and early spring. However, the distribution of precipitation across the area is dependent on the topography and the prevailing winds, with an increase in precipitation concomitant to an increase in altitude. Precipitation also decreases with latitude from north to south in the study unit. Fifty-year climate records from NCDC stations from Santa Cruz to Paso Robles show that the mean annual precipitation decreases from 31 in. in Santa Cruz in the north, to 13 in. in Paso Robles in the south (USGS 2005).

Annual precipitation for Central California from 2007-2008 was considerably lower than the normal at 66%. Whereas, annual precipitation from 2008-2009 was about 95% of the normal average rainfall.

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of a project's air quality impacts. These people include children, older adults, those with preexisting respiratory or cardiovascular illness. Sensitive receptors in the region are limited to a local school in Lockwood, and a church near US 101 in Jolon, California. Studies of projected highway traffic patterns suggest these sensitive receptors are buffered from emissions along this major transportation route, so the potential for effects on sensitive receptors to pollutant concentrations from construction-related and operational impacts of the Williams Hills SRMA is less than significant.

B. Effects:

At the Federal level, regulatory responsibilities for air quality lie with the U.S. Environmental Protection Agency (EPA), Region 9. At the state level, regulatory responsibility is delegated to the California Air Resources Board (CARB). Oversight authority for air quality matters rest at the county level with the Monterey Bay Unified Air Pollution Control District (MBUAPCD).

EPA uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). One set of limits (primary standard) protects health; another set of limits (secondary standard) is intended to prevent environmental and property damage. States may have standards that are more restrictive than the Federal thresholds, but they cannot be less restrictive.

As a Federal agency, BLM is required to comply with all applicable air quality laws, regulations, standards and implementation plans. The BLM Manual 7300-Air Resource Program Management indicates responsibilities and requirements to analyze all actions for conformity to air quality plans through its permitting programs under the Clean Air Act, as amended (42 USC 7401 et seq.).

For the purpose of monitoring and regulating air quality, the state of California has been divided into 15 air basins based on meteorological and geographic similarities. Monterey County is in the North Central Coast Air Basin. A geographic area that meets or exceeds the primary standard is called an attainment area; areas that do not meet the primary standard are called nonattainment areas. (<http://www.epa.gov/air/caa/peg/>).

Designations in relation to the State standards are made by the CARB while designations in relation to the National standards are made by EPA. State designations are reviewed annually while the National designations are reviewed when either the standards change, or when an area requests that they be re-designated due to changes in the area's air quality. Designations are made by air basin and in some cases designations are made at the county level. Designations are made by pollutant according to the following categories:

Attainment – Air quality in the area meets the standard.

Nonattainment Transitional – Air quality is approaching the standard (State only).

Nonattainment – Air quality in the area fails to the applicable standard.

Unclassified – Insufficient data to designate area, or designations have yet to be made.

Table 3-5 summarizes the attainment status of Monterey County with regard to the NAAQS and CAAQS. Nonattainment designations are of most concern because they indicate that unhealthy levels of the pollutant exist in the area, which typically triggers a need to develop a plan to achieve the applicable standard.

Table 3-5. Federal and State Attainment Status for the Monterey County Portion of the North Central Coast Air Basin

Pollutant	NAAQS	CAAQS
O3	Unclassified/Attainment	Nonattainment
CO	Unclassified/Attainment	Attainment
PM2.5	Unclassified/Attainment	Attainment
PM10	Unclassified	Nonattainment
NO2	Unclassified/Attainment	Attainment
SO2	Unclassified	Attainment
Pb	Unclassified/Attainment	Attainment

Source: California Air Resources Board 2013b.

Notes:

CAAQS = California ambient air quality standards.

CO = carbon monoxide.

NAAQS = national ambient air quality standards.

NO₂ = nitrogen dioxide.

O₃ = ozone.

PM₁₀ = particulate matter less than 10 microns in diameter.

PM_{2.5} = particulate matter less than 2.5 microns in diameter.

Pb = lead

SO₂ = sulfur dioxide

The Monterey Bay Air Resource District (MBARD) updates their Air Quality Management Plan (AQMP) every three years. The AQMP adopted on March 15, 2017 is an update based on a review of the time period 2012-2015. It shows that the region continues to make progress toward meeting the State ozone standard. The District's focus continues to be on achieving the 8-hour component of the California ozone standard as the region has already attained the 1-hour standard.

A review of the monitoring data from 2013-2015 indicates there were fewer exceedance days in that 3-year time period (9 days) compared to 2006-2008 (63) as well as the 2009-2011 (16) period used in the prior AQMP.

The report shows area-wide sources are the main contributor to ROG emissions in the region while mobile sources emissions continue to dominate the District's NO_x emissions inventory. As found in historical ozone transport studies, ozone concentrations at the Pinnacles National Park monitor are significantly impacted by Bay Area NO_x emissions. Nonetheless, the primary source of NO_x emissions are from mobile sources, so the District is focused on mobile source grant programs which reduce NO_x from both on road and off road mobile sources. Additionally, NO_x emissions from the upwind San Francisco Bay Area and San Joaquin Air Basins are forecast to decline through the year 2030. According to MBARD, this decline should help reduce the number of exceedances at Pinnacles National Park, which is heavily impacted by ozone transport from these upwind regions and is the primary reason the NCCAB is nonattainment for the State ozone standard.

The existing air quality conditions in the vicinity of Williams Hill are better characterized by the monitoring data collected in the region. The nearest monitoring stations in King City was selected to present air quality of the project vicinity and southern Monterey County near the US 101 transit corridor. The monitoring station in King City, CA is approximately 20 miles north of the Williams Hill SRMA. Table 3-6 summarizes air quality monitoring data from the King City monitoring station from 2011–2013.

Table 3-6. Ambient Air Quality Monitoring Data from the King City, Stations (2011–2013)

Particulate Matter (PM₁₀) (µg/m³)	2011	2012	2013
National maximum 24-hour concentration	76.8	97.4	78.2
State maximum 24-hour concentration	19.0	--	--
Annual average concentration (CAAQS = 20 µg/m ³)	23.9	24.3	27.7
Number of days standard exceeded a NAAQS 24-hour (>150 µg/m ³) (expected)	--	0.0	0.0
CAAQS 24-hour (>50 µg/m ³)	0	--	--

Particulate Matter (PM2.5) (µg/m3) (King City)	2011	2012	2013
National maximum 24-hour concentration	19.7	16.2	19.7
24-hour Standard 98th Percentile	13.6	13.2	15.8
National annual average concentration	6.4	5.6	6.7
State annual average concentration	6.4	5.6	6.7
Number of days standard exceeded a NAAQS 24-hour (>35 µg/m3)	0	0	0

Sources: California Air Resources Board 2014; U.S. Environmental Protection Agency 2014.

Notes:

-- = Insufficient data available to determine the value.

CAAQS = California ambient air quality standards.

NAAQS = national ambient air quality standards. ppm = parts per million.

µg/m3 = micrograms per cubic meter.

Climate Change

Climate change refers to any significant change in measures of climate (e.g., temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (such as changes in ocean circulation); human activities that change the atmosphere's composition (such as burning fossil fuels) and the land surface (such as urbanization) (IPCC 2007).

Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The primary greenhouse gases that enter the atmosphere as a result of anthropogenic activities include carbon dioxide (CO²), methane (CH⁴), nitrous oxide (N²O), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These synthetic gases are powerful GHGs that are emitted from a variety of industrial processes.

Ongoing scientific research has identified the potential impacts of anthropogenic greenhouse gas (GHG) emissions and changes in biological sequestration due to land management activities on global climate. Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia, recent industrialization and burning of fossil carbon sources have caused CO²e concentrations to increase dramatically, and are likely to contribute to overall global climatic changes. The Intergovernmental Panel on Climate Change (IPCC 2007) recently concluded that "warming of the climate system is unequivocal"

and “most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”

With respect to climate change, climate plays a significant role in the production of ozone. Sunlight and high temperatures are a major catalyst in reactions between VOCs and NO_x in the production of ozone. With an increase in overall temperature, we can expect to have more hot days and less precipitation that will lead to a higher production of ozone.

The primary sources of greenhouse gases associated with OHV recreation fall into the following classifications¹:

Direct Emissions

Combustion Sources – includes stationary devices (boilers, heaters, internal combustion engines, flares, burners) and mobile devices (barges, railcars, and trucks for material transport; vehicles for personnel transport; forklifts, construction equipment, etc.)

Indirect Emissions

Emissions associated with OHV recreation and maintenance operations, such as vehicle miles travelled (VMT) to reach the SRMA and VMT on the proposed OHV route network at full build out.

Direct and indirect GHG emissions may occur from various sources during each phase of development and operations. During development, emissions are generated from road construction. GHG emissions for these phases are mainly CO₂ emissions from fuel in internal combustion engines.

While global and national GHG inventories are established, regional and state specific inventories are in varying levels of development. Quantification techniques are in development – for example, there is a good understanding of climate change emissions related to fuel usage. Analytical tools necessary to quantify climatic impacts at the project level are presently unavailable. As a consequence, impact assessments of specific effects of anthropogenic activities are difficult to determine.

Alternative A:

This alternative would have reduced total direct air pollutant emissions in comparison with Alternative B because there are less OHV routes being considered. However, the BLM anticipates that projected increases in annual visitor use (number of visitors coming to SRMA) and the amount of activity by off-road

¹ American Petroleum Institute, Compendium of Greenhouse Gas Emissions Methodologies For The Oil and Natural Gas Industry; August 2009.

recreational vehicles (e.g., vehicle miles traveled) would increase. In addition, because of the expanded facilities, it is anticipated that maintenance of recreational trails would increase proportionally. These increased activity levels would result in an increase in the SRMA's annual emissions from visitor vehicles and OHVs. However, based on the anticipated level of facilities development associated with the Alternative A, it is highly unlikely that the operational emissions associated with implementation would exceed the surrogate thresholds of significance,

Alternative B:

The construction of OHV routes and staging areas would involve surface grading and development of facilities at proposed 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, PM_{2.5}, and sulfur oxides. Daily air pollutant emissions based on USEPA emission factors and methods from the proposed construction and operational activities for both alternatives are identified in the table below.

Table 3-7. Average Daily Construction Emissions (lbs/day)

VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
1.80	12.65	18.29	0.02	10.52	2.12

Average 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

Truckloads of aggregate imported/exported - vary

Water truck to water site and access roads - vary

Operations and Maintenance

With respect to indirect effects on emissions, vehicles accessing the proposed trails are expected to come from beyond the local area. However, these recreationalists are assumed to already make vehicle trips to access similar OHV recreation opportunities in the region. Therefore, any new trips to the proposed facilities are considered to offset existing trips. The increase number of OHV recreation visitors to the Williams Hill SRMA would result in new mobile emissions from OHV use on the proposed routes.

Routine trail maintenance would also be performed which would require occasional vehicle access to but the daily emissions associated with maintenance and operations on up to 20 miles of OHV routes are expected to be negligible. Increased activity levels would result in a greater increase in the SRMA's annual emissions from visitor vehicles and OHVs compared to Alternative A. However, it is still unlikely that the operational emissions associated with Alternative B would exceed thresholds of significance, As a result, this impact related to a potential violation of an air quality standard or substantial contribution to an air quality violation would be less than significant.

Conformity:

The USEPA rules require Federal agencies to determine whether a proposal conforms to the existing State Implementation Plan (SIP). USEPA rules state that an analysis is not necessary when the total emissions do not exceed de minimis levels, comply with the SIP and do not exceed 10% of the regional emissions. BLM also requires best management practices (BMPs) at the construction stage to ensure that PM10 and PM2.5 emissions are maintained at de minimis levels. The BLM's emissions estimates are based on similar analysis using CalEEMod for construction of staging areas and trails. Based on the proposed construction of OHV facilities, the anticipated increase in visitor use, and future maintenance of OHV routes the projected emissions would be well below the applicable thresholds, so additional project analysis for General Conformity is not required.

No Action Alternative:

Under this alternative, there would be no change from existing conditions related to air quality.

Cumulative Effects:

Since the emissions related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable air quality impacts.

3.8. Cultural Resources

A. Current Conditions:

Rancho San Lucas is on private lands adjacent to Williams Hill SRMA near Barrell Canyon. Rancho San Lucas was added to the National Register of Historic Places on May 6, 1991.

While the region has experienced intensive cultural and archeological research regarding the prehistoric record, the research focuses on areas with urban development and along the coastline. Regardless of this

intensity of research, there are significant gaps in geographic coverage and knowledge in this area, including Williams Hill. Most culture-historical reconstructions for this region are predicated mainly on data from the coastal strip. Based on what is currently known from the research conducted in Williams Hill and in the area, potential cultural resources could be lithics, cobble/cobble-core tools, *Olivella* beads, *Halitosis* beads or disks, and mortar/pestles to name a few (USDI).

Cultural resources that may occur in the area of potential effect include isolated artifacts and Native American traditional cultural properties and other areas of special interest.

B. Effects:

Cultural resources are non-renewable in the sense that once they are gone or disturbed, the conditions, context, and resource cannot be replaced. For this reason, cultural resources are sensitive to external factors, especially human created. Within areas with OHV use, threats to cultural resources come in two-fold: during the initial ground disturbance and subsequently during visitor use

During the initial ground disturbance, unknown cultural resources can be damaged and disturbed. Archeological sites are sensitive to construction equipment and general ground disturbance. Disruption caused to cultural resources could include scattering artifacts across the landscape or excavating through human altered landscapes and features. To reduce the potential to cause these negative impacts, BLM Class III Inventories, consisting of a pedestrian survey for cultural resources are in the process of being conducted for areas that are proposed for Alternatives A and B. If cultural resources are found during these surveys, the trail alignment will be altered to prevent a negative impact to the resource.

The potential effects associated with visitor use of the trails can be from several factors. With the additional trail access provided under alternative A and B, comes with it an increased access to areas that have historically been inaccessible to visitors due to vegetation and terrain. With this spreading of visitors into new terrain comes the increased potential to create easier access to cultural resources that were previously protected from looting and vandalism (Sampson; Wildesen).

Alternative A: Under Alternative B, 7.83 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 7.83 miles of new OHV routes represent the potential for direct effects on cultural resources. Alternative A includes 7 identified crossings of minor intermittent drainages. The potential for discovery of unknown resources increases where trails cross drainages but implementation of Project Design Features will decrease the potential for adverse impacts.

Vehicle barriers and clear signage along the proposed OHV routes would reduce potential adverse effects on known historic resources on private property adjacent to the BLM public lands, including the Rancho San Lucas site near Barrell Canyon.

Alternative B: Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 20.96 miles of new OHV routes represent the potential for direct effects on cultural resources. Alternative B includes 14 identified crossings of minor intermittent drainages. The potential for discovery of unknown resources increases where trails cross drainages but implementation of Project Design Features will decrease the potential for adverse impacts.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed so there would be no change from existing cultural resource conditions. No new ground disturbance would occur so no new impacts or effects on cultural resources would occur.

Cumulative Effects:

Since the impacts related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts to cultural resources.

3.9. Paleontological Resources

A. Current Conditions:

Williams Hill is underlain by late Miocene-aged, diatomaceous, marine shale of the Monterey Shale Formation (Dibblee and Minch 2006a,b,c,d). The shale is rich in microfossils (foraminifera), but poor in macrofossils (bivalves). Evaluation of geologic surveys (Durham 1965) and paleontological collections (UCMP 2021) did not reveal the presence of vertebrate fossils or fossils of other scientific significance at Williams Hill. The Monterey Shale Formation of Williams Hill is assigned a Potential Fossil Yield Class (PFYC) of 3 (Moderate), based on the presence of microfossils and bivalve macrofossils, but apparent complete lack of vertebrate fossils or fossils of other scientific significance.

B. Effects:

Alternative A:

Under Alternative A, 7.82 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 7.82 miles of new OHV routes represent long-term (semi-permanent), localized

impact to soil and bedrock, since vegetation, soil, and soft shale bedrock is bladed off (side cast) during route construction. Bare surfaces of trails could erode and result in further erosion damage of vegetation, soil, and bedrock both above and below the trail. Project Design Features for trails should minimize soil and bedrock erosion. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion. The Monterey Shale Formation of Williams Hill is not suspected to contain vertebrate fossils or fossils of other scientific significance (PFYC 3). Therefore, neither initial construction, nor long-term use and maintenance of the OHV routes, is anticipated to have any adverse effect on paleontological resources of these types.

Alternative B:

Under Alternative B, 20.96 miles of new OHV routes would be constructed, compared to the 15.19 miles of existing OHV routes. The 20.96 miles of new OHV routes represent long-term (semi-permanent), localized impact to soil and bedrock, since vegetation, soil, and soft shale bedrock is bladed off (side cast) during route construction. The effects to vegetation, soil, and bedrock will be substantially greater for Alternative B than Alternative A. Bare surfaces of trails could erode and result in further erosion damage of vegetation, soil, and bedrock both above and below the trail. Project Design Features for trails should minimize soil and bedrock erosion. Additionally, the Soil Conservation Plan and Trail Condition Evaluation monitoring will be used to detect any problems with soil erosion, and plan for corrective action to prevent further erosion. The Monterey Shale Formation of Williams Hill is not suspected to contain vertebrate fossils or fossils of other scientific significance (PFYC 3). Therefore, neither initial construction, nor long-term use and maintenance of the OHV routes, is anticipated to have any adverse effect on paleontological resources of these types.

No Action Alternative:

Under the No Action Alternative, no new OHV Routes or Staging Areas would be constructed, therefore, there would be no change from existing vegetation, soil, and bedrock disturbance conditions. No new disturbances of vegetation, soil, or bedrock would occur, therefore, there would be no effect on paleontological resources.

Cumulative Effects:

Since the impacts related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts to paleontological resources.

3.10. Recreation Resources

A. Current Conditions:

The public lands were designated a Special Recreation Management Area (SRMA) under the Approved Resource Management Plan for the Southern Diablo Mountain Range and Central Coast of California (BLM 2007). Public lands surrounding Williams Hill receive moderate visitor use for motorized and non-motorized recreation opportunities on 15 miles of designated open routes.

The BLM's adjusted visitor totals for 2021 suggest there are approximately 162 average daily trips to the Williams Hill SRMA. Assuming there are 2.4 people per vehicle the total use is almost 60,000 annual visitors. A majority of these recreationists visit the developed campground at Williams Hill. The number of visitors to Williams Hill has increased by 120% over the last five years (2017 to 2021). This trend is partially due to increased awareness of recreation opportunities at Williams Hill through social media, societal changes caused by the Covid-19 pandemic, and the displacement of recreationists from other recreation areas due to wildfires. As the number of recreationists at Williams Hill has increased, this has resulted in more reports of conflicts between different user groups at this area. Visitation to Williams Hill is highest during the Spring, Winter and Fall seasons. The table below shows the number of visitors to Williams Hill has nearly doubled over the past five years, including a substantial increase in motorized OHV recreation users. This increase in visitors is partially explained because of displacement from popular OHV recreation areas due to wildfires and other restrictions.

Table 3-8 Visitor Use Totals

Year	2017	2018	2019	2020	2021
Daily	74	83	89	138	162
Annual	26,863	30,218	32,384	50,376	59,204

Motorized recreation, target shooting, and camping are primary recreation activities at Williams Hill, while hunting, hiking, bird watching are less popular (but still frequent) activities. There is a BLM campground that was established in 2009 that sees regular use from travelers looking for free alternatives to crowded fee recreation areas. The free Williams Hill campground offers seven developed overnight campsites with level parking pads for small to moderately-sized recreational vehicles, fire rings, shade structures, picnic benches, as well as vault toilets and an informational kiosk. There is no electricity, no potable water, and no trash collection. Dispersed camping is also a popular activity at Williams Hill. All forms of camping have seen large increases in visitation over the last five years at Williams Hill.

Recreational target shooting is another popular activity at Williams Hill. A particularly popular site for this activity is the shale quarry located on the west side of W1 on the northern half of the property. During high fire danger, the BLM Central Coast Field Office closes its lands (including Williams Hill) to recreational target shooting to minimize the potential for new fire starts from heated bullet fragments. While a popular activity, the BLM has not observed a significant increase in visitation for this activity over the last five years.

B. Effects:

The development of OHV recreation opportunities under Alternative A and B is not likely to 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 because the proposed routes and trails are located on BLM public lands in the Williams Hills SRMA and there are no shared boundaries or regional trail connections being considered under the range of alternatives.

Additional OHV recreation opportunities at Williams Hill SRMA could result in increased public service calls related to vehicle accidents, search-and rescue, wildfire, and law enforcement. However, these impacts are anticipated to be minor because the proposed staging areas are designed for family-oriented (i.e. amateur) OHV recreation to reduce the potential for adverse impacts to public safety and emergency services. The impacts of increased OHV recreation opportunities on public services would be greater under Alternative B than Alternative A due to the increase in annual visitors that BLM expects from the current use levels. The BLM has, and continues to, partner with CalFire, Monterey County and others to address public safety concerns. The BLM anticipates increases in visitation under all alternatives as shown in the table below.

Table 3-9 Projected Visitor Use Totals by Alternative

Management Alternative	Current visitation	Anticipated annual growth of visitation	Estimated Visitors in 2032
No Action Alternative	59,204	2.5%	75,786
Alternative A	59,204	5%	96,437
Alternative B	59,204	7.5%	122,021

The data includes visits for other purposes (i.e. local operators and comm. site techs) which are not going to multiply at the same rate. Also, the annual growth rate over a 10-year period could be lower based on CA population trends and limits on OHV opportunities at Williams Hill SRMA.

Alternative A:

This alternative proposes approximately 8 miles of new OHV trails, 1 large staging area with a practice track, and 3 additional smaller staging areas. Given the high demand for OHV riding areas in the region and the development of additional trails, visitor usage is likely to increase 5 percent per year as a result of increased motorized recreation opportunities. This would equate to approximately 96,437 visitors annually after 10 years. The increased visitation would be primarily for motorized recreation and camping.

Increased visitor use would result in a higher impact on roads and trails, however the addition of 8 miles of new trails would spread use of motorized travel across a larger network of routes. The addition of these 8 miles of trails would also reduce the occurrences of private property trespass by creating looped routes. Current existing routes have no looped option and terminate at or near private property boundaries.

Existing routes are full bench roads at a width of 16-20 ft which allows for good line of sight when mitigating turns or approaching oncoming vehicles. New trails will be a significant smaller width and directional travel on routes could help reduce conflicts between mixed OHV users.

The BLM is not proposing to expand the Williams Hill campground under this alternative. As the number of campers increase, this will result in more dispersed camping because the developed campground will be more frequently at capacity.

As visitation increases, potential increases for conflict among users. However, the establishment of staging areas for motorized recreation and the concentration of motorized recreation opportunities in the northern half of the property will minimize the potential for conflict between campers and quiet recreationists and motorized recreationists. The establishment of a non-motorized trail from the campground under this alternative will provide a new recreation opportunity for those seeking a quiet experience.

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 use. In efforts to reduce existing and future unauthorized uses, the BLM would use measure to limit the type of OHV's that can access the trails where feasible. Measures to block access shall include fencing, gates, or natural barriers using either rock or vegetation are an effective way to minimize potential adverse impacts.

Alternative B:

In addition to Alternative A, this alternative proposes approximately 21 miles of new OHV trails, 1 large staging area with a practice track, and 3 additional staging areas. Given the additional miles of trail development and facilities, visitor usage is likely to increase by 7.5 percent per year. This would equate to

approximately 122,021 visitors annually after 10 years. The increased visitation would be primarily for motorized recreation and camping.

Increased visitor use would result in a higher impact on roads and trails, however the addition of 21 miles of new trails would spread use of motorized travel across a larger network of routes. The addition of these 21 miles of trails would also reduce the occurrences of private property trespass by creating looped routes. Current existing routes have no looped option and terminate at or near private property boundaries. This alternative includes a South Tower re-route, which would help mitigate private property trespass near the Williams Hill communications tower site, by offering an alternate loop option (see Appendix A).

Existing routes are full bench roads at a width of 16-20 ft which allows for good line of sight when mitigating turns or approaching oncoming vehicles. New trails will be a significant smaller width and directional travel on routes could help reduce conflicts between mixed OHV users.

The BLM is proposing to expand the Williams Hill campground under this alternative, which will expand camping capacity in the area. However, as the number of campers increase, this will result in more dispersed camping because the developed campground will be more frequently at capacity even with this expansion.

As visitation increases, potential increases for conflict among users. The establishment of motorized recreation opportunities on both the north and south side of Williams Hill could displace campers seeking a quiet recreation experience.

No Action Alternative:

This alternative would result in a continued increase in use due to the demand for OHV recreation areas in the region and a slight increase on impacts to the existing campground and route network. Visitor usage is expected to increase by 2.5 percent per year, resulting in 75,786 visitors after 10 years. As visitation increases on the existing route system, instances of trespass will increase and crowding of existing trails will occur. The lack of OHV staging facilities will result in dispersed staging and the use of the Williams Hill campground for staging. This could result in increasing conflict between motorized recreationists and quiet recreationists.

As the popularity of camping continues to grow under this alternative, more and more camping will be dispersed across the area.

Cumulative Effects:

Cumulative development projects within the area have the potential to create environmental impacts to surrounding recreation areas. The proposed alternatives would result in beneficial recreational effects by designating OHV recreation trails and developing additional staging areas for other dispersed recreational uses. Therefore, the menu of options being considered would not contribute to adverse cumulative impacts to recreational facilities.

3.11. Transportation and Travel Management

A. Current Conditions:

The BLM-administered lands are generally accessed from U.S. Highway 101 near San Ardo, California. The County road that provides physical access to the SRMA is Lockwood San-Ardo Road. This road sees light use from residential traffic and increasing use for recreation and site seeing. Under wet conditions, this road and others in Williams Hill can be dangerous for motorized vehicles.

B. Effects:

Alternative A:

Additional OHV recreation opportunities at Williams Hill SRMA could increase the number of vehicles heading to the SRMA from CA Highway 101 and Lockwood-San Ardo Rd. However, the impacts on transportation and traffic associated with staging areas is anticipated to be minor due to the modest increase in annual visitors that BLM expects from the current use levels under Alternative A.

Alternative B:

Under Alternative B, Staging Area 1 would have more frequent vehicles turning (or entering/exiting) at the intersection of Lockwood San Ardo Rd. and the existing quarry road. Adequate signage and roads designed to accommodate turning radius for all size vehicles on routes that connect with the County-road system would ensure the addition of staging areas would not result in substantial safety risks. Impacts to the existing route system are anticipated to be greatest under this alternative.

No Action Alternative:

Impacts to the route system are expected to be the least under this alternative as the increase in visitation is expected to be lower than the other alternatives.

Cumulative Effects:

Cumulative development projects within the area have the potential to generate new traffic volumes on the circulation system. However, the proposed 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 alternatives would not contribute to adverse cumulative traffic or transportation impacts.

3.12. Lands and Realty

A. Current Conditions:

Pursuant to Title V of FLPMA, communication sites and many other common public land uses are authorized under BLM's right-of way (ROW) policy. There are currently two communication sites on BLM public lands at Williams Hill operated by American Tower Company and Union Pacific Railroad, respectively. The US Army administers another communication site on private lands in the southern portion of the project area. All these facilities are accessed by routes W1 and W9.

South County land use is characterized by extensive areas of low intensity uses, dominated by grazing, dryland and irrigated farming, watershed, recreation, and small communities. The bulk of the industrial use in South County is due to the presence of extensive oil extraction operations near San Ardo. Much of this area is used in conjunction with grazing (SCAP, pg. 72).

The South County planning area is the largest of eight planning areas identified in the Monterey County General Plan. The South County planning area also has the lowest population density: 2.8 persons per square mile in 1980, compared with 87 persons per square mile countywide. It should be noted that 68 percent of South County is devoted to agriculture and 28 percent is under public land ownership. Thus, the density throughout South County is not uniform (SCAP, pg. 27).

Approximately 28% of South County is publicly owned and is generally not subject to private development. Most of South County's public lands are in Federal ownership -- 212,089 acres out of 225,519. The remainder is owned by the Monterey County Flood Control and Water Conservation District; these 13,430 acres includes San Antonio Reservoir and a large area around the reservoir (SCAP, pg. 32). It should also be noted that due to the presence of military installations, leasing arrangements, and other access restrictions, not all land in public ownership is available for use by the general public.

The 2010 EIR identifies the BLM-administered lands in the region as "Unimproved lands and watershed areas", which are generally vacant and which may serve as valuable watershed. Unimproved lands and watershed areas total 38,217 acres or almost 5% of South County. Watershed uses are particularly important

in this region due to the location of San Antonio Reservoir. This water body is the fourth largest land use in the area, totaling 5,687 acres or about 15% of the unimproved lands and watershed areas.

Monterey County General Plan Goal #35 recognizes the significance of unimproved lands and watershed areas in protecting and maintaining the County's natural resources and rural character and places emphasis on protection of the County's critical watersheds. As such, the General Plan states that the County shall ensure that land uses in and surrounding critical watershed areas will not compromise the important resource value of these areas; and any development in critical watershed areas shall be designed, sited, and constructed in a manner which minimizes negative effects on the watershed.

Public lands at Williams Hill are surrounded by private lands primarily used for ranching and agricultural purposes. As visitation to Williams Hill has increased, the BLM have received additional reports of trespass and vandalism on private lands from neighboring landowners.

B. Effects:

Alternative A and Alternative B:

The range of alternatives would have no effect on land use and planning in southern Monterey County. The Williams Hill SRMA is in a sparsely populated rural area near San Ardo, California and Lockwood, California. The applicable land use plans, policies, or regulation of the BLM and Monterey County both promote the open space values and recreation opportunities in the region. No project design features are needed.

Alternatives A and B will increase the number of visitors to Williams Hill, which could lead to additional impacts to neighboring private landowners. However, the construction of loop trails and installation of new vehicle barriers and gates should mitigate this impact.

No Action Alternative:

Visitation to Williams Hill under the No Action Alternative is anticipated to continue to increase. With the existing road/trail system largely consisting of routes that terminate at the public/private land boundary, instances of trespass and vandalism are expected to continue to increase.

Cumulative Effects:

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.

3.13. Environmental Justice and Socioeconomic Conditions

A. Current Conditions:

The requirements for environmental justice review during the environmental analysis process were established by EO 12898 (February 11, 1994). That order declares that each Federal agency is to identify “disproportionately high and adverse human health or environment effects of its programs, policies, and activities on minority populations and low-income populations.”

BLM’s 2006 PRMP/FEIS (Table 3.15-5) describes the results of the 2000 U.S. Census with regard to ethnicity and poverty in the counties that make up the Central Coast and Diablo Range analysis areas. Most of the counties share the same general ethnic patterns that the State of California exhibits with Caucasians/whites in the majority, a very large Hispanic community, ranging from 25 to 50 percent of the population; distinct minority populations of African Americans, generally comprising less than 5 percent of the population; Asian/Pacific Islanders, comprising between 5 and 10 percent of the population; and a very small Native American population.

Table 3.15-5 of the 2006 PRMP/FEIS provides additional data regarding ethnicity and poverty levels in Monterey and Fresno counties. The percent of the population with personal income below the poverty level is extremely high in Fresno County, over 20 percent of the population. Whereas, the percent of the minority populations with personal income below the poverty level in Monterey County is approximately 13.5 percent. With the very low and declining real per capita income shown in 2006 PRMP/FEIS (Table 3.15-4), these poverty levels are not surprising.

The majority of Monterey County and San Luis Obispo County residents are located centrally in the urban and residential development areas. Private land use in the Williams Hill region is predominately agriculture and ranching, but there is also an abundance of public lands reserved for military, open space, and a variety of recreation opportunities. Military installations include Fort Hunter-Liggett and Camp Roberts. The San Antonio Reservoir and Lake Nacimiento are both used widely for recreational boating purposes, while Los Padres National Forest supports (wilderness) hiking, camping, and other uses.

The small city of San Ardo, CA has a 2020 population of 543. Its population has increased by 5.03% since the most recent census, which recorded a population of 517 in 2010, but projections suggest slow population decline for San Ardo. The city of Paso Robles, CA approximately 40 miles south of San Ardo is estimated to have a 2022 population of approximately 32,200. Paso Robles is currently growing at a rate of 0.06% annually and its population has increased by 8.12% since the most recent census, which recorded a population of 29,793 in 2010 (World Population Review, 2022).

The BLM used the Economic Profile System (EPS), created by Headwaters Economics, to evaluate socioeconomic statistics from federal data sources, including the U.S. Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics (Headwaters 2020). The EPS allows BLM to compare socioeconomic indicators of Monterey and San Luis Obispo counties to the non-metropolitan (rural) populations of California.

The two counties combined are estimated to have a population of approximately 713,155 (Headwaters 2020). A brief outline of other information provided in the EPS reports is described below, followed by a “Summary Overview” table that compares the socioeconomic statistics for Monterey County and San Luis Obispo County, the two counties combined, and non-metropolitan communities of California.

Standard measures of growth and decline are population, employment, and real personal income. Trends indicate the population, employment, and real personal income have increased at about the same rate as much of rural California from 1970 – 2020 when the counties are combined. However, the data suggests Monterey County population is increasing slower than other rural areas, while population in San Luis Obispo has increased at a much rate. Long-term, steady growth of population, employment, and real personal income is generally an indication of a healthy, prosperous economy. Growth can benefit the general population of a place, especially by providing economic opportunities, but it can also stress communities and lead to income stratification.

Monterey County's estimated population is 434,394 with a growth rate of 4.33% (18,021) since the 2010 United States census data was collected. San Luis Obispo County's estimated population is 282,382 with a growth rate of 4.66% (12,580) since the 2010 United States census data was collected.

If the population growth trend in this region continues for the next 10 years, Monterey and San Luis Obispo counties could see up to 25,000 additional residents in rural and urban locations during the life of this plan (World Population Review, 2022).

Government is a major employer due to the presence of significant public assets, such as military lands at Fort Hunter Liggett and Camp Roberts, and other government facilities and programs operated by the U.S. Forest Service. Changes in government employment tend to track population trends. As a result, the county and city governments are expected to account for the majority of future job growth in the government sector as additional services are needed.

Various components of the economy are typically associated with the use of public lands, including timber, mining and agriculture, and industries that include travel and tourism. However, there are no reasonably foreseeable resource extraction operations based on the lack of commercial production potential, so timber

and mining are not affected. On the other hand, travel and tourism and agriculture are prevalent in southern Monterey County as reflected in the percent of employment in both these sectors, similar to other rural parts of the State.

It is important to understand the relative size of sectors to put the commodity related economy into perspective. For example, decisions that permit (or restrict) recreation activities have a higher chance of impacting a county with a high percentage of its employment in the commodity sectors. Based on the data it is clear that tourism and recreation continue to stimulate local employment. Communities surrounding Williams Hill SRMA can benefit directly from visitors who spend money in rentals, restaurants, gift shops, and elsewhere. Tourism can also help communities retain and attract capital and spur transitions to more diverse economies.

At 8,500 acres, the Williams Hill SRMA accounts for 0.004% of the entire County. As a result, actions on these BLM lands are not likely to affect the overall economy. On the other hand, the high percent of federal lands in Monterey County indicates recreation and tourism related to other federal lands, including Fort Ord National Monument and Pinnacles National Park, do supplement economic growth. Presumably, since the U.S. Forest Service lands are also managed primarily for their non-commercial values (i.e., scenery, wildlife, recreation), the economic contribution of resource extraction from federal lands to commodity sectors described in the EPS Summary Report is negligible.

B. Effects:

Alternative A and Alternative B:

The range of alternatives would have no effect on environmental justice communities in southern Monterey County. The Williams Hill SRMA is in a sparsely populated rural area near San Ardo, California and Lockwood, California. The applicable land use plans, policies, or regulation of the BLM and Monterey County both promote the open space values and recreation opportunities in the region. No project design features are needed.

No Action Alternative: Visitation to Williams Hill under the No Action Alternative would continue to increase but no disproportionate adverse impacts to low-income or minority populations are anticipated.

Cumulative Effects:

Since the impacts related to the range of alternatives are negligible, the menu of options being considered is not expected to create or substantially contribute to cumulatively considerable impacts to environmental justice and socioeconomic conditions.

4. Tribes, Individuals, Organizations, or Agencies Consulted:

There are no Federally recognized Tribes with ties to the Williams Hill area. The BLM contacted several non-Federally recognized tribes, organizations and individuals during public scoping. The BLM will continue to engage with these organizations throughout this planning process.

Name	Purpose	Findings & Conclusions
Salinan Nation Cultural Preservation Association	Coordination	No response
Salinan Tribe of Monterey, San Luis Obispo and San Benito Counties	Coordination	No response
Salinan Tribe	Coordination	No response
Xolon Salinan Tribe	Coordination	No response
Esselen Tribe of Monterey County	Coordination	No response

5. List of Preparers

Name	Title
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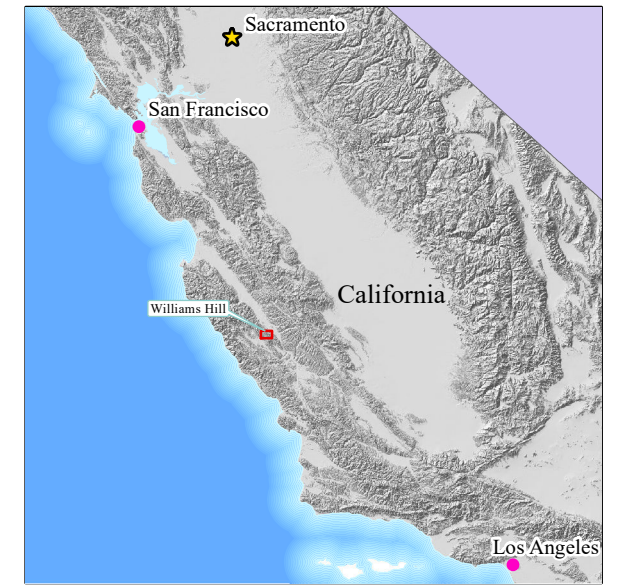
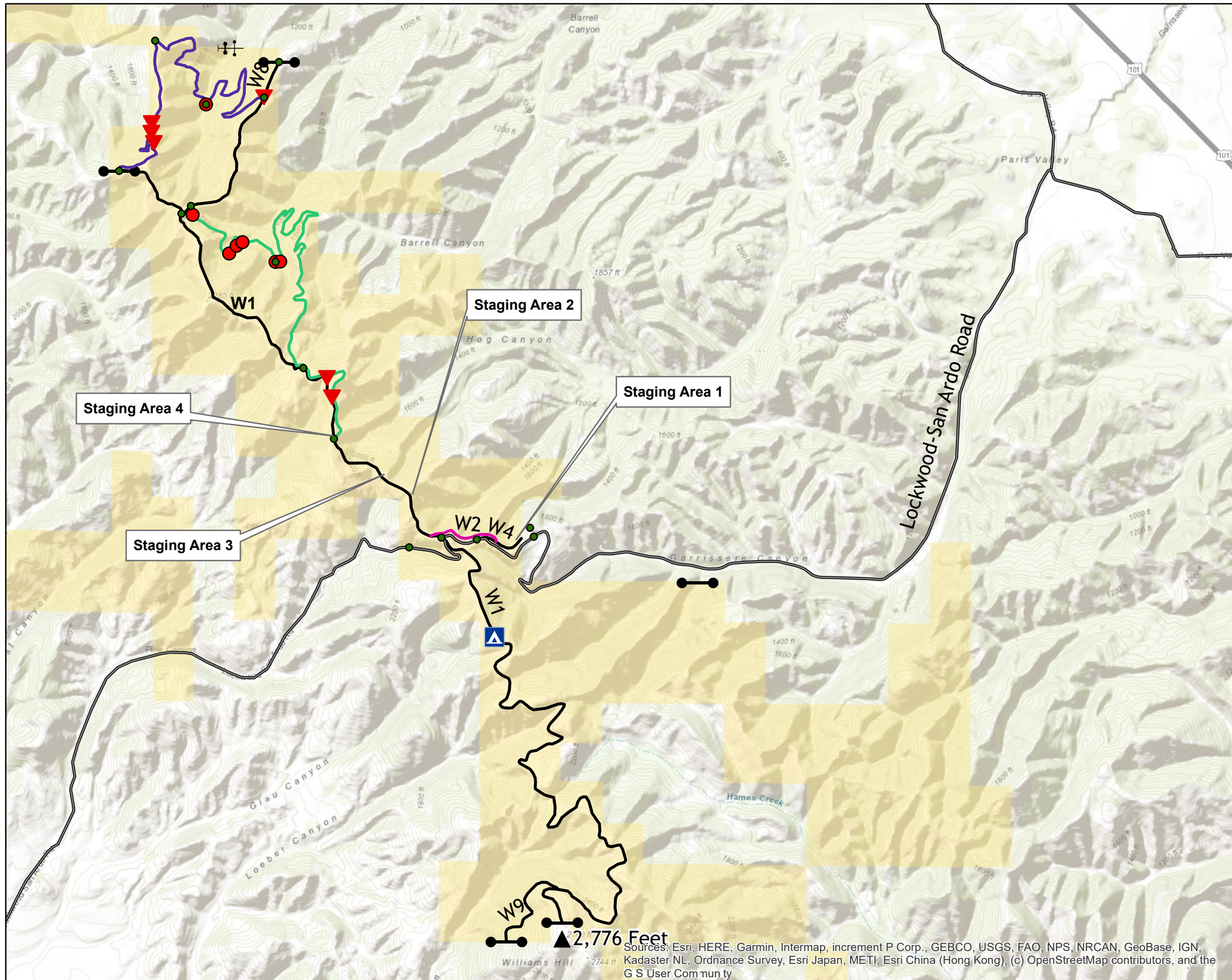
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Appendix A – Alternative Maps

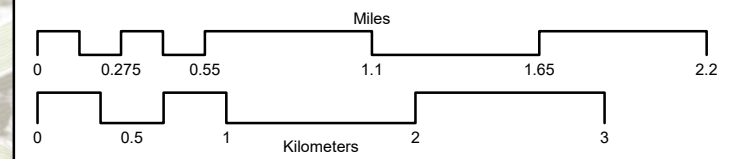
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Williams Hill Recreation Area Alternative A



Legend

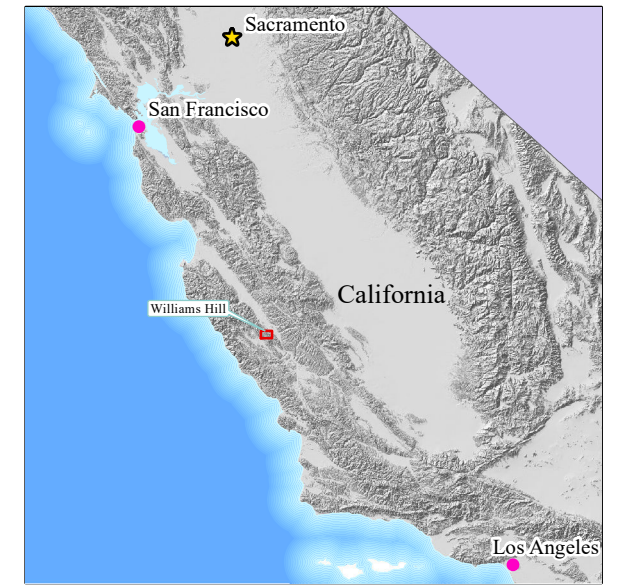
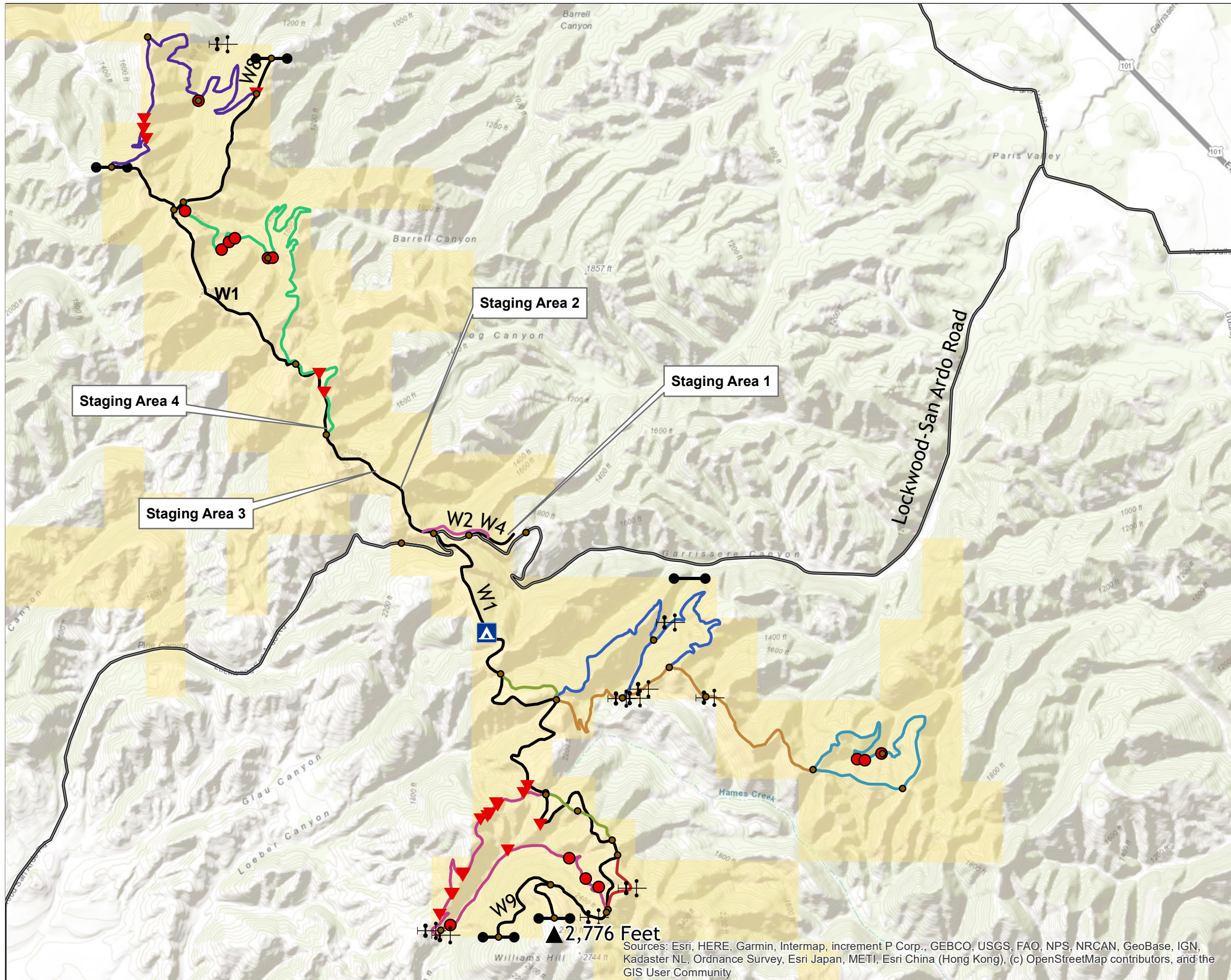
- Trail Segment Break
 - ▼ Block
 - Gate
 - Drainage Crossing
 - Motocross staging to W1 bypass, 0.45 mi.
 - North, 3.32 mi.
 - Barrell Canyon Loop, 4.06 mi.
 - Open Routes
 - Existing Gates
- AGENCY**
- Bureau of Land Management



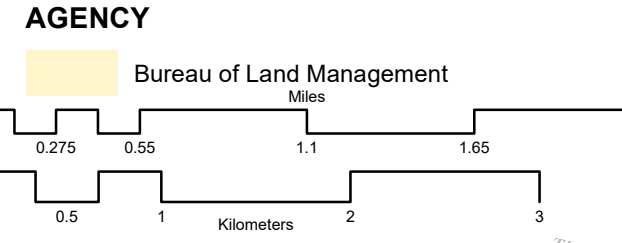
No warranty by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
Map intended to be plotted at a sheet size of 11" x 17"

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the G S User Community

Williams Hill Recreation Area Alternative B



- Trail Segment Break
- ▼ Vehicle Barrier
- ⊕ Gate
- Drainage Crossings
- Motocross staging to W1 bypass, 0.45 mi.
- North, 3.32 mi.
- Barrell Canyon Loop, 4.06 mi.
- East Inner Loop, 3.13 mi.
- East Loop Connection, 2.55 mi.
- East Loop, 2.70 mi.
- W1 Alternate/W3, 1 mi.
- South Loop, 3.33 mi.
- South Tower Reroute, 0.46 mi.
- Open Routes
- Existing Gates



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Appendix B – Project Design Features

Project design features (PDFs) are incorporated in the range of alternatives to protect resources. The application of these PDFs is not considered mitigation measures but rather resource protection measures that are included to avoid or reduce potential adverse impacts of the proposed management actions. These PDFs include:

1. Minimize Ground Disturbance and Land Occupancy.

- a. Design and implement the Williams Hill OHV Plan to disturb and occupy as little land area extent as possible
- b. Prior to the start of Williams Hill OHV Plan-related work activities (e.g., grading and construction), the BLM shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate.
- c. Use existing paths of travel to access project-related work areas
- d. Restore/stabilize all disturbed areas to the maximum extent feasible. Where appropriate, revegetate these areas or allow natural revegetation to occur.
- e. When operations are completed, any excess construction materials or unnatural debris shall be removed from the work area.
- f. To minimize disturbance to the work area, the BLM shall limit crew size, number of vehicles and equipment, and access points.

2. Recreational Resources

- a. Base the width of trail tread for OHV recreation on the size of vehicle expected on the trail (motorcycle, ATV, UTV, 4x4), the intended skill rating for the trail (less skilled operators require a wider tread for safety), and the topography on which the trail or road will be graded.
- b. Integrate the trail tread with designed drainage control measures to ensure hydrologic discontinuity between trails and waterways.
- c. Trail tread subject to high usage and/or other potentially intense erosive forces can be protected by armoring with hardened materials such as properly installed paver stones, gravel, or native rock.
- d. Because berms are likely to form on the outside edge of a trail, perform periodic maintenance measures to breach the berm at regular intervals or grade the berm material back into the trail tread. This will prevent runoff from ponding on the trail.
- e. Rolling Profile. Long, uninterrupted trail grades capture and convey runoff with increasing volume, velocity, and erosive force. Inclusion and placement of the crests and troughs of the rolling profile is a primary design decision made when a trail or road network is planned for construction or realignment. Troughs in a rolling trail profile are ideal locations for drain dip outlets. o Local topography, as well as natural features such as rock outcrops and logs, can be used as “pivot points” on the trail layout, making the trail more interesting and challenging to the OHV recreationist, reducing the temptation to create “volunteer” trails.
- f. Rolling Dips. Rolling dips are broad undulations graded into a trail or road. Rolling dips may be built into a new trail or road or retrofitted to an existing one. They are usually placed in a series of descending side paths so that runoff volume is sufficiently dispersed off the route. Reinforcement measures, such as rock armoring, can be used at the rolling

dip trough outlet to minimize erosion. Many factors dictate the appropriate spacing and dimensions of rolling dips, road steepness being the most important. The speed of OHV traffic on a trail is also important. Design of rolling dips dimensions should generally be more elongated with faster traffic. As a general rule, rolling dip troughs should be at least as long as the average wheelbase of vehicles on the trail or road. For example, if a trail is intended for motorcycles only, and the typical motorcycle wheelbase is 55 inches, then the trough flat on a rolling dip should be approximately 55 inches. Rolling dips are nearly always installed in series so that anyone rolling dip is not diverting too much runoff, which may lead to an additional problem of concentrated erosion.

- g. Waterbreaks. A waterbreak is a design feature that diverts concentrated water from a trail or road tread. It may be a ditch, dike, or dip, or a combination thereof, which is constructed diagonally across the trail or road so that water flow is effectively diverted from the tread.
 - a. Install waterbreaks in a series so that any one waterbreak is not diverting too much runoff. Excessive runoff at any one location may lead to an additional erosion problem.
 - b. Construct durable waterbreaks by mixing soil with rock in the waterbreak core and/or adding surface amendment such as cement. Waterbreaks may also be hardened by positioning pre-formed concrete blocks known as “dogbones”, along the waterbreak crests. On- site materials, such as rock or timber, can be used if sufficient amounts of soil are unavailable.
 - c. Installation of flexible waterbreaks may be appropriate for some trail conditions.
- h. Drain Dips. A drain dip is a section of the trail that is tilted to a greater extent to facilitate runoff drainage, and are usually cut into the grade of an existing trail or road.
 - a. Drain dips are typically used on low gradient trails. Use of drain dips can be a very effective drainage control measure on incised trails or roads, o Use drain dips where trails run into a swale or hollow in the landscape to promote hydrologic invisibility.
 - b. Ensure that drain dips are routinely monitored and maintained for effectiveness.
- i. Climbing Turns. Climbing turns differ from switchbacks in that they have a larger radius of turn (10 feet or more), with gradients up to 25 percent. Climbing turns are designed with as large a radius as is practicable. The larger the turn radius, the greater the separation distance between upper and lower limbs of the turn. This provides more ground for dispersing drainage. Climbing turns are typically banked. Divert trail drainage that flows around the banked turns from the trail tread immediately above and below the turn, where the trail section between turns is relatively straight. Sufficiently disperse the drainage diverted off-trail so that the drainage does not flow onto any lower portion of trail. Place sequential climbing turns so that the trail grade climbs a slope laterally. o Design climbing turns to minimize excavation and cut-slope exposure.
- j. Watercourse Crossings. A properly designed watercourse crossing allows water to remain in the watercourse and does not alter, or only slightly alters, the gradient of the watercourse at the crossing.
 - a. Design the trail at the watercourse crossing to be lower than the trail segments that approach the crossing on either side, adhering to the principal of hydrologic disconnection.
 - b. There are many watercourse crossing designs, such as rocked fords, articulated concrete blocks/matting, culverts and bridges. Each watercourse crossing must be designed based on the anticipated flood flows of the watercourse it crosses, and, as

- appropriate, for the passage of aquatic and terrestrial species. Not all designs are appropriate for any single crossing.
- c. Incorporate adequate drainage features such as grade breaks, outsloping, waterbreaks, and rolling dips on each approach limb so that runoff water is diverted off-trail and not conveyed along the path to the watercourse. The approaches should not be incised.
 - k. Sediment Basins/Ponds. Each sediment basin design must consider the particular site conditions, soil type, drainage area, potential sediment generated, rainfall, runoff and damage potential downstream.
 - a. Determine basin size for the entire catchment to the basin, not just the disturbed area.
 - b. Inflow must be directed into the upper end of the basin to prevent “short circuiting”.
 - c. Make the basin twice as long as wide (except for small basins). Then use baffles, peninsulas, or chambers to increase the L:W ratio to $> 5:1$.
 - d. Maximize surface area; shallow depth maximizes trapping efficiency and keeps sediment away from the skimmer. A skimmer will control filling and draining of the basin and help to utilize the surface area and volume to create conditions that will maximize sedimentation. Carefully consider pond design and baffle placement so that equipment can safely and easily access the pond for removing accumulated sediment. Location of stockpiled sediment after clean-out also needs consideration during the planning and design phase.
 - l. Parking Areas, Staging Areas, and Other Large Surface Areas. Parking lots, staging areas, campgrounds and picnic areas, pits at race tracks, and maintenance facilities all have large surface areas which must be drained without causing erosion or excessive soil loss. Options to prevent or limit erosion of a large surface area include:
 - a. Compaction of earth materials - This option entails scarifying the mineral surface, applying water to increase mineral substrate moisture content, and compacting it to an engineering standard based on anticipated loads of the surface area. Typically, the mineral substrate is compacted to at least 90 percent of the substrate’s maximum density.
 - b. Paving - This option is expensive and not appropriate for many settings. Areas to be paved are usually prepared by compaction of mineral substrate as described above. A compacted crushed rock cover is also applied to the surface before paving if traffic load is anticipated to be heavy.
 - c. Crushed rock cover - This option is slightly more aesthetic than paving, and cheaper and more easily applied to different settings. Mineral surfaces may or may not be compacted prior to being covered with crushed rock.
 - d. Regardless of the surface area treatment chosen, surface runoff should not accumulate excessively anywhere as concentrated flow. Design drainage of the surface area to incorporate multiple drainage swales to disperse runoff to multiple locations around the open area.
 - e. Place rock armor on runoff conveyance and discharge points to avoid erosion during storm events.
 - f. Use land surfaces that slope gently away from large surface areas to disperse surface area runoff.

- g. Consider constructing a runoff control feature, such as a man-made containment or filtering feature, if natural land surfaces suitable for dispersing runoff water are not in the vicinity of the large surface area. o Runoff that is discharged to a watercourse may require, at a minimum, a National Pollution Discharge Elimination System (NPDES) permit or waiver.

3. Hazards and Hazardous Materials

- a. Designate Vehicle and Equipment Storage, Staging, and Clean-up Locations. The BLM shall store, stage, and clean-up all vehicles and equipment used for project-related work activities at Staging Area 1 when not in use.
- b. Designate Vehicle and Equipment Fueling Locations. The BLM shall also store and conduct all re-fueling activities at Staging Area 1.
- c. Inspect for Equipment Leaks. The BLM shall inspect all off-road and other construction equipment for leaks prior to and at the conclusion of any installation, operation, or maintenance activity. If leaks are observed, the leaking equipment shall be removed from the project site and repaired. All contaminated water, sludge, spill residue, or other hazardous compounds discovered during inspections shall be contained and disposed of, as necessary, at lawfully permitted or authorized disposal sites.
- d. The BLM shall not perform any equipment maintenance within 150 feet of any wetland or jurisdictional water where equipment fuel, oil, etc. could enter such areas.
- e. The BLM shall not allow water containing mud, silt, or other pollutants to be placed in locations that may be subjected to high storm flows.
- f. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil.
- g. Prepare and Implement Spill Prevention and Response Plan. The BLM shall prepare a Spill Prevention and Response Plan (SPRP) to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. At a minimum, this plan will include (but not be limited to):
 - a. A map that delineates equipment staging, refueling, and maintenance areas and the BMPs that would be implemented to prevent spills or leaks from leaving these areas
 - b. A list of project materials which, if released, could pose a hazard to the public or the environment
 - c. Procedures for the proper storage, use, and disposal of any solvents or other chemicals used in project activities;
 - d. Procedures for the immediate containment and clean-up of any spills or leaks of hazardous materials, including a list of items to be maintained in an on-site spill response kit at all times
 - e. Identification of lawfully permitted or authorized disposal destinations outside of the project site.

4. Aesthetics

- a. Use local, native vegetation that matches the existing plant community composition of the planting area.
- b. Plant vegetation in patterns and shapes that reflect the natural plant colonization (e.g., planting along the prevailing slopes, avoid planting in regular shapes like squares or rectangles).

5. Seasonal Dust Control Measure Design Considerations.

- a. Deploy seasonal dust control measures in locations to minimize conflict with other uses, including campgrounds, staging areas, heavily travelled routes, and other areas of high visitation. Consider applying dust suppressants.

6. Biological Resources

To minimize and/or avoid impacts to wildlife:

- a. Establish speed limits and education to reduce the likelihood of vehicle strikes.
- b. Dens are monitored and when vacant, excavated or temporarily blocked to prevent entrapment of animals.
- c. Pipes and culverts are searched before being moved or sealed.

To minimize and/or avoid impacts to special-status plants. The BLM would implement the following measures to minimize and/or avoid impacts to special status plants:

- d. Prior to starting all work under the Williams Hill OHV Plan, a qualified biologist shall survey for the presence of special-status plants in and within 100 feet of work areas (including new access routes). These surveys should be conducted prior to the commencement of Program activities, during the appropriate blooming period for species that are known to or have the potential to occur in work areas.
- e. A qualified biologist shall map, flag, and protect special-status plants identified during surveys.
- f. The qualified biologist shall establish clear avoidance areas around California and federal endangered or threatened plant locations. This avoidance area shall provide a minimum 25-foot buffer from all work activities (the biologist may establish a larger buffer if appropriate). Sturdy, visible fencing or other protective features shall be installed around all avoidance areas. Fencing and other protective features shall be removed upon completion of work activities.
- g. If California or federal endangered or threatened plant species are observed in a work area or along an access path to a work area, the BLM shall prepare and submit a report detailing the find to the appropriate resource agency (i.e., USFWS, CDFW) prior to starting work. If a California or federal endangered or threatened plant species cannot be avoided during work activities, the USFWS and/or CDFW shall be consulted regarding the appropriate avoidance, minimization, and/or mitigation measures prior to conducting the work.
- h. Special-status plant species that are not California or federal listed shall be avoided to the extent feasible. If it is not feasible to avoid the loss of special-status plants that are not California or federal listed, the BLM shall, if feasible, compensate for this loss by reseeding, replanting, and/or restoring the disturbed areas with locally collected seed stock from nearby plant locations.

- i. **Qualified Biologist.** A qualified biologist shall be an individual with a minimum of five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two seasonal years conducting surveys for special-status species that may be present in the project area.

To minimize and/or avoid impacts to special-status amphibians and reptiles:

- j. Immediately prior to starting all work under the Williams Hill OHV Plan, a qualified biologist shall survey for the presence of special-status amphibians and reptiles in and within 100 feet of work areas (including new access routes).
- k. If special-status amphibians and/or reptiles are identified during surveys, a qualified biologist shall capture and relocate the animal to nearby, suitable habitat that is at least 300 feet from the work area.
- l. No trash shall be deposited on the site during work activities. All trash shall be placed in trash receptacles with secure lids or stored in vehicles.
- m. **Employee Education.** If, in the opinion of the project biologist, a work area is in or near an area that is known or has the potential to support listed species, all construction personnel shall receive training on listed species and their habitats by a USFWS approved biologist. The importance of these species and their habitat as well as the minimization and avoidance measures that are to be implemented as part of the project will be described to all employees.
- n. **Notification to the California Natural Diversity Database (CNDDDB).** If any listed, rare, or special-status species are detected during surveys or program activities, BLM shall submit notification to the CNDDDB within 14 working days of the sightings.
- o. **Minimize and/or Avoid Impacts to Nesting and Special-Status Birds.** The BLM would implement the following measures to minimize and/or avoid impacts to special-status birds:
 - i. Program implementation will avoid the avian breeding season (generally February 1 through September 15) to the extent feasible. If work occurs during the avian breeding season, a qualified biologist shall survey for nesting birds within the work area, along the access path to the work area, and in a sufficient area around the work area to identify nests that could be impacted by activities. These surveys shall be performed no more than seven (7) days prior to the start of work.
 - ii. If active nests are found during surveys, the BLM shall establish a buffer zone around the nest until the breeding season has ended, or until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival. The size of the buffer shall be determined by the qualified biologist, and shall depend on the species and topography, but would generally be 50-100 feet around active non-listed small bird species nests and 300-500 feet around active non-listed raptor nests. For the purposes of this measure only, non-listed shall refer to those species not listed under the federal or state Endangered Species Act and/or as state fully protected species.

7. Noxious and Invasive Plants (Weeds)

- a. Monitor for and treat noxious weeds. Primary weeds of concern are stinkwort (*Dittrichia graveolens*) and Russian thistle (*Salsola tragus*). Primary treatment method will be herbicide, including Glyphosate and Diuron-Tebuthiuron. Glyphosate is a water soluble, post-emergent, foliar-applied herbicide that will be used to control weeds between the seedling and flowering stage. Glyphosate will be applied to foliage in spray form using a backpack sprayer or spray wand and spray boom mounted to a tank on a UTV. This herbicide would be primarily used along the edges of routes and also Day-Use sites and the campground. Diuron-Tebuthiuron is a dry, granular, pre-emergent herbicide applied to the soil surface. It is used to completely suppress vegetation emergence and results in bare ground condition for several years. Diuron-Tebuthiuron will be broadcast applied to the soil surface by hand or with the use of hand-held mechanical spreaders. The application of this herbicide would be primarily limited to Day-Use sites and the campground.
- b. No soil, soil amendments (compost), or road base aggregate (gravel) shall be imported to Williams Hill without first consulting the BLM Natural Resource Specialist (Botany/Soils). Location of the imported material must first be inspected for the presence of noxious weeds by the Natural Resource Specialist, before importing the material will be granted. The primary source of spread of stinkwort and Russian thistle in Monterey County is imported roadbase aggregate. Secondary sources are road grading (contaminated equipment) and dispersal with vehicles. Vehicles and heavy equipment should be inspected and cleaned of soil and plant debris contamination prior to use at Williams Hill.

8. Cultural Resources

- a. Inventory Cultural Resources. Conduct a records search and field survey for historical and archaeological resources prior to the start of specific work activities; map and record all resources.
- b. Monitor Cultural Resources. Evaluate whether the project will adversely change the significance of a historical resource; first consult with and involve a Native American representative; have a qualified monitor present during all installation activities within the vicinity of the resource.
- c. Avoid Cultural Resources. Avoid substantial adverse changes to cultural resources; review ground disturbing activities, flag or fence buffers around all cultural resources in the vicinity of work activities, train construction personnel on cultural resources identification and avoidance.
- d. Avoid Impacts from Accidental Discoveries. In the event cultural resources are accidentally discovered during work activities, stop all work and immediately have the resource evaluated by a qualified archaeologist. If human remains are accidentally discovered, stop all work and contact the county coroner.
- e. Native American Consultation and Monitoring. Consult with and involve Native American representatives during near and long-term project implementation.
- f. Preserve Cultural Resources in Place. The BLM shall, to the maximum extent feasible and supported by Williams Hill OHV Plan data, preserve cultural resources in place and avoid substantial adverse changes to historical and archaeological resources. The BLM shall ensure adequate paths of travel are maintained around or between dust control measures and historical or archaeological resource and existing protections are sufficient to maintain resource protection.

9. Hydrology and Water Quality

- a. Manage Stockpiles. The BLM shall locate stockpiles of material at least 50 feet away from concentrated storm water flows.
- b. Designate Vehicle and Equipment Storage, Staging, and Clean-up Locations. The BLM shall store, stage, and clean-up all vehicles and equipment used for Williams Hill OHV Plan-related work activities at Staging Area 1 when not in use.
- c. Designate Vehicle and Equipment Fueling Locations. The BLM shall store all fuel and conduct all re-fueling activities at Staging Area 1.
- d. Inspect for Equipment Leaks. The BLM shall inspect all off-road and other construction equipment for leaks prior to and at the conclusion of any installation, operation, or maintenance activity. If leaks are observed, the leaking equipment shall be removed from the field and repaired immediately. All contaminated water, sludge, spill residue, or other hazardous compounds discovered during inspections shall be contained and disposed of, as necessary, at lawfully permitted or authorized disposal sites.
- e. Dust Suppressant Selection: If dust suppressants are used, the BLM shall select a non-toxic, environmentally friendly product (chemical) to reduce dust. The selection should take into consideration a variety of factors including but not limited to: surface runoff carrying suppressants and/or breakdown of products, uptake of dust suppressants by plants, ingestion of dust suppressant constituents by animals, volatilization, transport of suppressant particulates by wind erosion to unintended areas, consumption of contaminated groundwater, downwind drift of spray off-site during application, and ingestion of dust suppressant constituents by humans.

10. Noise

- a. Reduce Equipment Noise. To reduce equipment-related noise, the BLM shall:
 - i. Store and/or stage all construction equipment away from sensitive receptor locations as possible
 - ii. Maintain all construction equipment in good working order
 - iii. Ensure construction vehicles, equipment, and machines incorporate design features in good operating order that meet current industry standards for noise muffling and reduction, e.g., internal combustion engines shall be equipped with a muffler, engines should be enclosed or shielded, etc.
 - iv. Shield stationary equipment such as compressors, generators, and welder machines or locate/operate this equipment as far away from sensitive receptors as possible. If stationary noise sources must be located near sensitive noise receptors (within 100 feet), stationary noise sources shall be muffled, shielded, or enclosed within a temporary shed

Limit Construction Hours. The BLM shall limit construction equipment use to daylight hours, Monday – Friday, to the maximum extent feasible. If work during weekends or holidays is required, the BLM shall limit construction activities to the hours of 8 AM to 5 PM.