

Clear Creek Management Area

Proposed Resource Management Plan Amendment and Final Environmental Impact Statement

BLM

Hollister Field Office



September 2005



The Bureau of Land Management *Today*

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To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

Our Mission

To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

Our Values

To serve with honesty, integrity, accountability, respect, courage, and commitment to make a difference.

Our Priorities

To improve the health and productivity of the land to support the BLM multiple-use mission.

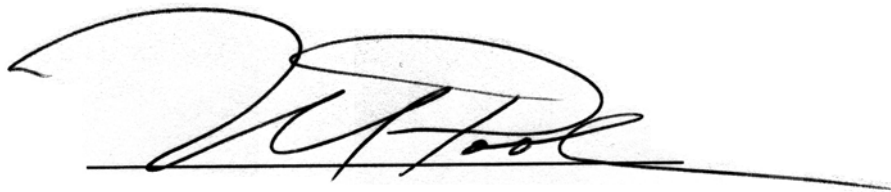
To cultivate community-based conservation, citizen-centered stewardship, and partnership through consultation, cooperation, and communication.

To respect, value, and support our employees, giving them resources and opportunities to succeed.

To pursue excellence in business practices, improve accountability to our stakeholders, and deliver better service to our customers.

Clear Creek Management Area
Proposed Resource Management Plan Amendment
And
Final Environmental Impact Statement

United States Department of the Interior
Bureau of Land Management
Hollister Field Office

A handwritten signature in black ink, appearing to read 'M. Pool', written over a horizontal line.

Mike Pool
California State Director

A handwritten signature in black ink, appearing to read 'G. Hill', written over a horizontal line.

George Hill
Field Office Manager

September 2005



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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In Reply refer to:
1610 (CA-190)P

Dear Reader:

Enclosed for your review is the Proposed Resource Management Plan (RMP) Amendment and Final Environmental Impact Statement (EIS) for the Clear Creek Management Area (CCMA). This process considers designation of routes and barrens for motorized vehicle use and the designation of a boundary for the San Benito Mountains Research Natural Area (SBMRNA).

This document is a revision to the Draft RMP Amendment/Draft EIS published for public comment in May 2004; it has been revised to reflect the input of government agencies, private organizations, and individuals. In addition to printed copies, this Proposed RMP Amendment/Final EIS is available on CD-ROM at the Hollister Field Office and the California State Office of the BLM. An electronic version of the document may also be available online at the site below, pending web accessibility.

Release of the Proposed RMP Amendment/Final EIS initiates a 30-day period for land use planning level decisions, which amend the RMP for the Clear Creek Management Area. During this period any person who participated in the planning process and has an interest that may be adversely affected by approval of the decisions that amend the RMP for the CCMA may submit a protest. Decisions that are protestable are as follows:

- Designation of barren areas as open to off road vehicle use.
- Adoption of the criteria for designating routes
- Designation of the SBMRNA

Decisions related to the selection of particular routes as open, closed, or limited are implementation decisions, as they implement the existing RMP for the Clear Creek Management Area. These decisions are not protestable, but are appealable to the Interior Board of Land Appeals upon adoption. Decisions on particular routes are adopted with a record of decision (ROD). BLM will accept comments on proposed decisions related to particular routes for 30 days from the date the U.S. Environmental Protection Agency (EPA) publishes the notice of availability for the Proposed RMP Amendment/Final EIS in the *Federal Register*. These comments should be submitted to the Hollister Field Office at the address above.

Protests must be postmarked within 30 days of the date that the EPA publishes the notice of availability for the Proposed RMP Amendment/Final EIS in the *Federal Register*. Instructions for filing a protest with the Director of the BLM may be found at 43 CFR 1610.5 and are outlined below. A protest may raise only those issues that were submitted for the record during the planning process. E-mail and faxed protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular or overnight mail postmarked by the close of the protest period. Under these conditions, BLM will consider the e-mail or faxed protest as an advance copy, and it will receive full consideration.

If you wish to provide BLM with such advance notification, please direct faxed protests to the attention of the BLM protest coordinator at (202) 452-5112 and e-mails to Brenda.Hudgens-Williams@blm.gov.

Please direct the follow-up letter to the appropriate address provided below.

The protest must contain:

- a. The name, mailing address, telephone number, and interest of the person filing the protest.
- b. A statement of the issue or issues being protested.
- c. A statement of the part or parts of the plan and the issue or issues being protested.
- d. A copy of all documents addressing the issue(s) that the protesting party submitted during the planning process or a statement of the date they were discussed for the record.
- e. A concise statement explaining why the protestor believes the State Director's decision is believed to be wrong.

All protests must be in writing and mailed to the following address:

Regular Mail:
Director (210)
USDI Bureau of Land Management
Attention: Brenda Williams
P.O. Box 66538
Washington, D.C. 20035

Overnight Mail:
Director (210)
USDI Bureau of Land Management
Attention: Brenda Williams
1620 L Street, N.W., Suite 1075
Washington, D.C. 20036

The Director will promptly render a decision on the protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the Director shall be the final decision of the Department of the Interior.

Your interest in planning for the public lands within the CCMA is appreciated.



George Hill
Hollister Field Office Manager

EXECUTIVE SUMMARY

INTRODUCTION

The Bureau of Land Management (BLM) is responsible for the balanced management of public lands, and the agency develops Resource Management Plans (RMPs) to help guide decisions on how best to achieve this balanced management. Resource Management Plans are based upon the principles of multiple-use and sustained yield, and take into account the long-term needs of future generations for renewable and non-renewable resources. The BLM's Hollister Field Office manages public lands in accordance with the 1984 Hollister Resource Management Plan (RMP). BLM prepared an Amendment to the Hollister RMP for Clear Creek Management Area in 1986. Since that time, new issues and concerns have surfaced regarding use in the Clear Creek Management Area (CCMA). These issues and concerns, as well as information gained from on-going studies of asbestos health risks, sensitive species habitat, and erosion and sedimentation problems in all watersheds of the CCMA, resulted in a BLM decision to re-evaluate and amend its 1984 and 1986 plans. The ensuing Clear Creek Management Area Plan Amendment rendered a Final Environmental Impact Statement (FEIS) in 1995 and a Record of Decision (ROD) in 1999. This Proposed Resource Management Plan Amendment and FEIS for the CCMA includes an analysis of management actions approved in the 1999 ROD and proposes to:

- Designate routes of travel and areas for motorized vehicle access as Open, Closed, or Limited,
- Designate boundaries of the expanded San Benito Mountain Research Natural Area (SBMRNA) and designate it an Area of Critical Environmental Concern (ACEC), and
- Incorporate acquired lands made through previous land tenure adjustments into the Clear Creek Management Area (CCMA).

Other planning issues for CCMA such as camping, hunting, hobby gem/mineral collection, hiking, backpacking, camping, hang gliding, geocaching, nature study, and wildlife viewing are not part of this Plan Amendment and would be addressed in subsequent amendments to the Plan.

The CCMA is located in central California's San Benito and Fresno counties. Previous decisions were based on an area covering approximately 50,000 acres of public land. New GIS data discloses that the CCMA actually encompasses 75,829 acres of which include 10,668 acres of private inholdings and 1,964 acres of state lands. About 30,128 acres of the CCMA lie within a BLM "Area of Critical Concern" (ACEC). This ACEC was designated because of the high concentrations of natural asbestos occurring in its serpentine soils. The actual red zone area extends 840 acres beyond the ACEC boundary. The San Benito Mountain Research Natural Area (SBMRNA) contains 1,870 acres. The San Benito Mountain Wilderness Study Area (WSA) contains 1,488 acres of which 382 acres do not overlap the SBMRNA.

Serpentine soils in the CCMA have given rise to a unique assemblage of plants and plant communities. Some plants are not only endemic to the area, they are rare and considered

in danger of extinction. One example is the San Benito evening primrose, a federally protected species. Some plant communities such as the San Benito Mountain Forest are also unique and warrant special management. While vegetation within the ACEC is specially adapted to serpentine soils, the overall vegetative cover tends to be sparse. Many slopes are devoid of vegetation entirely, or have very little vegetative cover. These “barren” hillslopes have become very popular with off-highway vehicle (OHV) enthusiasts. In addition to the authorized vehicular recreation on barren hillslopes, there exists a large network of backcountry roads and trails throughout most of the 75,829-acre CCMA. These roads and trails were developed in conjunction with extensive timber and mining efforts prior to 1970, and offer a challenging OHV experience.

Every year, motorcycle and four-wheeling events are held in the CCMA. The CCMA is popular with other users as well, particularly rockhounds and hunters, who utilize a network of roads and trails to pursue their recreational interests. The CCMA is most frequently visited during the wet season, approximately November through March.

There are health concerns regarding the public use of this area, as vehicles on unpaved roads, trails and barren slopes generate asbestos fibers, which can be inhaled by visitors. The potential for asbestos exposure via fiber inhalation while recreating or working in the area is a serious health issue. This health issue is magnified by the fact that the area was mined extensively for asbestos earlier in the century, leaving many sites where the tailings of almost pure asbestos are exposed. One large mined site, the Atlas Mine, is an EPA Superfund site, and is closed to public use.

The Final EIS for the 1995 Clear Creek Management Plan Amendment and Draft EIS for this project (2004) discuss the best available studies on naturally occurring asbestos in the CCMA and the related visitor exposure and health risk. The U.S. Environmental Protection Agency is currently conducting an asbestos exposure evaluation study in the Clear Creek Management Area. This study will provide further information on the exposure levels from various types of activities in the CCMA. Upon completion of this study, BLM will work with EPA and the public to appropriately respond to the new information. If the information is significantly different than the 1992 risk assessment, BLM will initiate a NEPA process to consider the new information and potential management responses at the CCMA in light of any new findings. Initial results from the EPA study indicate that an environmental impact statement will be necessary to consider the new information and a range of management options for the CCMA.

Human disturbance to the soils and plants in the serpentine ACEC is a special management concern, because throughout the ACEC, soil formation tends to be slow, and the topsoil shallow. Plant regeneration is also slow, and accelerated erosion from human activities (such as mining, recreation, and road building and maintenance) can impact water quality, soils, and vegetative resources. As a result, minimizing soil erosion and minimizing the damage to vegetation is a management priority.

PROPOSED ACTION

This document includes a proposed amendment to the Hollister Resource Management Plan of 1984 (as amended), and implementation decisions. These decisions would guide management in the CCMA for the next 15 years. The 'Proposed Action' will designate all specific routes (roads, ways, trails) within the Limited Use Area of the CCMA as open, limited, or closed, and designate barrens as areas that are open or closed. All routes not designated as open or limited are closed. OHV recreation use would be allowed only on trails and areas that are signed for use. An additional subset of routes will be designated for "administrative use" by permittees, licensees, rights-of-way holders, and the Federal government and authorized representatives. A majority of closed routes will be identified and prioritized for restoration over a period of years. Restoration refers to reclaiming of closed routes to revert to a natural state over time and disappear into the landscape. Route restoration will be evaluated through a separate environmental analysis.

Acquired lands within the CCMA are included in this designation project. The Proposed Action also proposes the designation of boundaries and interim management for an expanded San Benito Mountain Research Natural Area (SBMNRA).

A summary of the key characteristics of the Proposed Action is located in Chapter 2 (pg. 2-1).

PURPOSE AND NEED

The purpose of this project is, within the Clear Creek Management Area, to:

- Refine criteria for route selection, designate routes of travel, and designate areas for motorized vehicle access as Open, Closed or Limited.
- Designate boundaries of the San Benito Mountain Research Natural Area (SBMRNA), and
- Incorporate acquired lands made through previous land tenure adjustments into the Clear Creek Management Area.

The need for this project is to implement certain decisions from the Clear Creek Management Plan Amendment and provide management of acquired lands. The Record of Decision (ROD) for the Clear Creek Management Plan Amendment (1999) designated the Clear Creek Management Area (CCMA) a **Limited Use Area** for Off-Highway Vehicle (OHV) use and documented approval of the proposed action in the modified Alternative 3. The Limited Use designation requires that vehicle travel be restricted to a designated route system.

PLANNING PROCESS AND PUBLIC COLLABORATION

The planning process for this effort began as an Environmental Assessment (EA) and opened with publication of the Notice of Intent in the Federal Register on April 29, 2003 (Volume 68, No. 82). Scoping began from February 2003 through November 2003 with several meetings/workshops with the CCMA Technical Review Team (TRT) which is a

small group of people representing diverse entities ranging from off-highway vehicle clubs, environmental organizations, agencies, and private individuals. All of the meetings focused on developing criteria for designating routes and barrens and developing an interim strategy for managing the San Benito Mountain Research Natural Area.

The key themes discussed during the scoping meetings were: 1) development of soil moisture guidelines/standards for route maintenance; 2) permitted recreation events; 3) wet season closure alternatives, 4) air board regulations; 5) development of criteria and alternatives for route and barren designations

During preparation of the environmental assessment, a determination was made that the impacts would be significant to the quality of the human environment and an Environmental Impact Statement would be prepared by BLM. On July 19, 2004 BLM published a "Notice of Availability (NOA) of a Draft Resource Management Plan Amendment and Draft Environmental Impact Statement (DRMP & DEIS)" in the Federal Register on July 19, 2004 (Volume 69, Number 137). The NOA marked the beginning of a 120-day public comment period that closed on November 15, 2004.

Public meetings are part of the National Environmental Policy Act (NEPA) process and are used to receive comments from the public on the Draft Environmental Impact Statement (DEIS). On August 30, 2004, the Bureau of Land Management (BLM) Hollister Field Office announced a series of public meetings to accept comments on the Clear Creek DRMP & DEIS. A total of approximately 275 persons attended the BLM public meetings held in Coalinga, Hollister, and San Jose.

In addition to the comments gathered during the public meetings, BLM received approximately 848 written comments and electronic mail (e-mail) letters from agencies, individuals, and organizations in response to the CCMA Draft RMP Amendment and DEIS. A summary of comments gathered at public meetings and written comments received by the Hollister Field Office are contained in Appendices J and K.

PROPOSED ACTION

The Proposed Action primarily reflects Alternative A from the Draft EIS (2004) and incorporates aspects of the other alternatives. The Proposed Action will designate all specific routes (roads, ways, trails) within the Limited Use Area of the CCMA as open, limited, or closed, and designate barrens as areas that are open or closed. All routes not designated as open or limited are closed. The following table contains key characteristics of the Proposed Action.

Table ES-1. Key Characteristics of the Proposed Action

Routes (miles)		Open Barrens (acres)
Open	201	478
Limited	15	
County	26	
Total Miles – Recreation Use*	242	
Trail Types (miles)		Research Natural Area (acres)
Paved	3	4147
Improved	26	
4-wheel Drive	25	
Jeep	53	
ATV	35	
Single Track	100	
Total Miles	242	

* Mileage includes routes currently available for public use, but not under BLM jurisdiction.

ENVIRONMENTAL CONSEQUENCES

The proposed action would not have significant impacts on mineral, visual, prime farmlands, wilderness, wild and scenic rivers, wildlife (except for sensitive plants and animals), rangeland management, or Native American relations, and therefore were dropped from further analysis and discussion.

The impact analysis of the proposed action is based on an average of 50,000 visitors annually. Based on population trends and OHV recreation demand, it is expected that moderate increases in visitation could occur at the CCMA, though significant increases may be constrained relative to the asbestos hazard, remote location, carrying capacity, and lack of facilities.

Detailed descriptions of the direct and indirect impacts of resource management under the 'Proposed Action' for each resource area are provided in Chapter 4, along with a discussion of the possible cumulative impacts provided that could result from actions taken in this EIS. Appendix L of the FEIS contains a summary of the environmental consequences of the proposed action.

CONSULTATION AND COORDINATION

Coordination with other agencies and consistency with other plans for the Draft EIS were accomplished through frequent communications, meetings, and cooperative efforts between the BLM interdisciplinary team and involved federal, state, and local agencies and organizations. This included interaction and meetings with the Clear Creek TRT,

Regional Water Quality Control Board, Monterey Bay Unified Air Pollution Control District, California State Parks Off-Highway Motor Vehicle Recreation Division, and annual OHV grant workshops. BLM also notified elected officials in regard to CCMA route designation and SBMRNA expansion through personal briefings, phone calls, and letters describing the management situation. These included US Senators Barbara Boxer and Diane Feinstein, US Congressman Sam Farr, and San Benito County officials.

Formal Consultation the U.S. Fish and Wildlife Service (USFWS) was conducted on the 1995 amendment to the Hollister RMP for Clear Creek with a Biological Opinion issued in 1997. Subsequent coordination with the USFWS has been ongoing throughout the planning process with frequent communications (phone, email, submission of reports), meetings, and onsite visits to the CCMA. On January 12, 2005 an initial Request for Initiation of Formal Section 7 Consultation on the Draft Resource Management Plan Amendment and Draft Environmental Impact Statement for the Clear Creek Management Area was sent to the USFWS. A subsequent memorandum dated April 14, 2005, transmitted the Biological Assessment and supporting documentation in relation to the Request for Initiation of Formal Section 7 Consultation.

Coordination with the U.S. Environmental Protection Agency (EPA) by phone, through various meetings, and coordination of studies and site management activities at the CCMA has occurred throughout the planning process. Topics discussed include comments on the Draft EIS, air and water quality, human health risks associated with exposure to naturally occurring asbestos and general project updates.

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CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

This Proposed Resource Management Plan Amendment and associated Final Environmental Impact Statement (Final EIS) to the Hollister Resource Management Plan (RMP) for the Clear Creek Management Area (CCMA) analyzes and proposes to:

- Designate routes of travel and areas for motorized vehicle access as Open, Closed, or Limited,
- Designate boundaries of the expanded San Benito Mountain Research Natural Area (SBMRNA) and designate it an Area of Critical Environmental Concern (ACEC), and
- Incorporate acquired lands made through previous land tenure adjustments into the Clear Creek Management Area (CCMA).

This Proposed Plan Amendment and Final EIS is tiered to the environmental analysis conducted in the Clear Creek Management Area Plan Amendment and Final Environmental Impact Statement (FEIS) (1995) and decisions adopted in the Record of Decision for the Clear Creek Management Area Plan Amendment (1999).

Other planning issues for CCMA such as camping, hunting, hobby gem/mineral collection, hiking, backpacking, camping, hang gliding, geocaching, nature study, and wildlife viewing are not part of this Plan Amendment and would be addressed in subsequent amendments to the Plan.

1.2 PLANNING AREA

The Clear Creek Management Area (CCMA) is located in central California in the southern portion of San Benito County and the western portion of Fresno County as shown on Map 1-1. It encompasses approximately 75,000 acres of public land managed by the Hollister Field Office of the Bureau of Land Management (BLM). Management areas are typically larger units of public lands that have a degree of similarity with regard to resource characteristics and planning issues. This area has been used extensively for Off-Highway Vehicle (OHV)¹ recreation for many years. A variety of other recreation activities also occur within the CCMA including, hunting, rock-hounding, wildlife watching, and hiking.

Within the CCMA boundary is the Serpentine ACEC covering about 31,000 acres. Its 1984 designation was based on the health concerns associated with the naturally occurring asbestos within the serpentine soils and because of the unique vegetation and forest types associated with serpentine

¹ For many years the term “off-highway vehicle” (OHV) has been used by the public, industry, and the BLM interchangeably with the term “off-road vehicle” (ORV). However, only the term off-road vehicle has a legally established definition in the Presidential Executive Orders and the BLM’s related 43 CFR 8340 regulations. In general, throughout this document we will refer to motorized OHV, except when discussing issues related to policy or regulations.

soil. The boundaries of the ACEC were defined by mapping of asbestos soils derived from the New Idria serpentine formation. This ACEC is sometimes referred to as the Hazardous Asbestos Area (HAA). Human disturbance to the soils and plants in the serpentine ACEC is a special management concern, because throughout the ACEC, soil formation tends to be slow and the topsoil shallow. Plant regeneration is also slow, and accelerated erosion from human activities has negatively impacted soil and vegetative resources over the years. Minimizing soil erosion and minimizing the damage to vegetation is a management priority.

Within the Serpentine ACEC is the San Benito Mountain Research Natural Area (SBMRNA), which is approximately 4,082 acres in size. This area was originally established as an Outstanding Natural Area in 1972, with an area of about 1,880 acres. The Record of Decision for 1999 Amendment to the Plan requires the present environmental review for determining the boundaries of the expanded Research Natural Area (RNA). RNAs are designated for the protection of public lands having natural characteristics that are unusual or that are of scientific or other interest. The SBMRNA was designated because of the unique vegetative communities associated with the serpentine soils. Its primary purpose is to provide research and educational opportunities while maintaining and protecting a unique assemblage of vegetation in as natural condition as possible.

The Clear Creek Management Area is shown on Map 1-1 along with the area of the Serpentine ACEC and the SBMRNA. The acreages of these areas are shown in Table 1-1, with a breakdown of BLM, other agencies and private land ownership in the planning area.

Table 1-1. Land Ownership in the Planning Area

Ownership	Clear Creek Management Area (acres)	Percent of CCMA	Serpentine ACEC (acres)	San Benito Mountain Research Natural Area (acres)
BLM	63,197	83.3	30,968	4,082
Private	10,668	14.1		
State	1,964	2.6		
Total	75,829	100.0	30,968	4,082^a

^a Boundaries and final acreage are to be determined by this planning process. Previous size was 1,870 acres including the San Benito Mountain Wilderness Study Area with 1,488 acres.

1.3 BACKGROUND

The Clear Creek Management Area has a long history of use and land use planning. The geologic natures of the area (with many minerals including nickel, mercury, chromium, copper, magnisite and naturally occurring asbestos in serpentine soils) lead to intense scrutiny of the area. The following relates some of the previous planning efforts and general history of recreational use to help the reader understand where we are and how we got there.

1.3.1 Planning History

The Hollister Resource Management Plan (RMP), adopted in 1984, provides management guidance for the Clear Creek area. The RMP outlined management goals and resource management decisions, and established the 30,000 acre Clear Creek Serpentine Area of Critical Environmental Concern within the 75,000 acre CCMA. It expanded the San Benito Mountain Natural Area to about 2000

acres. This RMP incorporated the existing OHV designations, which were originally adopted in 1982. The Hollister RMP also called for the preparation of watershed management guidelines (Best Management Practices) that were completed in 1984. These measures outlined management practices to control erosion and reduce sediment transport.

In 1986, a more detailed activity plan was prepared for the CCMA, to implement decisions adopted in the Hollister RMP and to incorporate the “Best Management Practices” from the watershed management guidelines. This Clear Creek Management Plan was developed to manage a complex ecosystem comprised of sensitive and unique plant communities, a highly erosion-prone watershed, and unique serpentine soils containing naturally occurring asbestos.

In 1993, a draft Environmental Impact Statement was issued for the Clear Creek Management Area, in which six alternatives for management were analyzed. Alternatives ranged from continuing the existing management with the majority of routes and areas open, to OHV closure with vehicles limited to a small network of roads. After public comment, involvement with the Clear Creek Technical Review Team, intensive review of comments, and re-analysis of data, the BLM issued a final EIS (FEIS) in 1995 with a substantially modified proposed action. The text of the modified Alternative 3 is contained in section III of the ROD (1999).

The 1995 amendment to the Hollister RMP re-evaluated existing land use decisions. This amendment was based upon new information which became available on the asbestos related health risks and rare plant species. This RMP amendment responded to these new issues and addressed existing public uses within both the CCMA and the Serpentine ACEC. In the Clear Creek Management Area RMP Amendment and FEIS (1995), the following issues were identified and addressed in the alternative development, analysis, and impact assessment:

- 1) airborne asbestos emissions,
- 2) public health risks associated with asbestos exposure,
- 3) asbestos sediment production and transport,
- 4) San Benito evening primrose recovery,
- 5) watershed and riparian zone management, and
- 6) existing multiple uses.

The management alternatives presented in that RMP amendment were based upon issues identified during the initial public scoping phase of the planning effort. Six alternatives were considered, and the environmental impacts of each alternative were analyzed in relation to varying degrees of public use. The Record of Decision (1999) for the CCMA RMP Amendment approved the Modified Alternative 3 – Dispersed OHV Use. This current RMP Amendment for the CCMA would implement specific route and area designations and analyzes the overall environmental effects. This DEIS addresses the impacts of adopting these designations by:

- 1) taking into account any new or significant planning issues;
- 2) ensuring that the Plan’s conservation strategies and designations complement each other; and
- 3) describing and responding to any additional cumulative impacts.

The plans identified above have been reviewed to determine whether the proposed action conforms to the terms and conditions of the land use plan as required by 43 CFR 1610.5.

1.3.2 Use History

There exists a large network of backcountry roads and trails throughout most of the CCMA. These roads and trails were developed in conjunction with timber and mining operations prior to 1970. Since that time, they have become a challenging OHV recreation experience.

Circa 1969-1970, the Panoche Hills/Mercy Hot Springs area located approximately 20 miles to the north was closed to OHV use because of resource management concerns. In the 1970's the CCMA, then referred to as the Clear Creek Recreation Area, became popular particularly with motorcycles for OHV use. In 1972, the San Benito Mountain Natural Area was closed to off-road vehicle use. Initial OHV designations for the CCMA were established in 1982. The designations included:

- 1) 16,000 acres designated as limited, primarily in Clear Creek Canyon, San Carlos Creek, and Sawmill Creek, with vehicle travel limited to designated routes and areas;
- 2) approximately 2,000 acres designated as closed; and
- 3) 25,000 acres designated as open to vehicle use.

This 1982 plan identified a number of concerns, including, the presence of airborne asbestos, and the continuation of present patterns of OHV use further degrading resources by contributing to sedimentation and threatening populations of federally protected plant species. Implementation of these designations was to proceed with priority given to protection of endangered plant habitat, archeological sites, severely eroding hill climbs, and the Natural Area. The Hollister Resource Management Plan (1984) reaffirmed these designations. A Clear Creek Management Plan was completed in 1986 that carried forward existing designations with only minor modifications.

1.4 PURPOSE AND NEED

The purpose of this project is, within the Clear Creek Management Area, to:

- Refine criteria for route selection, designate routes of travel, and designate areas for motorized vehicle access as Open, Closed or Limited.
- Designate boundaries of the San Benito Mountain Research Natural Area (SBMRNA), and
- Incorporate acquired lands made through previous land tenure adjustments into the Clear Creek Management Area.

The need for this project is to implement certain decisions from the Clear Creek Management Plan Amendment and provide management of acquired lands. The Record of Decision (ROD) for the Clear Creek Management Plan Amendment (1999) designated the Clear Creek Management Area (CCMA) a **Limited Use Area** for Off-Highway Vehicle (OHV) use and documented approval of the proposed action in the modified Alternative 3. The Limited Use area designation requires that vehicle travel be restricted to a designated route system. Criteria outlined in the ROD (1999) to determine whether routes should be designated opened or closed include:

- proximity to sensitive resources (stream crossings, special designations, Research Natural Area, biological and cultural resources, mine sites),
- private land,

- erosion hazards and maintenance concerns,
- motorized and non-motorized recreation opportunities, and
- administrative and local access.

This project refines the screening criteria and applies the criteria to the current inventory of routes in the CCMA. This is needed to establish a route system and to consider any changes to that route system in the future. This project also defines where route rehabilitation and restoration is appropriate. Restoration of closed routes will be analyzed under a subsequent environmental analysis.

The ROD (1999) also requires a public process for determining the boundaries of the expansion of the San Benito Mountain Research Natural Area (SBMRNA) to approximately 4,082 acres. The ROD (1999) approved designation of the San Benito Mountain Outstanding Natural Area as a Research Natural Area (RNA). Instruction Memorandum CA-97-31 (Policy and Procedures for Establishing Research Natural Areas in California, 12/12/96) and the BLM Land Use Planning Handbook direct that all RNA's are to be designated ACECs and follow the ACEC designation guidance provided in 43 CFR 1610.7-2 and BLM Manual 1613. This project proposes to add the ACEC designation to the SBMRNA, define its boundary, and specify resource use limitations.

Route designation decisions need to be made in concert with decisions on barren use designations and San Benito Mountain Research Natural Area boundary expansion to provide for effective management of the CCMA.

An additional purpose of this plan amendment is to incorporate acquired lands made through previous land tenure adjustments into the CCMA, for the purposes of route designation. These lands are located primarily in the northeast portion of the CCMA.

1.5 RELATIONSHIP TO STATUTES, REGULATIONS, POLICIES AND OTHER LAND USE PLANS

All BLM decisions and approvals will be consistent with applicable statutes, regulations, and policies, including but not limited to the following:

- Federal Endangered Species Act
- National Environmental Policy Act
- Federal Land Policy and Management Act
- National Historic Preservation Act
- Clean Water Act
- Clean Air Act
- Federal Executive Orders and the Code of Federal Regulations

The proposed action is in conformance with the following two Executive Orders:

1. Executive Order 11644 (*Use of Off-Road Vehicles on the Public Lands*), February 9, 1972 (87 F.R. 2877), to establish policies and provide for procedures to control and direct the use of Off-Highway Vehicles on Federal lands so as to (1) protect the resources of those lands, (2) promote the safety of all users of those lands, and (3) minimize conflicts among the various uses of those lands.

2. Executive Order 11989 (*Off-Road Vehicles on Public Lands*), May 24, 1977 (42 F.R. 26959), amending the previous order. This amendment strengthened protection of the lands by authorizing agency heads to (1) close areas or trails to OHVs causing considerable adverse effects and (2) designate lands as closed to OHVs unless the lands or trails are specifically designated as open to them.

This project also complies with 43 CFR 8342.1, which establishes criteria to consider when the BLM makes route and area designations. The BLM bases designations on the protection of resources of the public lands, the promotion of safety of the users of the public lands, and to minimize conflicts among the various users of the public lands. Designations must be in accordance with the following criteria:

- Areas and trails shall be located to minimize the damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.
- Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats, and for the protection of vernal pools, riparian areas, and known and newly discovered occurrences of sensitive and rare plants and communities and related moderate to high potential habitat. Special attention would be given to protect endangered or threatened species and their habitats.
- Areas and trails shall be located to minimize conflict between OHV use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in the area, taking into account noise and other factors.
- Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails would be located in natural areas only if the authorized officer determines that off road vehicle use in such locations would not adversely affect their natural, esthetic, scenic, or other values for which such areas are established.

The designation of routes and areas will also comply with 43 CFR 8341 and 8342.

This Final EIS also considers the designation of a route system for the limited use area, as called for in the 1999 Record of Decision for the CCMA Plan Amendment and FEIS (1995). The ROD (1999) directed the designation of approximately 270 miles of routes to be available for OHV use, and 937 acres of open area based upon resource management criteria. The open routes and areas in the BLM database at time of approval of the Record of Decision (comprised of United States Geological Survey topographical map information, orthophoto quads, aerial photos, and Global Positioning System field mapping information), have remained open for vehicle travel. No proliferation of routes has been allowed, and routes not currently open can only be considered for vehicle use through environmental analysis.

The resource condition objectives were outlined in the ROD (1999) Approved Action; Alternative 3 – Dispersed OHV Use – Modified:

1. Reduce asbestos exposure and asbestos emissions while still providing opportunities for OHV use. Minimize dust emissions from main roads. Ensure that BLM employees meet all OSHA requirements.
2. Protect existing populations of the San Benito evening primrose and attempt to expand its range to areas that have moderate and high potential habitat for the species. Manage to ensure that sensitive species and communities maintain or enhance their condition.
3. Maintain or enhance water quality in all watersheds. Reduce erosion and sediment transport in all CCMA watersheds by reducing the number of miles and barren acreage available for vehicle use, and by implementing Best Management Practices for all road work.
4. Expand the boundaries of the San Benito Mountain Natural Area to include a contiguous cross-section of the unique serpentine and adjacent ecotones found only within this area, using easily identifiable geographical landmarks as boundaries, wherever possible.
5. Manage the Clear Creek Management Area as a **Limited Use** area. Based upon resource management criteria, designate routes and open play areas available for OHV use as resource conditions warrant.

The BLM must take into account the conservation of threatened and endangered plant and animal species and the ecosystems on which they depend, as it designs a motorized vehicle access network for the 75,000 acres of land within the CCMA. This area has unique vegetation communities and landforms associated with the serpentine soils. With its proximity to the growing populations of the San Francisco Bay area and San Joaquin Valley, the CCMA is subject to increasing demand for recreation. Increasing loss and fragmentation of species habitat, has led to the need for a motorized vehicle access network in the CCMA that meets the public's recreational needs, but does so in a manner compatible with ongoing programs to conserve plant and animal species and their habitats.

1.6 GOALS

The general goal of this project is to establish a clear and understandable route network, which allows users to clearly understand the appropriate type of use for each area. Specific goals are as follows:

- to provide a wide range of recreation opportunities and experiences;
- to manage recreation use to minimize user impacts to the environment;
- to emphasize the use of public outreach to increase public awareness and sensitivity to resources; and
- to adaptively manage changing visitor use patterns.

The designations will comply with current regulations, reflect changes on the ground, analyze changes in the potential impact of a route to sensitive natural, cultural, and environmental resources, and correlate actual use to the formal route designation.

This project will establish a methodology to define and assess routes that may be used for future analysis of routes. Construction of new routes is outside the scope of this project. The scope of this project does not include amending the current multiple use class (Limited) of the project area, except as related to designation of barren “play” areas.

1.7 CONSTRAINTS

BLM used the best available data for decisions on process and evaluation of resource conditions and impacts, implementation of monitoring, enforcement, route restoration and route maintenance. Assessments of route condition and soil loss support decisions used in route designations. Information gathered in the future may lead to a re-evaluation of, and possible change in, route and area designation.

Public lands within the CCMA adjoin private lands and lands managed by other agencies. The proposed actions and decisions only apply to lands managed by the BLM. The owners and managers of other lands may allow, close or restrict the use of segments of routes that cross their lands at any time.

Some routes on public lands are also county roads. These roads are a part of the overall travel management system, but are not managed by BLM. The county is responsible for management and maintenance of these roads. BLM designation decisions do not apply to county roads, although they may be shown on the route network.

The decisions will not affect any right of access that may be determined to exist to private lands in CCMA, including any Revised Statute 2477 right-of-way. Such access rights and specific requests for access would involve separate and independent analyses and decisions. A resource management plan or plan amendment decision also does not affect current or future opportunity for any party to assert a claim for right of access under R.S. 2477. Therefore, this project does not address general or specific rights of access over federal lands in CCMA. However, it is intended that this analysis would address an anticipated general level of vehicle access to private land so that it could satisfy the requirement for NEPA analysis for any such requests in the future. This project does not address the existence of right of access under RS 2477 or the case that may exist for such right as may be brought forward by any entity or party.

1.8 INCORPORATE ACQUIRED LANDS MADE THROUGH PREVIOUS LAND TENURE ADJUSTMENTS

Newly acquired lands are incorporated into this document specifically for designation of routes and areas, and boundary clarification for the SBMRNA. Additionally, this DEIS would not address NEPA compliance requirements for access associated with any other type of use or resource (e.g. rights-of-way, land use permits, grazing, etc.) of these new acquired lands.

1.9 ROUTE DESIGNATION DATABASE

The designations proposed in this project are based upon the best science and data reasonably available at this time. Between January 2001 and August 2003, field crews inventoried nearly 440 miles of motorized access routes within the CCMA. Routes were recorded using global positioning system technology. Information relating to type of route and trail maintenance objective, location, and pertinent features were recorded, along with assessment according to State of California soil loss standards. This information was transferred into the resource planning team's Geographic Information System (GIS) and Access databases. These inventoried routes are shown on Map 1-3 and are the database used in this route designation process.

BLM has commissioned aerial over flights during 2004 to compare the inventoried routes to those visible from the air using the latest digital imagery. These data are not yet available. The number of existing routes to be shown in this aerial imagery and not surveyed by field crews is roughly estimated at 15 percent of the total miles or routes. Nevertheless, the baselines for inventoried routes used in this analysis are those surveyed by field crews between January 2001 and August 2003.

Over the past several years, many studies were completed within the CCMA, relating to ecology of the federally protected San Benito evening primrose, watershed analysis for erosion and sedimentation, water quality, asbestos exposure, and analysis of the barrens. This information was used to ensure that the designations meet both access and resource needs.

In conjunction with the Technical Review Team (TRT) for the CCMA, extensive evaluation criteria were developed for screening the routes and areas evaluated in the designation process. This designation project will complete a site specific analysis for each route within the inventory (using the criteria identified in Chapter 2) to arrive at the designated open and limited route network. Upon approval of the proposed Plan Amendment, a new user map would be issued in the fall 2004, clearly identifying designated routes and areas where motorized vehicle use is authorized. Each individual route and area will have a designation record, outlining the criteria and rationale for designation.

1.10 IMPLEMENTING ROUTE AND AREA DESIGNATIONS

There is an on-going public debate about signing of routes relative to their route designation. The two extremes of the debate can be simply stated as "Closed unless signed Open" or "Open unless signed Closed". The BLM's National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands (2001) does not recommend a default management strategy related to signing of routes. Until the route designation process is complete, current interim guidance (ROD, 1999) in the CCMA allows OHV use on all routes which are not signed or physically closed. Upon designation of a route system, it would be not be feasible to sign or physically close all routes or areas within the CCMA where OHV use would not be authorized.

The BLM's management strategy and guidance, in compliance with the CFR, are that OHV use shall be restricted to open designated routes, and that these open designated routes shall be clearly identified so that the public will be aware of locations where OHV use is authorized. BLM will employ a combination of signing strategies, and use the best techniques for an area. To a certain degree, there will be experimentation to solve problems and increase visitor compliance. In the CCMA, the BLM will concentrate on signing the open routes and closed areas. The route designation remains the same whether it is signed or not. The user is responsible for being aware of which routes are open for OHV use and which routes are closed.

By concentrating on signing of open routes, BLM will emphasize to the visitor what is available for use and not on what is closed. This will also maintain the wild-land character of the CCMA and minimize the cost of signing such a large area. Identification of designated routes and areas will be accomplished by route markers, information kiosks, and posting of appropriate signs. Additionally, BLM will prepare a map and brochure to identify open routes, present an appropriate land use ethic, and explain the Limited Use concept. Large signs indicating "Limited Use Area – Vehicle Travel Limited to Designated Open Routes and Areas" will be installed at major entry points and at congregation areas.

1.11 HUMAN HEALTH RISKS AND NATURALLY OCCURRING ASBESTOS

The Final EIS for the 1995 Clear Creek Management Plan Amendment and Draft EIS for this project (2004) discuss the available studies at the time of publication on naturally occurring asbestos in the CCMA and the related visitor exposure and health risk. The U.S. Environmental Protection Agency is currently conducting an asbestos exposure evaluation study in the Clear Creek Management Area. This study will provide further information on the exposure levels from various types of activities in the CCMA. Currently available results from recent sampling events are included in Appendix I. Initial results from the EPA study indicate that an environmental impact statement will be necessary to consider the new information and a range of management options for the CCMA. These initial results show some higher exposure values than the 1992 risk assessment. For example, the EPA data, sampled in September 2004, indicate that the tail rider in a line of three motorcycles was exposed to 0.955 fibers/cubic centimeter (f/cc), which is higher than concentrations reported for a tail motorcycle rider in the 1992 risk assessment.

Upon completion of this study, BLM will work with EPA and the public to appropriately respond to the new information. If the information is significantly different than the 1992 risk assessment, BLM will expeditiously initiate a NEPA process to consider the new information and potential management responses at the CCMA in light of any new findings. This subsequent NEPA process would address general public access and recreation at the CCMA and analyze a full range of alternatives. Chapter 4 includes further discussion on the EPA study. BLM will involve the public in any additional NEPA analysis and in considering any management changes to the CCMA.

1.12 SUMMARY OF CHANGES FROM DRAFT EIS

A number of changes have been made from the Draft EIS in this Final EIS. These changes do not substantially change the proposed action or present significantly new information. The following is a summary of the changes by Chapter.

Chapter 1

- Addition of Section 1.11 discussing Human Health Risks and Naturally Occurring Asbestos.
- Addition of Section 1.12 summarizing changes from the Draft EIS.

Chapter 2

- Only presents the Proposed Action. No changes were made to the other Alternatives presented in the Draft EIS.
- Proposed Action, as presented in the Draft EIS as Alternative A, has the following changes:
 - Additional 18 miles of open routes
 - Additional 6 miles of limited routes
 - Recalculation of acreages for open barren areas and RNA boundary
 - Includes text from the existing 1999 Record of Decision (ROD) for the Clear Creek Management Area.
 - Provides for additions to the route network of routes not assessed in this EIS using the designation criteria in the proposed action (from Draft EIS Alternative B). Total route network may not exceed 270 miles (as outlined in the 1999 ROD).
 - Removes actions that are outside the scope of the purpose and need for this project.
 - Removes actions that re-stated existing decisions that are outside the scope of the purpose and need for this project.
 - Addition of section on Monitoring and Adaptive Management from Draft EIS Chapter 4. Addition of detail on the monitoring and adaptive management strategy.

Chapter 3

- Addition of description of implementation of a temporary 2005 dry season restriction.
- Addition of description of ongoing EPA asbestos exposure evaluation.

Chapter 4

- Only presents impacts from the Proposed Action. Impacts from other Alternatives have not changed from the Draft EIS.
- Recalculated sediment yield from trails and barrens.
- Addition of Section 4.10 on Cumulative Effects from Draft EIS Chapter 5.

Chapter 5

- Cumulative Effects moved to Chapter 4.
- Addition of description of coordination and consultation.

Appendices

Appendix A – changes designation of certain routes.

Appendix C – adds details on priority of fencing activities.

Appendix H – includes new water quality data.

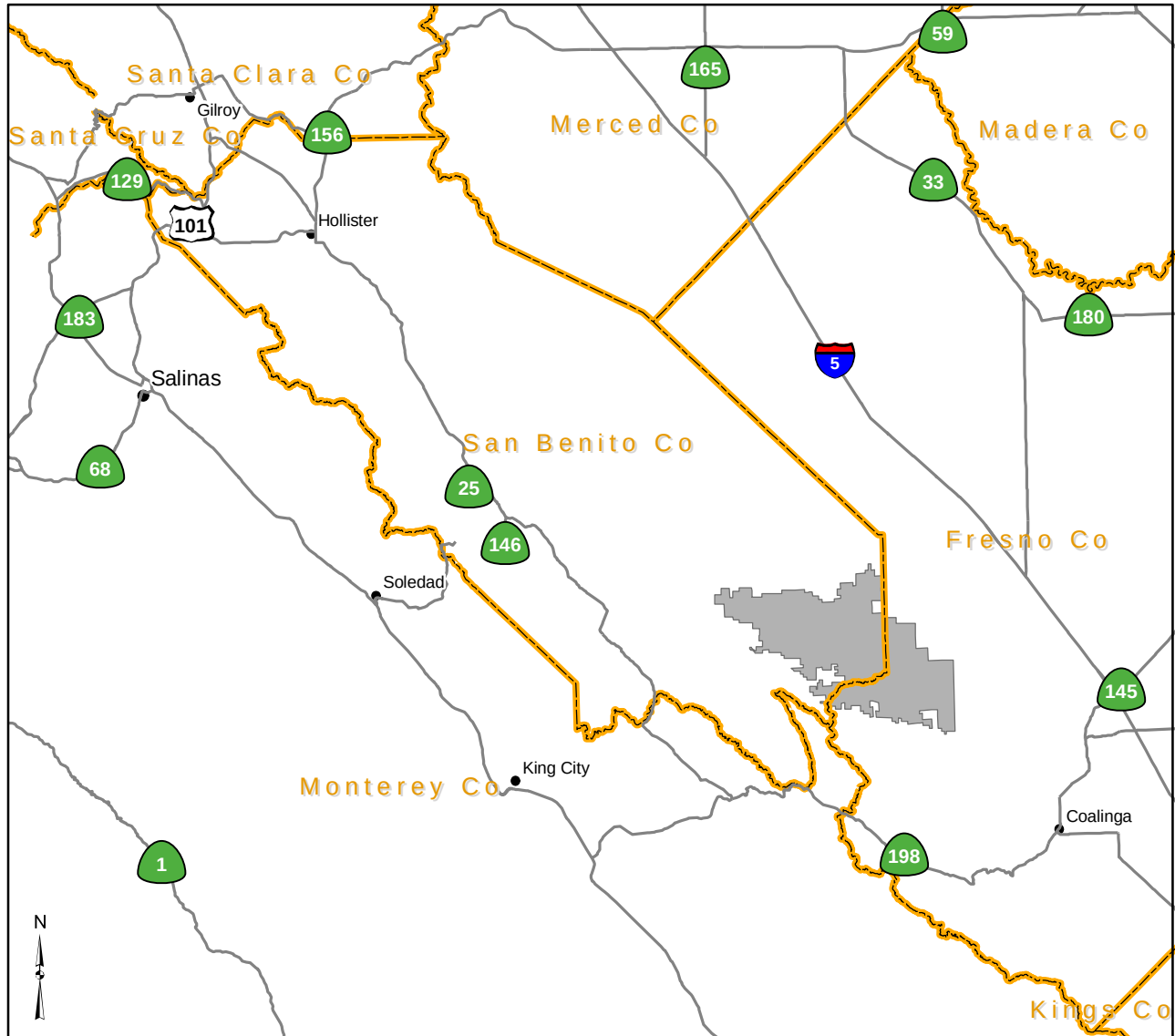
Appendix I – new appendix containing EPA’s “Human Health Risk Assessment -Asbestos Air Sampling Clear Creek Management Area, California September 15th, 2004”

Appendix J - new appendix providing BLM’s response to comments received on Draft EIS from organizations and agencies.

Appendix K – new appendix summarizing public comments received on Draft EIS and providing BLM’s response to comments.

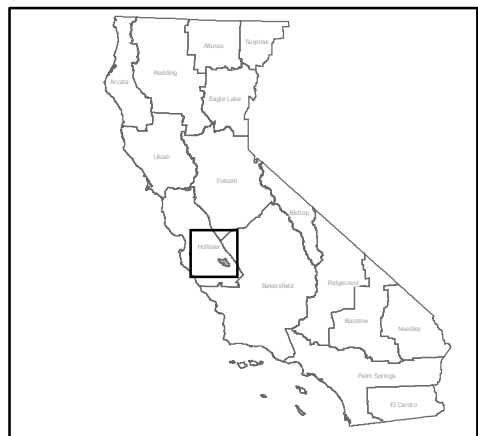
Appendix L – revised table of environmental consequences showing proposed action only.

Clear Creek Management Area Locator Map



0 12.5 25 50 Miles

-  County Boundry
-  Clear Creek Management Area



CHAPTER TWO

PROPOSED ACTION

2.1 INTRODUCTION

This chapter describes the Proposed Action, which primarily reflects Alternative A from the Draft EIS (2004) and incorporates aspects of the other alternatives. Alternatives B, C, and D have not changed since publication of the Draft EIS and are, therefore, not re-printed here. BLM finds that the Proposed Action, as described in this chapter, best meets the purpose and need for this project. Four alternatives, developed through the public participation process, and their associated environmental consequences were described in the Draft EIS (2004).

The CCMA was designated a Limited Use Area, with selection of the modified Alternative 3 (ROD, 1999). The Proposed Action will designate all specific routes (roads, ways, trails) within the Limited Use Area of the CCMA as open, limited, or closed, and designate barrens as areas that are open or closed. Within the CCMA, the Limited Use area is defined as restricting OHV use to designated areas and trails. All routes not designated as open or limited are closed. OHV recreation use would be allowed only on trails and areas that are signed for use. An additional subset of routes will be designated for “administrative use” by permittees, licensees, rights-of-way holders, and the Federal government and authorized representatives. These routes have the same restrictions as closed routes and will not be available for casual recreation use. These routes differ from closed routes, in that they will be regularly maintained and will not be considered for restoration. A majority of closed routes will be identified and prioritized for restoration over a period of years. Restoration refers to reclaiming of closed routes to revert to a natural state over time and disappear into the landscape. Route restoration will be evaluated through a separate environmental analysis. Acquired lands within the CCMA are included in this designation project.

The Proposed Action also proposes the designation of boundaries and interim management for the expanded San Benito Mountain Research Natural Area (SBMNRA).

Table 2-1. Key Characteristics of the Proposed Action

Routes (miles)		Open Barrens (acres)
Open	201	478
Limited	15	
County	26	
Total Miles – Recreation Use*	242	
Trail Types (miles)		Research Natural Area (acres)
Paved	3	4147
Improved	26	
4-wheel Drive	25	
Jeep	53	
ATV	35	
Single Track	100	
Total Miles	242	

* Mileage includes routes currently available for public use, but not under BLM jurisdiction.

2.2 DEFINITIONS

Off-Highway Vehicle (OHV). Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) any nonamphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used in times of national defense emergencies.

Open Route. Access on route by motorized vehicles is allowed. Specific uses with potential for resource damage or significant conflict with other use may require specific authorization.

Closed Route. Access on route by motorized vehicles is prohibited except for: (1) fire, military, emergency or law enforcement vehicles when used for emergency purposes; (2) combat or combat support vehicles when used for national defense purposes; (3) vehicles whose use is expressly authorized by an agency head under a permit, lease, or contract; and (4) vehicles used for official purposes by employees, agents, or designated representatives of the federal government or one of its contractors. Use must be consistent with the multiple use guidelines for that area.

Administrative Use – Official use per CFR 8340.0-5(d): use by an employee, agent, or designated representative of the Federal Government or one of its contractors, in the course of his employment, agency, or representation.

Limited Route. Access on a route by motor vehicles may be limited to use in one or more of the following ways and limited with respect to: type of vehicle; number of vehicles allowed; time or season of vehicle use, or; permitted or licensed vehicle use only

Open Area. An area where motorized vehicle use is allowed and is not constrained to a specific route of travel.

Limited Area. An area restricted at certain times, in certain areas, and/or to certain vehicular use. Types of restrictions include: types and numbers of vehicles, time or season of vehicle use, and use on designated roads and trail.

Closed Area. An area where OHV use is prohibited.

Casual Use. Casual use of public lands in the context of OHV access is defined as the use of routes not requiring a specific authorization.

Authorized Use. Authorized use is the use of routes approved through a permitting process for specific activities (e.g., rights-of-way issued for development of communication sites, or circumstances of environmental sensitivity or organized events require a recreation permit).

2.3 GENERAL POLICIES AND GUIDANCE

The following are existing policies and management guidance that will be followed:

- Compliance monitoring will be conducted for the protection of San Benito evening-primrose (CABE) to document the condition of the species, habitat, and the protective measures in place. Monitoring will record direct disturbance to CABE, CABE habitat, and CABE

potential habitat by off-highway vehicle use, including but not limited to tire tracks, trampling of plants, soil compaction, soil displacement, seed displacement, and soil erosion and sedimentation. Biologists will visit occurrences monthly from October to May and on a less frequent basis during the off-season. Additional BLM staff will monitor integrity of protective measures on a more frequent basis. The intensity and extent of disturbance at each occurrence will be evaluated annually with FWS to determine adaptive management. BLM will coordinate with FWS in revising the compliance monitoring plan to promote the long-term conservation of the primrose. Annual population census monitoring will be conducted and reported to FWS.

- BLM will comply with the 1998 Programmatic Agreement (PA) between California BLM and the California State Historic Preservation Officer (SHPO). BLM meets annually with the California SHPO to renew this agreement. The PA was developed to fulfill the responsibilities of the National Historic Preservation Act (NHPA) and to implement the National Programmatic Agreement (NPA) between the BLM, the Advisory Council on Historic Preservation (ACHP), and the National Conference of State Historic Preservation Officers. The PA is designed for the BLM to “integrate its historic preservation planning and management decisions with other policy and program requirements to the maximum feasible extent in the public interest” (1998:2). The PA meets the Section 106 requirements of the NHPA to “take into account the effects of the agency’s undertaking on properties included in or eligible for the National Register of Historic Places”(NRHP) as cited in 36CFR800.1(a).
- BLM will continue to monitor water quality, soil erosion, and sediment conditions within the watersheds of the CCMA. The BLM will implement Best Management Practices (BMPs) to reduce impacts to watershed resources, and will continue to evaluate and update these measures as needed to minimize impacts to water quality, control erosion and sediment production, and protect sensitive resources. The BMPs will incorporate the soil loss standards for OHV areas, developed jointly by BLM and California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division. These measures are contained in Appendix D.
- Best Management Practices (BMP) related to watershed improvement and road maintenance projects will continue to be implemented to reduce erosion and off-site sedimentation transport (see Appendix D). All maintenance work on designated routes will conform to the Route Management Objectives outlined in Appendix C, and comply with Monterey Bay Unified Air Pollution Control District and San Joaquin Valley Air Pollution Control District air regulations for airborne asbestos. BLM will continue to implement visitor controls to ensure visitor and worker safety during all phases of route work.
- BLM will obtain California Department of Fish and Game permits and Clean Water Act Section 404 permits from the U.S. Army Corps of Engineers, for stream alteration and BMP watershed management practices as necessary and appropriate.
- Open or limited routes may be closed temporarily if necessary according to soil loss assessment, resource impacts, or required maintenance. Emergency limitations or closures are not OHV designations, but remain in effect until the adverse effects are eliminated, measures are in place to prevent their recurrence, or revised OHV designations are adopted.
- There are two types of seasonal closures employed on the CCMA, wet season and dry season. In both cases, roads remain open for administrative use. The dry season closure is implemented to reduce air emissions and protect the public from these airborne emissions.

The wet season closure reduces rutting of roads and trails, reducing sediment transfer into the various watersheds.

- All route maintenance activities will be addressed in an annual corrective route maintenance plan and will undergo environmental review by appropriate staff. Route maintenance activities will be conducted in a manner that avoids impacts to sensitive resources, species, and habitats.
- Any and all route work will avoid a "may affect" situation for the San Benito evening-primrose (*Camissonia benitensis*). Accordingly, maintenance at some locations might be only partially implemented, or modified, or deferred until after consultation with the USFWS is completed.
- Routes that traverse abandoned mine lands will be designated closed, unless effectively fenced to prohibit access to mine areas.
- BLM will continue to evaluate conformity with California State soil loss standards. BLM will maintain and update the Access database structure for route inventory, soil loss standards, maintenance, and monitoring. Updates will be incorporated as route work and monitoring are completed.

2.3.1 Existing Land Use Plan Decisions

This project proposes actions to implement and/or amend the following existing land use plan decisions for the Clear Creek Management Area as adopted in 1999 ROD:

- Resource Condition Objective 3 (1999 ROD): Maintain or enhance water quality in all watersheds. Reduce erosion and sediment transport in all CCMA watersheds by reducing the number of miles and barren acreage available for vehicle use, and by implementing BMP's for all road work.
 - Management Action 9 (1999 ROD): Barren hillslopes greater than 10 acres in size will be reviewed to determine potential for erosion and sustainable OHV use. After completion of the barren area inventory and subsequent designation, a subset of all barrens will be monitored annually to determine soil loss and water quality impacts. Barren acreage available for OHV play will be adjusted accordingly.
- Resource Condition Objective 4 (1999 ROD): Expand the boundaries of the San Benito Mountain Natural Area to include a contiguous cross-section of the unique serpentine and adjacent ecotones found only within this area, using easily identifiable geographical landmarks as boundaries wherever possible.
 - Management Action 13 (1999 ROD): The San Benito Mountain Natural Area will be redesignated as a Research Natural Area and may be expanded to as much as 4,082 acres. A research management plan will be developed to encourage scientific studies in and around this area. The area will be proposed for a mineral withdrawal.
- Resource Condition Objective 5 (1999 ROD): Manage the Clear Creek Management Area as a Limited Use area. Based upon resource management criteria, designate routes and open play areas available for OHV use as resource conditions warrant.

- o Management Action 14 (1999 ROD): The 50,000-acre CCMA will be designated a Limited Use area. Existing open routes and areas in the BLM database (comprised of United States Geological Survey topographical map information, orthophoto quads, aerial photos, and Global Positioning System field mapping information) at time of approval of the Record of Decision, will continue to be open for vehicle travel until a disposition of routes and areas has been analyzed by the environmental process. Environmental review of all known open and closed routes and areas in the database will be completed within 1 year. Criteria to be considered will include proximity to sensitive resources (stream crossings, special designations, biological and cultural resources, mine sites), private land, erosion and maintenance concerns, motorized and non-motorized recreation opportunities, and administrative and local access. On-going designations (signing, barriers, etc.) of open and closed routes and barren areas will continue and will be monitored for compliance. No route proliferation will be allowed, and violations of use designations will be subject to appropriate law enforcement action.

2.4 MANAGEMENT ACTIONS

The following decisions are proposed for the designation of a route system and barren areas, and designating the boundaries of the expanded RNA.

2.4.1 Designation of a Route System

Routes of Travel Designations

- Designate the routes of travel network, consisting of Open and Limited routes, for casual use as shown in Appendix A and Map 1-1. All routes not designated open or limited, are designated as closed. Designated closed routes will be removed from the travel network. Casual OHV travel will only be allowed on designated “Open” and “Limited” routes which are signed for use. All designated routes have been screened through the criteria in Appendix A and include a designation record and rationale. Within the CCMA Limited Use Area, all casual use will be restricted to designated open or limited routes. Individual route determinations are presented in tables in Appendix A. Certain Closed routes would be identified for Administrative Use, defined as, “official use” by the Federal Government, it’s designated or authorized representatives, permittees, lessees, or rights-of-way holders. Cross country travel will not be allowed anywhere in the CCMA, except for designated open barrens.
- During implementation of the designated route network, unsigned designated open routes would remain closed to all vehicles until signed.
- The following are additional decisions related to routes in the designated route network:
 - o R001 between the intersection of R002 and R011 is renumbered R009 (Aurora Grade).
 - o The Aurora Mine area between R009 and R014 and between R014 and the boundary of the RNA would be closed to all motorized vehicle use and camping.

- o R017, R018, T171A &B, T219, T220, and T221 would be designated as Limited (limited to 4-wheel vehicles and ATV's only, no motorcycles).
- o T 151 would be re-routed in T.18 S., R12 E., sec.'s 8 and 22 that cross private lands.
- o KCAC Road would be designated Closed for administrative use only.
- o R019B, White Creek Road (within the Atlas Mine) would be designated Closed for administrative use only.
- o R019A, White Creek Road (south of the Atlas Mine) would be designated Closed for administrative use only.
- o R007, T217, T233, and T240 would be designated Closed for administrative use only to allow access to private lands.
- o T158B, Sawmill Creek Road would be designated as Limited, for wet season vehicle restriction.
- o The Byles Canyon Road, Tucker Canyon, Cane Canyon, and Baker Canyon Roads would be designated Closed for administrative use only.
- Additional routes not considered in this EIS, may be added to the designated route network through inventory, soil loss assessment, and screening using the criteria in Appendix A. Routes may be added to the designated route network until the total number of routes (including non-BLM administered) available for casual recreation use totals 270 miles.
- Minor modifications of the route network during plan implementation will be allowed and will include the following:
 - o Minor realignments of a route necessary to avoid sensitive natural or cultural resources,
 - o Minor realignments of a route necessary to reduce impact on sensitive species and habitats,
 - o Minor realignments of a route that will substantially increase the quality of the recreational experience, but that will not affect sensitive species or habitat, or other sensitive resource values,
 - o Minor realignments of a route to avoid mines and private lands.

“Minor realignment” is defined as a change of no more than ¼ linear mile of an individual designated route. This could include the opening of an existing previously closed route that serves the same access need as the route that is to be realigned. It could also involve re-routes of a segment of a route, to avoid the above mentioned resource conflicts. All new construction will undergo environmental review and NEPA compliance. All realignments and re-routes will be documented in the official record and kept on file at the BLM Field Office.

- A difficulty rating system will be implemented for all designated open and limited routes. Ratings will be identified on route markers within the Clear Creek Watershed.
- California State Soils Loss Standards and Monitoring will be implemented on all designated open routes and surveys completed on an annual basis. Routes may be temporarily closed until corrective maintenance repairs can be completed if necessary.

- Designated Closed routes will be selected and prioritized for restoration and reclamation, with subsequent environmental analysis completed.
- Portions of routes crossing non-BLM lands will not be designated. Landowners/managers will be responsible for preventing public access to or across their lands. BLM may negotiate reciprocal rights-of-way as appropriate to maintain the integrity of the route network. Landowners/managers within the CCMA were contacted during the public comment period. Requests for closure have been incorporated into the Proposed Action. Routes crossing non-BLM lands may be depicted on route maps as a part of the existing situation, but BLM has no jurisdiction for decisions related to the status of those routes.
- All lands recently acquired within the CCMA boundaries by BLM will be designated as limited use areas and incorporated into the designated route system. See Map 1-1 for the location of these newly acquired lands within the CCMA.
- Stopping and Parking will only be allowed within 40-feet of the centerline of an open or limited route except for within the SBMRNA and specifically restricted areas (sensitive habitat, mines, private lands, etc.).

2.4.2 Designation of Barrens

- Designate all barrens, as depicted on Map 1-1 and in Appendix B, as open to OHV use. All other barren areas are designated closed to OHV use.

2.4.3 San Benito Mountain Research Natural Area Expansion

Research Natural Areas (RNAs) are areas that contain important ecological and scientific values, and are managed for minimum human disturbance. Because natural processes are allowed to dominate, an RNA is an excellent control site for similar plant communities that are being actively managed. Non-manipulative research and baseline data gathering are important components of RNA. An RNA is designated because the land has one or more of the following characteristics:

1. a typical representation of a common plant or animal association;
2. an unusual plant or animal association;
3. a threatened or endangered plant or animal species;
4. a typical representation of common geologic, soil, or water features; or
5. outstanding or unusual geologic, soil, or water features.

The following decisions are proposed for the SBMRNA:

- Implement management objectives and prescriptions that will permit natural processes to continue without interference in the SBMRNA, as outlined in the Interim RNA Management Plan (Appendix E). This plan outlines the prescriptions that will permit natural processes to continue without interference. It will also determine what characteristics of the habitat are important and what management response will be to changes in these characteristics, along with monitoring requirements, and specifying resource use limitations. It is important to avoid impacting these areas in ways which could adversely affect the natural, scenic, or ecological values for which established.

- The San Benito Mountain RNA will be expanded to 4147 acres as shown on the Map 1-1. This boundary incorporates areas containing unique vegetation communities, habitats, and species into the Research Natural Area, benefiting their long-term protection. Expansion of the boundaries of the SBMRNA will be based on:
 - Protection of the San Benito evening primrose(*Camissonia benitensis*), sensitive species, potential, and occupied habitat,
 - Inclusion of the unique vegetation communities (forest, T&E, and sensitive species),
 - Inclusion of watersheds/sub-watersheds to the extent possible, for protection of riparian habitat,
 - Inclusion of the transition zone between the serpentine and non-serpentine soils,
 - Delineation using identifiable geographical landmarks (routes, trails, ridges, etc.),
 - Reducing the impacts of OHV use and other conflicting uses,
 - Authorizing only those trails and areas, as determined by the authorizing officer, which will not adversely affect the natural, scenic, esthetic or other values for which established.

The proposed boundary adds acreage to the current SBMRNA boundary on the north and south sides of the Sawmill Creek watershed to protect sensitive resource values and riparian habitat. Additional acreage is also added on the northeast portion of the RNA to encompass a greater portion of the San Carlos Creek watershed for the protection of riparian areas, sensitive species, serpentine barrens, forest communities, and inclusion of transition zones. Upper Clear Creek Canyon is also included in the expanded RNA. Including these areas will also contribute to controlling OHV trespass into the RNA and closed mine areas. The expansion under this alternative will incorporate areas containing unique vegetation communities and habitats. The boundaries will be delineated using identifiable landmarks such as routes to the extent possible.

- Complete an activity level SBMRNA Management Plan. A monitoring plan will be a component of this plan, and documents key community attributes, produces standardized monitoring protocols, and identifies research needs which will allow more effective management of the RNA.
- Uses inconsistent with preservation of the values for which the RNA was designated will not be allowed. These include camping, building of a wood-fueled campfire, motorized and non-motorized vehicle use off designated roads, woodcutting, hunting/trapping, and plant gathering. The above restrictions apply to recreational use only and may be allowable for research projects. Grazing, prescribed fire, timber harvest, and pest suppression (native and non-native) shall not be allowed unless these actions can be shown to preserve the desired characteristics of the RNA, and only occur after environmental documentation and consultation with the U.S. Fish and Wildlife Service.
- A restoration/rehabilitation plan will be developed for the SBMRNA to rehabilitate disturbed areas (i.e. OHV play areas, roads, trails, and mine sites) within the expanded boundary.
- Adjacent lands should not have intensive use, unless an adequate buffer can be provided.
- Fences and barriers will be constructed to preclude OHV access into the SBMRNA.
- The existing San Benito Mountain Wilderness Study Area, which covers 1500 acres of the original SBMNA, will continue to be managed under BLM's Interim Management Policy for Wilderness Study Areas (H-8550-1).

The SBMRNA will be closed to sales of mineral materials; closed to locatable mineral activities that require reclamation; and available with no surface occupancy stipulations for leasable minerals.

2.4.4 Monitoring and Adaptive Management

The following activities are proposed:

The current Compliance Monitoring Plan will be revised to improve the BLM's ability to manage the CCMA in a manner that promotes the long-term conservation of *Camissonia benitensis* and makes efficient use of staffing and funding.

The BLM and the FWS have been working on an updated draft of the guidance used in previous years, tentatively entitled Adaptive Management Plan and Off-Highway Vehicle Compliance Monitoring Plan for the Clear Creek Management Area, and will continue to refine this document so it provides clear guidance regarding management activities in the CCMA. The approach used to develop the revision is to: 1) build upon existing documents and strategies that have established protocol for compliance monitoring; and 2) facilitate an adaptive management approach by a) improving transfer of information to managers, and b) providing managers with a set of recommendations that can be used to make efficient and timely decisions. The BLM proposes that the FWS continue to assist in development and review of monitoring programs for *Camissonia benitensis* at the CCMA.

The monitoring plan will likely include commitments to: 1) coordinate with FWS on implementation of adaptive management actions; 2) conduct annual area-wide monitoring of *Camissonia benitensis* habitat and population estimates; 3) analyze correlations between OHV use patterns and population levels; and 4) establish thresholds that would trigger adaptive management.

Specifically, the BLM and the FWS anticipate that the final working guidance being developed will include the following measures addressing conservation of *Camissonia benitensis*:

- ◆ **Population and habitat monitoring protocols:** Annual estimates of the distribution and abundance of *Camissonia benitensis*, and the spatial distribution of documented and potential habitat within the CCMA. Methods to provide these estimates are likely to be refined in the future.
- ◆ **OHV and other recreational use compliance monitoring:** Efforts to monitor compliance with rules and regulations governing use of the CCMA. The intensity and frequency of this effort will be commensurate with historical compliance data and other factors that affect risk to *Camissonia benitensis* and its habitats. Methods used to determine compliance levels are likely to continue to be refined in the future.
- ◆ **Interagency coordination:** The BLM and the FWS will continue to meet annually, or more often as needed, to:
 1. Review all plant and habitat abundance and distribution data and any relevant circumstances;
 2. Review all OHV and other recreational use compliance monitoring data;
 3. Evaluate this information and determine whether current accepted risk thresholds have been exceeded;

4. Develop any needed recommendations for managers;
 5. Generally evaluate CCMA Plan implementation, management strategy effectiveness, monitoring programs, and listed species risk thresholds;
 6. Determine whether either the BLM and/or the FWS believe there is any reason to reinstate consultation under section 7 of the ESA.
- ◆ **Erosion process studies and control strategies:** The provision to develop additional strategies to study, more fully understand, and manage soil erosion as it affects *Camissonia benitensis* habitats.

The BLM and FWS expect that it will take some time to finish and approve the current draft of this monitoring and implementation guidance. Additionally, following completion of the plan, refinement of monitoring protocols and management responses to new information will continue into the future. Should any current circumstances arise where more fundamental reconsiderations are needed, reinitiation of consultation under section 7 of the ESA may occur.

During the interim period prior to the development and approval of final monitoring and adaptive management guidance and protocols by the BLM and the FWS, annual evaluations and any needed management responses will be implemented, consistent with existing authorities. If, during these annual evaluations, the BLM and FWS cannot agree whether accepted risk thresholds have been exceeded, or agree on the appropriate management response to substantial compliance problems and associated risks to listed species, the BLM will ensure the protection of the species and associated habitats under its FLPMA authorities by closing relevant portions of the management areas in question.

2.5 ROUTE AND BARREN DESIGNATION METHODOLOGY

Routes

The BLM planning team developed extensive criteria for evaluating routes and areas in the designation process. These designation criteria address a variety of management issues and concerns, including compliance with statutory guidelines. There are many factors that contributed to deciding which existing routes and areas should be designated as open. The final designation of the route and barren network provides for the needs of the public land user, while protecting sensitive species and habitat, protecting natural and cultural resources, and protecting the unique ecosystem within the SBMRNA. Designation decisions are based on a variety of data, including previous studies, field inventory data, biological, environmental, cultural, and natural and recreation resources, land use, and land ownership. This process is standardized, repeatable, and can be logically followed; it assesses each route and area on its own merits and issues, and documents that assessment; systematically assesses both individually and cumulatively the effects of each route on biological, cultural, and natural resources; and establishes a clear link between the designation decision and the rationale for that decision. The process considered the level of impact of each route and barren; the number, density, and intensity of use of each route and area and its relationship to habitat fragmentation and cumulative effects; and ways to minimize the number and intensity of conflicting land uses.

A standardized and stepwise process was identified, whereby routes and barrens are evaluated relative to a list of criteria (see Appendix A) such as, resource sensitivity, soil loss, manageability, intended

route use, and recreation opportunity. From this evaluation of criteria a designation on use classification, open, limited, or closed, is made.

The first step in developing the proposed designations was to conduct a detailed field inventory and soil loss assessment of routes. This inventory was conducted from July 2001 to August 2003, assessing and documenting approximately 400 miles of motorized routes within the CCMA. Additional route inventory has been completed since and the process is ongoing. GPS units were used to collect a variety of resource information for GIS applications and Access databases. Dynamac Corporation completed an analysis of the barrens in April 1998, after conducting a geomorphic field evaluation and inventory of the serpentine barrens within the CCMA. The objectives of this evaluation were to determine the degree of soil erosion and sedimentation; evaluate natural and human influences on sedimentation and erosion within the barrens; and to develop a barren inventory and ranking system.

Once the field data was collected, the planning teams began the work of identifying a revised network of open and closed routes and barrens within the CCMA. Using GIS maps and specific field knowledge, the planning team made full use of background data to determine whether a route or barren should be open or closed. This data included existing as well as potential environmental concerns that might constrain a route and barren network, including:

- T&E and sensitive species and habitats,
- Cultural and Paleontological resources,
- Riparian areas,
- Soil loss assessment.

Access requirements and other land use data were also mapped, including:

- Route type, condition and use,
- Topographical and hydrological information,
- Private land ownership,
- Abandoned mines,
- Recreation point data.

The BLM planning staff screened all routes and barrens within the existing inventory through the criteria tables (Appendix A and B), made recommendations on the designation, and prepared a written rationale. A Data Element Dictionary was developed for each of the resource screening criteria, representing the data on which decisions about authorized recreation vehicle use of routes and barren areas is based. The data element dictionary describes the allowed responses for each criterion. As routes and barrens are screened through the criteria tables, data element codes are assigned based on staff evaluation. The last digit of the element code also represents a scoring feature, with totals greater than nine for all criteria deemed least suitable for open designation. Individual designation records and evaluation forms may be viewed at the Hollister Field Office. The designation record and evaluation form will document final designation of routes and barrens at the conclusion of this process and include necessary mitigation measures or restoration as needed. All data for the designations is managed in a relational database. A map of the proposed vehicle designations and expansion of the SBMRNA are included in the Appendix on Map 1-1. Implementation of the designations is outlined in Appendix C, Implementation Plan.

The route designation criteria have been combined into four tiers, roughly corresponding to the criteria's likelihood of requiring route closure. Where possible, mitigation measures are discussed that could be used to reduce the expected motorized OHV impacts under each criterion. Mitigation, as used in the designation criteria process, refers to management actions that BLM could undertake to

alleviate the effects of OHV use with respect to the designation criteria. The criteria are included in Appendix A.

Barrens

These criteria were selected following public comment, TRT discussion, staff meetings and interviews with professionals working in other areas with OHV use. Where possible, mitigation measures are discussed that could be used to reduce the expected motorized OHV impacts under each criterion. The Geomorphic Field Evaluation of Serpentine Soil Barrens, CCMA (Dynamac Corp., 1998), contains useful data to be considered in the designation process. The objectives of this field evaluation were: to determine the degree of soil erosion and sedimentation taking place within the barrens; to evaluate natural and human influences on sedimentation and erosion within the barrens; and to develop a barren inventory and ranking system. Key information from this study used in this designation process include; stream orders present, hydrographic position, vegetation cover, vegetation boundary/buffer, amount of gullying, slope, armoring present, sediment trapping features, and contribution of sediment to sub-watersheds with high erosion rates. For the purposes of this document "barrens" are defined as a general term applied to openings in serpentine hillslopes larger than 10 acres which support almost no herbaceous or woody vegetation. These criteria are included in Appendix B.

2.6 MITIGATION MEASURES

The following lists several proposed mitigation measures incorporated into the Proposed Action to lessen environmental impacts.

- **Route Maintenance:** Route maintenance and improvement work will be completed by BLM, a BLM contractor, or approved cooperator in accordance with the following implementation standards and references:

BLM manuals 9113, H-9113-2, 9114,

Federal Highway Administration's (FHWA) Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects Standards, US Forest Service Trails Handbook 2309.18, sections 2.32 a, b, and c, and

1995 Pacific Watershed Associates (PWA) report will be used for standards, guidelines, and recommendations.

Resource awareness training will be completed by all operators to ensure compliance with adopted route maintenance guidelines, with relevant inventory data incorporated into the training as appropriate. BLM manuals and PWA techniques are incorporated by reference in this DEIS. The BLM will continue to implement Best Management Practices to reduce impacts to watershed resources and control non-point source pollution. California OHV State soil loss standards will be used in monitoring and assessment of routes and areas, and will serve as the basis in developing corrective route management plans.

- **Public Notification:** BLM will notify the public with media releases and postings to clubs, landowners, claimants and other permittees, regarding scheduled route work, and regarding any temporary route closures or route diversions. Efforts will be made to ensure the public

will have alternative routes wherever possible, but there could be days when route segments within the CCMA might be closed to ensure the safety of the public. Safety information will be included in notifications.

- **Soil Compaction and Moisture:** Work on open routes will be done when soil moisture is sufficient to adequately compact the tread and prevent visible airborne asbestos emissions. If work is to be done under dry season conditions, then water will be added in sufficient quantities to maintain adequate soil moisture. Upon mechanical disturbance by the treads of track driven equipment, the soil will be re-compacted in six-inch or less lifts.
- **Stream Crossing Requirements:** To minimize sediment deposition into flowing streams, work will be performed during the low flow stages whenever feasible, or if, possible when the channel does not contain flowing water. If warranted, a temporary hay-bale check dam will be placed directly downstream to trap sediment and to reduce turbidity. Regardless, all work in perennial creeks will be performed with proper permits and coordination with the California Department of Fish and Game Stream Alteration permit guidelines, including Clean Water Act Section 404 permits from the U.S. Army Corps of Engineers.
- **Sensitive Resource Screening:** Work on routes will not take place until a screen for sensitive resources (TE plants, animals, cultural resources, mine sites, riparian corridors, stream crossing and vernal pools, etc.) by appropriate staff is completed. Screening will involve comparing maps and other data of known sensitive resources against maps of the proposed route maintenance projects. A sensitive resource and/or area intersecting a project within a 200-meter buffer will be identified and taken to the next level of analysis. Whenever feasible, project screening will take place at the end of the spring rainy season, for projects proposed for the following autumn. Additional resources review will be required for route maintenance projects involving activities outside of the historic zone of disturbance for a particular route (or a revised Area of Potential Effect).. The historic zone of disturbance is defined as that area within and adjacent to the route that has historically received route maintenance, and follows the guidelines identified in the Route Maintenance Objectives (Appendix C). Identified areas will be field-checked as appropriate, using a field documentation form or other method to identify whether the proposed maintenance treatment could proceed or whether the treatment had to be modified or deferred. If necessary, the field-check will identify what additional measures will need to be implemented to avoid impacting sensitive resources. These forms will then be entered into a database with fields to link it to the route project database and the resource database (currently being developed). The Field Manager will approve projects or modifications to projects prior to implementation, and copies of that documentation will be placed in the maintenance project binder and the Field Office NEPA binder. Programmatic environmental assessments, site specific environmental assessments, or categorical exclusions will document NEPA analysis for all route maintenance activities.
- **Flora/Fauna:** There will be no adverse impacts to known occurrences of federally threatened *Camissonia benitensis* without further consultation with the USFWS. There will be no known adverse impacts from route maintenance, to federal or California listed species and sensitive species (Appendix F), or to habitat with high or medium potential to support the sensitive species that are known to occur within the CCMA. Known occurrences of the several plant species listed in Appendix F, or current BLM Sensitive Species listings, will be avoided during route maintenance. Based upon field review, the proposed route maintenance for a particular site could be modified/downgraded (example: if a culvert were proposed, the

repair, clearing, or replacement of which will impact a known occurrence or habitat currently capable of supporting *Camissonia benitensis*, then a possible downgrade could be to install a rolling dip or other measure within the existing tread). Site-specific project plans will be developed for those locations where the potential exists to impact sensitive resources, and the stipulations required to minimize impacts will be documented as part of this project plan.

- **San Benito Mountain Research Natural Area and Wilderness Study Area:** The San Benito Mountain Research Natural Area (SBMRNA) contains a Wilderness Study Area (WSA) that will be managed under BLM's Interim Management Policy (IMP) and Guidelines for Lands under Wilderness Review until Congress makes the final determination as to wilderness or non-wilderness status. The Bureau will comply with the intent of the IMP, which will be to manage for non-impairment of wilderness values. Necessary maintenance of routes through the area will enhance overall wilderness quality by minimizing route-related impacts to the sensitive resources inside the SBMRNA/WSA. The Bureau will follow management guidelines that will enhance or maintain the characteristics of the SBMRNA (43CFR 8223), and in accordance with the ROD (1999). Areas along the roadways near the WSA will be rehabilitated using the most effective method available.
- **Cultural Resources (including Areas of Native American Cultural Significance):** All maintenance and proposed projects will avoid adversely impacting known cultural resources sites, in compliance with the California BLM-SHPO Programmatic Agreement of 1998. At this time, there are no areas within the Management Area that are known to possess religious significance to Native Americans. It should be noted, however, that prehistoric and ethnographic affiliations for this area have never been adequately identified due largely to a lack of supporting data for the region. BLM will evaluate and incorporate ongoing research, literature, and ethnographic and archeological reports from the region and incorporated into the interpretation of the prehistoric and historic landscapes of the CCMA. This cultural resource knowledge will in turn be used towards the application of BMP for management of the CCMA.

2.7 IMPLEMENTATION

Developing an effective signing protocol which provides for the greatest public compliance and allows the user to clearly understand the designated route network, will be a key component in successful implementation of the route and area designations. All designated open and limited routes and areas will be signed. Closed routes and areas will be prioritized for restoration. A variety of techniques will be used on closed routes to ensure compliance with the designation, including vertical mulching, obliteration, natural and man-made barriers, as well as law enforcement, education, and signing of some routes where prevalent resource concerns exist or intensive historical use patterns are present. Some routes or portions of routes will be left to natural reclamation processes. A detailed description and schedule of management actions related to implementation of this designation project is in Appendix C.

The BLM will evaluate alternative funding sources, including implementation of a Recreation Fee. A fee program will be used to supplement existing funding, primarily for operations, maintenance, and facility development. Implementation of a recreation fee program will identify a program that best fulfills the needs of the CCMA, its visitors, and the BLM as the agency responsible for management, to provide a quality recreation experience on a sustained basis. Implementation of any such program will have full public involvement.

CHAPTER THREE

AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This chapter provides a description of those portions of the environment that could be affected by the alternatives selected for analysis. Particular emphasis is placed on how those alternatives could affect the unique resource values of two specially designated areas within the CCMA - the Serpentine Area of Critical Environmental Concern (ACEC) and the San Benito Mountain Research Natural Area (SBMRNA). The San Benito Mountain Research Natural Area falls within the Serpentine ACEC. These areas require special management attention and monitoring, because most of the dispersed OHV recreation occurs within the ACEC boundaries. As a result of discussions with EPA during preparation of this FEIS, issues related to human health risk associated with exposure to naturally occurring asbestos are not discussed in detail in this chapter. These issues will be addressed in a subsequent planning process that will analyze the broader overall access and recreation use of the CCMA. The CCMA RMP Amendment and FEIS (1995) have previously depicted the affected environment for the CCMA in detail. This chapter summarizes earlier information and concentrates on new information in this document.

The planning area covers the 75,000 acre Clear Creek Management Area and includes portions of San Benito and western Fresno Counties. The heart of the management area is Clear Creek Canyon, which is located approximately 25 miles northwest of the town of Coalinga. Clear Creek runs through Clear Creek Canyon as it descends west from San Benito Mountain, until its confluence with the San Benito River.

3.2 TOPGRAPHY AND CLIMATE

Elevation within the Management Area varies from about 2,000 feet to over 5,000 feet. The highest peak in this portion of the Diablo Mountain Range is San Benito Mountain, at 5,241 feet in elevation. The topography is mostly mountainous and the slopes range from 30 to 70 percent, with small interspersed, flat lying stream terraces. Predominant in this landscape are steep, barren areas surrounded by brush-covered slopes with occasional rock outcrops.

Weather in the CCMA is typically Mediterranean: hot and dry in the summer and cool and wet in the winter. Summer daytime temperatures frequently exceed 100° F. Winter temperatures frequently fall below freezing and snow is common at the higher elevations. Precipitation, in the form of rain with some snow, occurs almost entirely from November to May. The average rainfall is 17 inches per year. Periodic flooding as a result of high intensity rainfall is not uncommon in this area, as rainfall can be as much as one inch of rain per hour.

3.3 AIR QUALITY, SOILS, AND WATER

3.3.1 Air Quality

The CCMA is within two air quality management areas as regulated by the State of California. These air basins are: the North Central Coast and the San Joaquin Valley. There are two regional air quality boards that oversee these air basins: the Monterey Bay Unified Air Pollution Control District

(MBUAPCD) and the San Joaquin Valley Unified Air Pollution Control District. The North Central Coast Air Basin (NCCAB) includes Monterey, Santa Cruz and San Benito Counties. A portion of western Fresno County located within the planning area is in the San Joaquin Valley Air Basin. The affected environment for air quality is based on public use within the 75,000 acre CCMA of approximately 50,000 visitors a year and the total Vehicle Miles Traveled (VMT) and is not directly related to the number of miles of unpaved roads or the selection of a particular route network. .

The Diablo Range effectively separates the San Joaquin Valley from the Salinas Valley and coastal marine weather patterns. Thus, the meteorological conditions in these two air basins are quite different. The mountainous Diablo Range restricts the circulation of air within the San Joaquin Valley, which is noted for its persistent winter inversions and "tule fog" and for its high summer temperatures. This restricted air circulation in the San Joaquin Valley allows for a build-up of pollutants which translates into a significant number of days with a poor-to-moderate pollution index. West of the Diablo Range, the air quality generally improves because the weather patterns and air circulation are heavily influenced by the cooler coastal marine conditions and air circulation.

The California Air Resources Board (CARB) makes State area designations based on criteria established for nine pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM₁₀), sulfates, lead, hydrogen sulfide, and visibility-reducing particles. Air basins in the State are either in nonattainment, attainment, or unclassified for NO₂, SO₂, Pb, and visibility reducing particles. The NCCAB is in moderate nonattainment for the ozone standard, unclassified/attainment for the CO standard, attainment for NO₂ and SO₂, and nonattainment for PM₁₀. San Benito County is classified as moderate nonattainment for ozone and unclassified for carbon monoxide. Emissions from motor vehicles traveling on paved and unpaved roads are estimated to contribute over 50 percent of directly emitted PM₁₀ within the NCCAB. California ozone exceedances for the NCCAB were recorded on eight occasions in 2002, and three times each in 2001 and 2000 (CARB), although there has been a significant downward trend over the past 15 years. California PM₁₀ violations were recorded at Hollister on one occasion in 2002 and zero times in 2001 and 2000 (CARB). Fresno County is designated as attainment for carbon monoxide (CARB, 2002).

The MBUAPCD meets federal standards for particulate matter and therefore does not have federal plans addressing those standards. San Benito County is designated as attainment/unclassified with respect to federal ambient air quality standards for ozone, carbon monoxide, and PM₁₀. The San Joaquin Valley Air Basin includes Fresno County, which currently exceeds both federal and California ambient air quality standards for ozone and PM₁₀. At a meeting in January 1997, the MBUAPCD indicated that BLM was in conformance with the State Implementation Plan (SIP) for ozone for the NCCAB. In the 1999 ROD, it was identified that BLM received a memo from the MBUAPCD which stated that for the NCCAB, "Direct and indirect emissions of VOC and NO_x are below the threshold level of 100 tons/year applicable to the North Central Coast Air Basin; thus a general conformity finding is not necessary." Additionally in the memo, the MBUAPCD stated that; "Since the NCCAB is unclassified for the federal PM₁₀ standard, a general conformity finding is not needed for PM₁₀ emissions."

The NCCAB has significant influences to air quality from variable meteorological conditions, and transport of air pollution from the San Francisco Bay Area, along with locally generated emissions. The nearby Pinnacles National Monument is also an air monitoring station, and the NCCAB's attainment status for ozone is closely linked to conditions monitored there. The Air Resources Board has determined that ozone levels at Pinnacles are highly influenced by transported smog from a number of regional sources, including San Francisco Bay and the San Joaquin Valley. Overall there has been a 24 percent improvement in ambient ozone levels at Pinnacles from 1987 to 1999, with

Pinnacles being very close to achieving the standard (MBUAPCD). Photochemical modeling which addresses ozone is typically done on a regional basis. The 2000 Air Quality Management Plan for the NCCAB contains a description of the photochemical ozone model prepared for that air basin.

PM₁₀ in the atmosphere can be caused by both environmental factors and human activities. Human activities that contribute to PM₁₀ emissions include combustion sources, fugitive dust sources, agricultural activities, and off-highway vehicle travel on un-paved roads and OHV use areas. The 2002 Estimated Annual Average Emissions (CARB) for San Benito County, indicate a total of 6.31 tons per day of PM₁₀ emissions from unpaved road sources, however it is likely that these estimates do not account for emissions from the CCMA. The other pollutants associated with exhaust from motorized vehicles are: Reactive Organic Gases (ROG), Nitrogen Oxides (NOX), and Carbon Monoxide (CO). For Off-Road Recreational Vehicles (Other Mobile Sources), the 2002 Estimated Annual Average Emissions (CARB) for San Benito County, from these pollutants in tons per day is, ROG/0.03 and CO/0.34. Since the San Joaquin Valley Air Pollution Control Board adopted a PM₁₀ reduction plan effective December 1993, all land-use decisions for the CCMA will need to conform to this plan.

The US EPA has established new National Ambient Air Quality Standards for PM_{2.5} emissions. These fine particles have been implicated as an increased health risk. Sources for PM_{2.5} emissions mostly consist of chemical compounds from combustion processes in vehicles. However, natural processes and human activities such as motorized vehicle operation easily erode serpentine rocks bearing asbestos (Wrucke 1995). Vehicle travel on unpaved serpentine roads and trails can also generate asbestos emissions and other fine dust of less than ten microns (PM₁₀), all of which can negatively impact air quality. The BLM's National Science and Technology Center has prepared an updated PM emission inventory for the CCMA based on soil type, silt loading, and vehicle type. This data quantifies the PM₁₀ and PM_{2.5} contribution from vehicles and is in Appendix G.

Within the CCMA Hazardous Asbestos Area ACEC, is a serpentine formation with the presence of naturally occurring asbestos. Surface disturbance, primarily from vehicle use on the unpaved roads in this area, generates asbestos emissions, which can exceed established Occupational Health and Safety Administration (OSHA) standards of 0.1fiber/cc for the Personal Exposure Level (PEL). Road maintenance, grading, and construction activities can also contribute to airborne asbestos emissions. The BLM must conform to the Asbestos Air Toxic Control Measure (ATCM) adopted by the MBUAPCD, relating to road construction and maintenance operations and the control of airborne asbestos emissions.

Studies have been conducted over the past decade by regulatory agencies to determine the impacts to air quality from vehicle use on unpaved roads in natural asbestos areas. The results of these studies indicate that the force of vehicle wheels on the road surface causes pulverization of the serpentine surface material, lifting asbestos fibers up by the passing vehicles and strong air currents, and suspending these particles in the air (EPA, 1989). The quantity of dust emitted depends on vehicle traffic, vehicle weight, the number of wheels per vehicle, vehicle speed, soil moisture, and concentration of asbestos in the soil. Unpaved routes in the CCMA generally have a pulverized texture when dry. After rainfall has saturated these road surfaces they become muddy and slippery, but within a short time the route surfaces can dry out and generate dust.

Air sampling investigations conducted by EPA indicated that asbestos concentrations were similar within the North Central Coast air basin and San Joaquin Valley air basin. This EPA study only addressed asbestos air pollution transport. The onsite generation and inhalation of airborne asbestos was determined by both EPA and BLM to be a potential problem from motorized vehicle use in the

CCMA. EPA is currently conducting a new risk assessment to determine potential health risks associated with exposure to airborne naturally occurring asbestos for a variety of recreation activities at the CCMA. Studies were conducted in September and November 2004, and March 2005. A final round of studies will be completed in September 2005.

National Emission Standards for Hazardous Air Pollutants (NESHAPS) includes an asbestos standard. The asbestos standard under the NESHAPS regulations, however, pertains only to asbestos mining and milling operations and does not set any airborne "threshold" for acceptable levels of airborne asbestos.

3.3.2 Soils

The Clear Creek Management Area is defined by a northwest-trending serpentine body (Serpentine ACEC), three to five miles wide and 15 miles long. The serpentine mass is highly sheared with the exposed rock being made up of small chips and plates that are generally friable and erode easily. Locally, there are some blocks of more erosion-resistant rocks which have been only moderately crushed and sheared; these rocks generally form the higher mountain tops and rock escarpments. This serpentine uplift is thought to have formed over 65 million years ago (Cretaceous Age) and contains a unique collection of minerals. This geologic assemblage is called the New Idria Formation. Surrounding the New Idria Formation are the approximately 100 million year old Jurassic Franciscan Formation, as well as the Cretaceous marine sandstone and shale of the Panoche Formation. The Franciscan group is the oldest group of rocks in the area and consists primarily of marine sandstone with minor shale and conglomerate inter-layered with basaltic lavas and associated lenses of chert. The Panoche formation consists mainly of layered shale and sandstone.

Five major types of soils have been identified within the San Benito County portion of the management area. The two major differences between these five groups are the source rock from which they are formed. Two main rock types exist within the Clear Creek Management Area, ultramafic rock (serpentine) and sedimentary rock. Soils derived from serpentine rock contain asbestos. Those soils derived from sedimentary rock do not contain asbestos. All soil types are prone to some form of erosion and soil loss due to natural conditions and human disturbance.

Soils within the CCMA ACEC are of the Atravesada, Henneke, and Shadeleaf series, which are characteristic of serpentinite. The soils are composed of gravelly clay loam to gravelly loam textures, and generally are relatively thin, averaging between two and three feet in depth over bedrock. Left undisturbed, the serpentinite soils found in the barrens typically develop a gravel lag or armor at the ground surface which contributes to reducing erosion potential. The soils are extremely sensitive to manmade disturbances, such as OHV use. The properties of serpentine soils (low calcium/magnesium ratio, high Ph, low organic matter and the presence of toxic elements such as nickel, cobalt, mercury, chromium, and lead) are such that plant growth is stunted or inhibited, resulting in the barren slopes, common to the CCMA. Soil formation and fertility are generally greater in the sedimentary derived soils. The sedimentary soils found in the CCMA are more productive and lack the barren areas typical of the serpentine-derived soil. In some locations such as open barren hillslopes, serpentine soils are being physically removed faster than they are being naturally replenished. Soil analytical results (Dynamac, 1998), revealed that the concentration of metals detected within the CCMA are inherent to a highly mineralized area. Some of these metals are in forms that are toxic to people and erode and flow out of the CCMA by water and air. Two metals are especially important: chromium and mercury.

Table 3-1 below depicts the miles of routes, percent of silt, and percent of asbestos in each soil type, related to the existing route inventory.

Table 3-1. Miles of Routes by Soil Type.

CCMA Soil Type	Soil Characteristics	Percent Slope	Percent Silt	Percent of Silt Containing Any Asbestos	Existing Miles of Routes	Proposed Miles Of Routes
742	Xerothents, cool - Liltén association	30 to 65	30.7	0	6.4	1.72
744	Liltén - Xerothents, cool association	15 to 50	36.1	0	27.8	13.51
757	Rock Outcrop - Borreguero complex	30 to 65	25.8	0	2.9	1.15
758	Xerothents, cool - Rock outcrop complex	50 to 70	17.8	0	0.4	0.11
761	Barrens	30 to 50	18	33.8	17.4	7.61
765	Atravesada - Henneke, Shadeleaf complex	10 to 40	28	93.4	96.7	61.99
767	Atravesada gravelly loam	30 to 65	31.9	96.4	147	85.71
768	Barrens	30 to 65	8.1	54.4	17.9	9.84
769	Barrens - Roacha -Xerothents	30 to 65	7.6	35.7	44.7	23.73
770	cool - Liltén association	30 to 65	38.6	0	9.1	1.38
773	Hentine - Rock outcrop complex	30 to 65	17.4	11.8	5.4	3.31
774	Hentine - Franciscan, Rock outcrop complex	30 to 65	16.6	9.3	17.5	9.57

3.3.3 Watershed Resources

The study area encompasses eleven sub-watersheds located within the CCMA, including; Clear Creek, Larios Canyon/Creek, San Benito River, San Carlos Creek, East Fork San Carlos Creek, Cantua Creek, Sawmill Creek, Picacho Creek, Diaz Creek, Leona Arroya, and White Creek. These areas represent distinct watersheds, often with extreme geographic, topographic, and mineralogical variability. The watersheds are drained by higher order perennial streams that, with the exception of White Creek, descend from San Benito Mountain. White Creek descends from Wright Mountain and flows to the southeast. Clear Creek flows to the west until it reaches the San Benito River, where it discharges. Larios and San Carlos Creek flow to the north where they discharge to Silver Creek. The topography of the CCMA is dominated by convex gently sloping ridges, with slopes becoming quite steep as they approach the stream channels and inner gorges. Elevations within the CCMA range from approximately 2,500 feet at the mouth of the drainage to 5,000 feet along the crest of the Diablo Range. The ridges and slopes are dominated by naturally occurring areas of serpentinite soils forming complexes of barren areas interspersed with chaparral and conifers.

The serpentine watershed and riparian areas in the CCMA have been subject to widespread surface disturbances over the last century. In general, the watershed conditions observed in the CCMA reflect naturally high rates of erosion that have been accelerated by human impacts. These watershed conditions result from a long history of surface disturbance, beginning in the mid-1850's, from road construction, logging, and mineral exploration and extraction, and in more recent times by off-road

vehicle travel and recreation. These watersheds have high erosion rates due to the steep, unstable slopes which are composed of soft sheared serpentine bedrock. Since the mid-1970's motorized vehicle recreation has been the dominant public use within the area. Road maintenance operations and techniques also influence erosion and sedimentation rates. Maintenance of the route network is based on annual soil loss assessment inventories, to prioritize the work and determine the appropriate measures to reduce erosion and off-site sedimentation impacts, and to provide for safe motorized access.

The riparian zones around the perennial streams and some intermittent streams, and the barren or sparsely vegetated serpentine slopes, exhibit a fragile ecology, diversity and assemblage of rare and unique plants. In addition, several special status plant and animal species occur in the CCMA and are dependent in some stage of their life cycles on proper functioning condition of creeks and streams. In total, Clear Creek and surrounding watersheds support plant and animal communities that are important from the perspective of California native biodiversity. The management of watershed resources for the CCMA necessitates understanding the relationships between surface water, soil erosion and sedimentation, with respect to surface disturbances from human activities.

A study was completed in 1998 by Dynamac Corporation, which conducted a field evaluation of the serpentine soil barren areas within the CCMA. The objectives of this study were, 1) to complete an evaluation of soil erosion and sedimentation taking place within the barrens, evaluating both natural and human caused influences, and 2) develop an inventory of barrens and prioritize them with respect to their potential for erosion and contributing to sedimentation. A variety of physical characteristics were analyzed, including, drainage area, relative size of barren within the drainage, soil color, vegetation type and percent of cover, amount of gulying, slope of ground surface, number and order of streams present, off-highway vehicle use density, amount and type of armoring present, mining history, proximity to access routes, and sediment trapping features.

Water

Water resources refer to all surface water runoff into rivers and creeks within the CCMA and the values that this water provides to people, wildlife, and vegetation. The San Benito River is impounded by a dam, forming the Hernandez Reservoir, approximately six miles north of the mouth of Clear Creek. The Hernandez Reservoir provides for groundwater recharge for northern San Benito County. The State of California Regional Water Control Boards (CRWQCB) have jurisdiction over water resources in the CCMA, as authorized by the Environmental Protection Agency under the Clean Water Act: the Central Valley Regional Water Control Board and the Central Coast Regional Water Control Board. The former agency oversees all waters flowing into the Central Valley, know collectively as the "West Side Streams", and the latter agency oversees those waters within the CCMA that flow into the San Benito River.

The Central Valley Regional Water Control Board has designated nine beneficial uses for this the "West Side Streams" (SWRCB 1975): Agricultural Supply (i.e. vegetation for livestock grazing), Industrial Process Supply (i.e. fire protection), Water Contact Recreation (i.e. swimming and wading), Non-Contact Water Recreation (i.e. camping, hunting and hiking), Warm Fresh Water Habitat (i.e. to sustain warm water aquatic species), Wildlife Habitat (i.e. for food, water, and shelter for wildlife), Preservation of Rare and Endangered Species, and Groundwater Recharge.

The Central Coast Regional Water Control Board has not specifically designated beneficial uses for any streams in the CCMA that drain into the San Benito River. For such unnamed waters in the Central Coast Basin two beneficial uses were identified; Municipal and Domestic Water Supply, and

Protection of Recreation and Aquatic Life. Designated uses for the San Benito River include; Municipal and Domestic Water Supply (MUN), Agricultural Supply, Industrial Service Supply, Groundwater Recharge, Recreation Contact/Non-Contact, Wildlife Habitat, Freshwater Habitat, Spawning and Reproduction, Freshwater Replenishment, and Commercial and Sport Fishing. Designated uses for the Hernandez Reservoir include those listed for the San Benito River and Navigation. California Water Resources Control Board has listed 2002 Clean Water Act Section 303 (d) Water Quality Limited Segments for the following streams; Clear Creek (mercury), San Benito River (fecal coliform and sedimentation), and Hernandez Reservoir (mercury).

Because heavy metals and asbestos are concerns in this area, the BLM contracted a water quality study (Dynamac, 1998) to determine the magnitude of heavy metals being deposited into streams from 15 abandoned mines. Soil and water sampling was completed below, at, and above each of the mined areas. Results from this study produced important findings. The background concentration of metals detected in soils tended to be above stated standards, and is consistent with the natural geochemistry of the area. However, differences in the water samples taken from below and above mined sites, indicated that disturbed areas are contributing to metal concentrations over and above the naturally high levels. Accessibility by vehicles was also found to potentially be a factor in increasing concentrations of metals transported in the water downstream. As a result of this study, five mine areas, the Alpine, the Aurora, Clear Creek, Larious Canyon, and the Molina were determined to not only pose the greatest ambient hazard in terms of inhalation of hazardous materials, but also pose the greatest water contamination risk. These were all closed to vehicle use with the issuance of a Federal Register notice in February, 1998.

To evaluate the potential threat to human health, BLM compared the results of surface water analyses (Dynamac, 1998) to Federal drinking water regulations. From six mine sites, down gradient surface water samples contained concentrations of antimony, cadmium, chromium, mercury, and nickel that exceeded the Maximum Contaminant Levels (MCLs). On Clear Creek and the San Benito River, where multiple sampling points were established, cumulative, increasing concentrations did not appear to occur. Mine sites in the San Carlos and Larious Creek watersheds were the only locations where metals were detected at concentrations three times the background levels. In general, the metal concentrations detected in the Clear Creek watershed were very low. Mercury compounds were the most prevalent metal compounds detected, occurring in all but one sample, over the five watersheds. Results from combined surface water sample data for the San Benito watershed indicated background and down gradient concentrations of nickel that exceeded the MCL. The San Carlos watershed exhibited means background and down gradient concentrations of mercury that exceed the MCL. The surface water exposure pathway would appear to present a minimal risk to recreation users of the CCMA, because of the limited number of days that a typical user visits, and the fact that the surface water is generally not used as a potable water source. The Alpine Mine and Larious Canyon would present the greatest exposure to users.

TMDL stands for a Total Maximum Daily Load. This is the amount of a particular material that a water body can assimilate on a regular basis and still remain at levels that protect beneficial uses designated for that water body. A TMDL is approved by the Regional Water Quality Control Board, the State Water Resources Control Board and the US Environmental Protection Agency. Once approved, it establishes 1) an allowable amount of a pollutant to a water body, 2) proportional responsibility for controlling the pollutant, 3) numeric indicators of water quality, and 4) implementation to achieve the allowable amount of pollutant loading.

TMDLs are developed by analyzing data and information provided by existing or commissioned studies, and/or by stakeholders interested in the water body or conditions being investigated.

Development results in a clear definition of water quality problems in a water body or watershed, a numeric value for the TMDL, and an implementation plan that identifies how the problems will be solved and the TMDL achieved. The implementation plans identify new requirements, based on existing regulations, in conjunction with other existing water quality management activities. The implementation plans identify which requirements or activities (via voluntary or regulatory programs) apply to which agencies, landowners, resource managers, and/or the public. Typically, TMDLs and their implementation plans will be approved by adoption into the Regional Board's Basin Plan.

Section 303(d) of the Clean Water Act requires States to identify waters not attaining applicable water quality standards. The State complies with this requirement by periodically assessing the conditions of the rivers, lakes and bays and identifying them as "impaired" if they do not meet water quality standards. Clear Creek and Hernandez Reservoir were identified as impaired by mercury on the 1998 Clean Water Act Section 303(d) list of impaired water bodies.

The California Regional Water Quality Control Board, Central Coast Region (Regional Board) adopted a "Total Maximum Daily Load" (TMDL) for Mercury in Clear Creek and Hernandez Reservoir at the March 19, 2004 Regional Board meeting. This TMDL was approved June 21, 2004 by EPA, which became the effective date. The TMDL identifies attainable numeric targets to protect water quality, determines that the implementation measures to achieve these targets have already been established by the US Bureau of Land Management, and designates a monitoring program to ensure that the implementation is effective. Key components of the Resolution are to place responsibility upon the BLM to submit a satisfactory monitoring plan to the Regional Board, and to report monitoring results quarterly. A variety of tables developed by the Central Coast Regional Board are in Appendix H.

Data from USGS and Central Coast Regional Board collected from 1995 through 2002 indicate total mercury levels in water in Clear Creek ranging from less than 0.1 µg/L up to 1.5 µg/L. The lowest Basin Plan objective for mercury (0.0002 mg/L) is superseded by the California Toxics Rule (Federal Register, 2000), which includes a health-based mercury objective of 0.050 µg/L (total mercury) for consumption of organisms and water (for the MUN use designation). This value is the numeric objective for all waters in the Region designated for municipal and domestic supply (MUN). The numeric target selected for the TMDL for total mercury in water is 0.050 µg/L for Clear Creek. The available data indicate that the San Benito River is currently meeting water quality objectives for mercury. The data also indicate that Hernandez Reservoir is currently meeting water column objectives for mercury (1998 data.) Six samples were collected in Hernandez Reservoir in 2002 by the Regional Board and all samples were below water quality and sediment objectives for mercury. However three recent (12/2004 – 05/2005) samples indicate total mercury in Clear Creek in the range of 0.19-0.21 µg/L. Of 41 water quality samples collected from 1995 to 2002, 11 (27 percent) were in excess of the state mercury objective for Clear Creek. A water sample for mercury was taken in San Carlos Creek in March 2005 with the results indicating 0.0033 mg/L (parts per million) compared to the Public Health Drinking Water Limits of 0.002 mg/L.

In preparation of the Regional Board's Technical Report (March 2004) related to analysis for mercury impairment, two major activities that have been conducted in the Clear Creek area were evaluated for their possible contribution to mercury loads in the creek. The activities evaluated were: Off-Highway Vehicle use (OHV) and abandoned mine lands. Regional Board staff considered both of these activities in designing the water quality sampling program conducted in 2002. Seven locations were selected on Clear Creek and positioned to evaluate potential water quality impacts from the two major categories of activity. Sample locations were mostly located in pairs to evaluate water quality

immediately upstream and downstream of a targeted area. Sites were located upstream and downstream of mining and OHV influences.

Background levels of mercury in soils and sediment in the Clear Creek area was estimated to be 0.2 mg/kg. Sediment data from paired sample sites were essentially all at or below this value except for one sample collected at the furthest downstream location, the USGS gage. “This indicates that sediment loading into the creek is roughly at background levels throughout most of the watershed, which suggests that the OHV activities are not causing any significant mercury loading. These data also suggest no appreciable loading is currently occurring in the vicinity of the Clear Creek and Alpine mine drainage.”¹

Evaluation of the water column data from 2002 Regional Board sampling, yields a conclusion similar to the one drawn from the sediment data. Three of the samples collected in April 2002 exceeded the total mercury objective of 0.050µg/L. Two locations were in the vicinity of Staging Area Two and downstream of where most mine drainage enters the creek, and were only slightly above the objective. The location where the sample result was about three times the objective was the most downstream location at the USGS gage. However, a USGS sample collected just one week earlier at this same location and under very similar flow conditions was found to only have 0.02 µg/L of total mercury. In the May 2002 sampling event, none of the Clear Creek samples had any detectable water column mercury.

“Based on both the water and sediment data collected by the Regional Board, it appears that high-use OHV areas are not a significant source of mercury loading. It also appears that abandoned mine lands may no longer be contributing appreciable loads of mercury to Clear Creek. One possible reason that abandoned mines may no longer be major sources of mercury to the creek is recent efforts of the US Bureau of Land Management (USBLM) to remediate those mine areas”²

A study conducted by Pacific Watershed Associates (1995) determined nearly half the sediment delivered to streams within the CCMA came from stream and swale crossings. Since 1993, BLM has contracted with the U.S. Geological Survey to monitor water quality and sediment at the Clear Creek Gauging Station, located near the Oak Flat Campground. Data collected includes information relative to suspended sediment, water flows, bedload measurements, and metal concentrations. This data is posted on the USGS internet website, and will be used to evaluate watershed response to both natural and human-caused impacts which cause soil loss and sediment transport. A preliminary review of the USGS water quality data indicates that BLM’s restoration of abandoned mercury mines, has reduced the amount of mercury sediment since this project began in 2000. In 2005, BLM in conjunction with USGS began collection of water quality samples in Clear Creek for asbestos analysis. Results from two samples taken in April 2005 indicate 0.187 and 0.083 million fibers per liter. Water quality data is in Appendix H.

The extent of the contribution of heavy metals and asbestos into the Hernandez Reservoir remains an issue. Unregulated human use of the CCMA could exacerbate water quality problems, but given the underlying geology of the area, some continued natural contribution of mercury and asbestos may be unavoidable. By eliminating unregulated use, by eliminating vehicle access to abandoned mines, and

¹ Central Coast Regional Water Quality Control Board, Staff Report; *Total Maximum Daily Load, Technical Support Analysis for Mercury Impairment of Clear Creek and Hernandez Reservoir*, March 10, 2004.

² Central Coast Regional Water Quality Control Board, Staff Report; *Total Maximum Daily Load, Technical Support Analysis for Mercury Impairment of Clear Creek and Hernandez Reservoir*, March 10, 2004.

by completing significant road repairs and improvements, the BLM hopes to minimize the potential for additional human-caused impacts to the subject waterways.

BLM policy is to ensure that these designated water uses are maintained or enhanced. BLM is working to develop closer working relationships with the appropriate water control boards as well as other federal, state and local agencies which share responsibilities to meet both State and Federal water quality goals and objectives as they apply to waters in the CCMA. Other agencies that BLM regularly contacts for advice and assistance include the U.S. and California EPA, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the U.S. Geological Survey.

Erosion

Soil erosion is the physical removal of the soil by means of storm runoff, raindrop impact, wind, animal, or human activity. The processes most responsible for soil erosion in the CCMA are surface erosion (sheet and rilling), fluvial erosion (gullying or streambank erosion), and landslides. Moderately high to extremely high rates of soil erosion appear to be concentrated near routes, hillclimbs, and the inner gorge areas adjacent to stream channels. Eroded soil that reaches streams is transported downstream during high flows and affects downstream land and water users. Many factors affect the degree of soil erodibility and the type of erosion process. Rainfall intensity, slope steepness, plant cover and the physical and chemical properties of the soil affect the extent and type of erosion that occurs.

In part, high rates of erosion in the serpentine watersheds is a natural consequence of the erodible soils formed from highly sheared and fractured serpentine rock containing abundant chrysotile asbestos. Many of these steep slopes lack soil or vegetative cover. On these barren slopes, run-off from winter storms causes extensive rill and gully erosion, which contributes to sediment yields in stream channels. Two important causes of gully formation, which have been large contributors to sediment yield from the CCMA route system, are stream diversions and through-cut roads. Erosion on both barren and vegetated slopes affects soil texture and composition, and can reduce infiltration capacity, soil productivity, and contribute to the release of asbestos fibers. Additional factors contributing to erosion include; hillclimbs that lead directly into stream channels, OHV use of barrens, removal or damage of riparian vegetation, streambed disturbance by vehicles, eroding roads and trails, and stream channel processes.

Sheet erosion occurs when “sheets” of water flow across the barrens and remove loose particles of soil and transport them downslope. Sheet erosion in general is so gradual of a process that it can go on undetected except for noticeable color changes in these serpentine soils. In the Clear Creek watersheds, a subtle soil color change usually can be seen where sheet flow has removed the uppermost soil horizon which is red-brown and has exposed the underlying blue-grey sub-soil. OHV use can disrupt the gravel lag and loosen underlying soil particles and structure, intensifying the effects of sheet erosion. The overall rate of sediment delivery to streams within the CCMA from sheet erosion processes appears to be relatively low.

A study was completed in 1993 by PTI Environmental Services to assess the rate of background soil erosion from the Clear Creek watershed, and to examine the magnitude of accelerated erosion due to human use of the watersheds. Modeling was used to estimate background (undisturbed) soil loss and the cumulative volume of soil expected to reach Clear Creek. The undisturbed annual soil loss ranged from 2 to 25 tons/acre, with a mean of 11 tons/acre. Most of the sub-watersheds had soil losses in the range of 9 to 12 tons/acre. Significantly, most of the soil erosion per unit area over the Clear Creek watershed is relatively uniform. Only 3 of the 42 sub-watersheds had soil losses in excess of 20

tons/acre, and these were located throughout the watershed. A sediment delivery ratio is used to account for soil that is eroded from hillslopes and re-deposited prior to reaching the stream channel network. The sediment yield at the mouth of Clear Creek from undisturbed soil conditions is estimated to be approximately 31,000 tons/year or approximately 3 tons/acre per year. Modeling from the PTI study (1993) indicates that not a great deal of active sediment is stored in the Clear Creek floodplain, and that Clear Creek is well adjusted to its present sediment load. Background erosion for all watersheds within the Serpentine ACEC totals approximately 92,904 tons/year.

Roads of any type are a continuing source of erosion. Road related sediments are more easily delivered to stream channels than sediments from hillsides, because of constructed or eroded drainage paths. Road use, road failure, grading, and vehicle related damage to soil and vegetation on OHV play areas and hillclimbs, all serve to make roads less stable with respect to soil erosion than surrounding hillslopes. The combined effect of roads in the Clear Creek watershed is to increase the estimated sediment yield to Clear Creek above background levels, and varies greatly from 1-130 percent in each sub-watershed depending on road density. Overall, it was determined that from roads, there is a 16 percent increase above the undisturbed sediment yield to Clear Creek. The erosion rate from roads alone averages 80 tons/acre of road surface per year. The resulting total sediment yield from roads within the Clear Creek watershed is nearly 5,000 tons/year. Combined sediment yield at the mouth of Clear Creek from undisturbed soils and roads is approximately 36,300 tons per year. Erosion inventories have indicated that a significant source of sediment yields to streams occurs in relationship to stream and swale crossings, and as a result of gullies on roads and adjacent slopes. A study was prepared by Pacific Watershed Associates (1995) inventorying erosion on 110 miles of roads within the CCMA, and identifying management treatments to reduce the effects of roads on watershed erosion rates. The BLM has constructed hardened water crossings, rolling dips, water bars, and other maintenance treatments on roads within the CCMA based on recommendations of this study, and continues to implement erosion control measures to reduce future road related soil loss and sediment yield.

OHV use of barrens is another significant process which accelerates surface erosion. The mechanical action of OHV use on barren hillslopes progressively destroys the gravel lag deposit that otherwise armors the barrens. As gullying of the OHV play areas takes place, this process accelerates erosion further. Soil loss from hillclimb play areas was determined to be approximately 16 tons/acre of play area per year, with a sediment yield of approximately 5 tons/ acre. If sediment from OHV play areas is assumed to be transported directly to the stream channel without intermittent storage, the sediment yield is approximately 16 tons/acre per year.

The BLM currently employs Best Management Practices (Appendix D) related to road maintenance to reduce impacts to watershed resources. These measures include annual soil loss monitoring, construction of hardened crossings and rolling dips, stabilization of eroding trails, out-sloping, and vehicle barriers and fencing in riparian zones. Management practices can be applied to reduce erosion, contain eroded material, and modify recreation use on routes, trails, and barrens. Rehabilitation and restoration of closed roads will also be a key factor in reducing overall erosion and sediment yields.

Geology

The CCMA is primarily underlain by asbestos-rich serpentinite of the New Idria diapiric body. This unit is composed mostly of sheared serpentinite that forms an elliptical shaped, northwest-trending intrusive mass, and is the core of the Coalinga anticline. Several distinct rock units are also present in the Clear Creek watershed, including Franciscan sandstones and meta-sedimentary rocks that outcrop

near the mouth of Clear Creek, and a nearly continuous northwest-southeast trending calcareous silicate rock that outcrops in the middle of the Clear Creek watershed.

The geology of the CCMA is a result of a complex history of plate tectonics. The serpentinite mass was originally part of the Pacific Ocean sea floor that was subducted under the North American continent. This unit was later uplifted and intruded through the overlying sediments that comprised the core of various anticlines within the Diablo Range. The rock unit underwent further deformation, shearing, and redistribution as a result of right lateral movement along the San Andreas fault system. During the uplift, associated erosion, and piercement of the serpentinite mass into the core of the Coalinga anticline (the present-day New Idria serpentinite mass), some of the rock unit became exposed during the Miocene epoch. Subsequent landslides to the east, off the flanks of the rising anticline, resulted in emplacement of serpentinite bodies in the Miocene sediments. Miocene and other younger aged strata also contain detritus eroded from serpentinite bodies, indicating that uplift in the Coast Ranges has continued since the Miocene epoch. The Coast Ranges underwent a major regional uplift sometime during the Pliocene and Pleistocene epochs, which defined the boundary between the Coast Ranges and the Great Valley (San Joaquin) of California. As a result of this uplift and subsequent erosion, large alluvial fans were formed along the western edge of the San Joaquin Valley. Evidence of continued uplift and mass wasting indicate that the uplift on some of the folds continues to date.

The asbestos and associated mineralization in the New Idria serpentinite mass resulted in early mining activity in the CCMA. As a result, this area has approximately 300 mining claims; however most of the mining activity is of casual use rather than commercial use. Casual use means that no explosives or mechanized equipment are allowed, and surface disturbance is limited to five acres or less. Historical activities included exploration, prospecting, and mining of asbestos, chromite, copper, gemstones, magnesite, and mercury. Mercury was mined in Idria on the north edge of the CCMA, as late as the 1970's. Located in the center of the CCMA, the last producing asbestos mine in the U.S., the KCAC mine closed in 2002. To accommodate mining, exploration roads were built throughout the watershed and expanded during the 1930's and 1940's. Current recreation activities are facilitated by the large network of exploration roads which are the basis of the current route network. There is currently no commercial mineral production presently occurring on public land within the CCMA.

3.3.4 Human Health

Asbestos

The affected environment as related to human health and potential risks from exposure to naturally occurring asbestos is only discussed here briefly. The risks associated with exposure to asbestos are related to the overall broader public access and use of the CCMA and are not specific to the selection of a route network or the route designation process. A description of EPA's current study and current BLM actions is contained in this section.

Asbestos is a generic term that refers to a class of needle-shaped mineral types, all of which occur naturally in the environment. Individual asbestos fibers are only visible under a microscope. In addition, because of their size and shape, these fibers are easily disturbed and made airborne. Once the fibers are in the air they may remain suspended and easily travel with the prevailing wind. Asbestos found in the Clear Creek area is primarily of the chrysotile mineral type, which is also referred to as the "short-fiber" type of asbestos. Both animal and human studies have demonstrated that inhalation of all types of asbestos can be carcinogenic (PTI, 1992). Although there are

considerable differences in the cancer potency of these six fiber types, the entire class of asbestos fibers, including chrysotile asbestos, has been classified as a human carcinogen by EPA and the Department of Health and Human Services (DHHS.) Adverse health effects from chrysotile inhalation may include cancer of the larynx, lung cancer, mesothelioma and asbestosis. Most of these adverse health effects are the result of exposure to high concentrations in the workplace over many years. However, the short-term and generally lower airborne asbestos concentrations found in an outdoor environmental setting still may increase a person's chances of developing cancer. The chances or risk of contracting these asbestos-related diseases depends upon several risk factors. These factors include, exposure concentration (quantity), exposure duration, exposure frequency, individual risk factors, and the size, shape, and chemical makeup of asbestos fibers.

BLM's Technical Assistance Contractor, PTI Environmental Services, prepared a Human Health Risk Assessment report that estimated the risk to the public from asbestos exposure in the ACEC. This report is contained in the FEIS (1995) for the CCMA. Based upon the amount of asbestos inhaled during activities, an individual who visits the Clear Creek Management Area repeatedly can expect to incur some increased amount of health risk. When evaluating these risk estimates, the reviewer should be aware of the various uncertainties in the data that may exist and consider how these uncertainties may affect the actual human health risks resulting from exposure at this site.

EPA began conducting a new exposure evaluation and human health risk assessment in September 2004 at the CCMA to provide updated information on asbestos exposure from disturbance of soil containing asbestos. Preliminary sampling in September in the dry season revealed substantially higher exposure values in the CCMA than those used in the 1992 risk assessment, and indicate that the 1992 risk assessment likely underestimates asbestos exposure. EPA data indicate the tail rider in a line of three motorcycles was exposed to 0.955 fibers/cc, which is nine times the highest concentration for a tail rider in the 1992 assessment, as well as nine times the OSHA PEL of 0.1 fiber/cc¹. This high exposure concentration, which occurred during dry season conditions, may not represent exposure concentrations for all activities under all conditions in the CCMA.

EPA's findings for the September studies are contained in a Technical Memorandum titled "**Human Health Risk Assessment -Asbestos Air Sampling Clear Creek Management Area, California September 15th, 2004**" and are in Appendix I. Additional sampling and studies were conducted by EPA in November 2004 and February 2005. A final round of sampling will be conducted in September 2005. EPA's complete evaluation will sample a range of conditions and activities and analyze all samples with transmission electron microscopy (TEM) analysis. TEM analysis is better able to determine fiber types and dimensions than phase contrast microscopy (PCM), which was used in the 1992 risk assessment. EPA's complete exposure evaluation and final report are expected in 2006, and will provide BLM with important information related to asbestos exposure and management of the CCMA.

BLM received EPA's Technical Memorandum (Sept. 2004) in February 2005. As acknowledged in the Technical Memorandum, specific uncertainties exist that should be considered when interpreting the results for this exposure evaluation, and that further sampling and evaluation is necessary for completion of this risk assessment. Upon completion of the asbestos exposure studies and a final report by EPA, BLM will better be able to assess impacts from exposure to naturally occurring asbestos as related to recreation use at the CCMA. These issues would be addressed in a subsequent environmental review and NEPA process.

¹ The OSHA PEL is not applicable to the general public and has been primarily used by BLM in regards to the public for comparison purposes only.

After review of EPA's Technical Memorandum and preliminary data from dry season sampling BLM determined that in the interim awaiting a final report on the study, it was in the public interest to restrict public use of the Serpentine ACEC (Hazardous Asbestos Area) during the driest period to reduce potential risks to public health. In response to data received from EPA, BLM implemented dry season use restrictions affecting all BLM lands within the Serpentine ACEC from June 4, 2005 to October 15, 2005. A Closure Order was signed May 25, 2005 restricting all public access (motorized and non-motorized) within the affected area during this time period. The closure did not affect county-administered roads within the CCMA. The dry season use restrictions and Closure Order are pursuant to 43 CFR 8365.1 as follows: "Closure and restriction orders. (a) To protect persons, property, and public lands and resources, the authorized officer may issue and order to close or restrict use of designated lands."

Dry Season Closures

Dry season use restrictions have been identified as a management tool in previous plans for the CCMA, including the 1995 FEIS, although they have not been implemented in the past. The Management Guidance and Determinations Common to all Alternatives section of the 1995 FEIS/Plan Amendment for the CCMA states that "A seasonal restriction to OHV use would be enforced throughout the CCMA...during dry soil and dusty conditions" (p. 12). The same document also refers to "seasonal access closures" during "months of extreme dry and dusty. . ." road conditions (p. 23). The 1999 Record of Decision (ROD) reaffirms limiting the number of vehicles within CCMA, or establishing vehicle quotas during certain seasons. The issue of dry season restrictions is not addressed in this plan and would be addressed in a subsequent planning process that would consider broader public access and public recreation use issues for the CCMA.

Pursuant to 43 Code of Federal Regulations (CFR) subpart 8364, BLM seasonally restricted public access to certain BLM-administered public lands at the CCMA during the period of June 4, 2005 through October 15, 2005. This seasonal closure was needed to ensure visitor safety and protect public land users from potential health risks associated with naturally occurring asbestos found within the closure area.

This seasonal closure affects public lands located within the 30,000-acre Serpentine Area of Critical Environmental Concern (ACEC) situated within the Clear Creek Management Area (CCMA). Except for travel on county roads, public access (motorized and non-motorized) within this area will be allowed only by written authorization from the Hollister Field Manager. A Closure Order was signed on May, 25, 2005. The dry season closure was a temporary measure in response to advise and ongoing studies by the U.S. Environmental Protection Agency (EPA). EPA is expected to release the Final Report on the exposure evaluation during 2006.

Metals

Soil analytical results (Dynamac, 1998) revealed that the concentration of metals detected within the CCMA, are inherent to a highly mineralized area. Thirteen of the 15 abandoned mine lands sites sampled, contained metal concentrations that exceeded EPA proposed Soil Screening Levels (SSL's) for either ingestion or inhalation. Arsenic, mercury, and nickel were consistently detected at levels that exceeded the ingestion SSLs, while mercury was also detected at levels that exceeded the inhalation SSLs. To evaluate the potential threat to human health, the surface water analytical results were compared to Federal drinking water regulations. Six downgradient surface water samples contained concentrations of antimony, cadmium, chromium, mercury, and nickel that exceeded the Maximum Contaminant Levels (MCL's). On Clear Creek and the San Benito River, where multiple

sampling points were established, cumulative, increasing concentrations did not appear to occur downstream. In general, the metal concentrations detected in the Clear Creek watershed were very low, with the exception of chromium which had two occurrences where MCLs were exceeded. Downstream sediment sampling suggests that the transport of metals may be limited to areas just downstream of a confluence of the mine drainage and the receiving stream. Metals detected in Clear Creek appear to be fairly stable, with only a small fraction entering solution. The highest metal concentrations were detected in the San Carlos and Larios Canyon watersheds. The results of analysis revealed that the media samples collected from the San Carlos watershed consistently exhibited the greatest concentrations of metals, both in background and down gradient samples. Water sampling at Hernandez Reservoir indicates the presence of mercury and asbestos exceeding drinking water standards.

A cause for environmental concern is the appearance of mercury in waters and agricultural soils in the San Luis River to the north and in the Panoche Fan to the east of the Management Area. The source of the mercury is the New Idria mine works in the Management Area that between 1858 and 1972 yielded the second largest mercury production in North America. High levels of mercury in soils likely come from a combination of natural dispersion and human mining activity.

Ganguli et al. (2000) have measured mercury concentrations and cation species composition from streams impacted by the New Idria mercury mine in the Management Area. They estimate a baseline flux of 1.5 kg yr^{-1} of mercury from acid mine drainage from the mine and hypothesize that the source of the mercury in the San Carlos Creek comes from mine tailings. Most mercury exported from the New Idria mine and other point sources in the Management Area leaves as methylated mercury. In a comparative study of degradation of microbially created methylated mercury by Marvin-Dipasquale et al. (2000), in three ecosystems impacted by mercury contamination, San Carlos Creek has the highest degradation rate of methylated mercury corresponding to the highest amount of total mercury in the creek water. Degradation results principally from both aerobic and anaerobic reductive demethylation, producing methane. Outputs of mercury from the Management Area appear to increase during high water flows as iron hydroxide does not adsorb mercury and methylmercury as efficiently as during low flows. The cumulative downstream impacts of mercury transport from the Management Area on human populations are not known at present.

Coolbaugh et al. (2002) have done field studies at the New Idria Mine to calculate emissions of mercury to the atmosphere. Averaged inputs at New Idria are $9.2 \text{ ng m}^{-2} \text{ h}^{-1}$ of mercury ions and comprise a previously unquantified but significant source of mineralized mercury to atmosphere.

Cr(VI), also referred to as hexavalent chromium Cr+6, exists in several forms: chromic acid, calcium chromate, chromium trioxide, lead chromate, strontium chromate, zinc chromate, and potassium dichromate. Chromium(VI), a naturally occurring oxidative source of occurs in the San Benito Mountains. For more information on chromium(VI) connect to Flegal and Abu-Saba at: <http://www.msi.ucsb.edu/msilinks/CRC/CRCtexts/Toxics/ucsc1.html>). Chromium(VI) concentrations exceed EPA water quality criteria in San Carlos Creek, upstream from the abandoned New Idria mercury mine. Apparently, oxidation of chromite inclusions in the serpentinite deposits abundant in that region, yield the toxic form of chromium. San Carlos Creek mixes with acid mine drainage from the New Idria mine, lowering the ambient pH and introducing substantial amounts of iron(II). Consequently, dissolved chromium(VI) reduces to chromium(III) and adsorbs to ferric oxide surfaces. Flegal and Abu-Saba remark on this a curious example of an anthropogenic impact mitigating a naturally occurring contaminant.

The Clear Creek mercury monitoring program is in compliance with the Central Coast Regional Board Resolution R3-2004-0029 (effective date 2004), which adopted a Total Maximum Daily Load (TMDL) for mercury in Clear Creek. This program requires BLM to conduct quarterly water quality monitoring for five years and to document compliance with the numeric standard of 0.05 parts per million (ppm) of total mercury in the surface water in Clear Creek. It also requires annual photo-monitoring of remediated mine sites in the Clear Creek watershed and submitting an annual report summarizing our results.

The water quality samples are collected in Clear Creek at the USGS gauging station located near the Oak Flat campground. Photo-monitoring is performed annually for the Alpine Mine, Jade Mill site, and Xanadu Mine. The purpose of photo monitoring of the remediated mine areas is to annually document any significant surface disturbance or erosion from these restored areas.

The water quality results that have been submitted to date, did not meet the mercury numeric objective; one sample was taken on December 16, 2004 and the result was 0.19 ppm, the second sample taken on March 30, 2005 was 0.19 ppm, a third sample on May 26, 2005 was 0.21 ppm. Samples taken before the TMDL reporting requirements were in effect ranged from 0.49 ppm (Dec. 2003), 8.10 ppm (Feb. 2004), 0.07 ppm (April 2004), and 0.11 ppm (July 2004).

The values reported to the Regional Board in 2005 were higher than expected, perhaps due to the above average rainfall and associated high stream-flow during this sampling period. These values also seem to contradict the findings of the Regional Water Board's report that seemed to indicate a downward trend in mercury in the water. BLM is pursuing funding to conduct scientific field studies to determine if natural levels of mercury in selected geologic formations are eroding and producing sediment high in mercury which are contributing to the high levels of mercury in the water column.

3.4 BIOLOGICAL RESOURCES

Serpentine soils in the CCMA have given rise to a unique assemblage of plants and plant communities. One example is the San Benito evening primrose, a federally protected species. Some plant communities such as the San Benito Mountain Forest are also unique and warrant special management. While vegetation within the Serpentine ACEC is specially adapted to serpentine soils, the overall vegetative cover tends to be sparse. Many slopes are devoid of vegetation entirely, or have very little vegetative cover. These "barren" hillslopes are a striking feature of the CCMA.

The serpentine watershed and riparian areas in the CCMA have been subject to widespread surface disturbances over the last century. The riparian zones around the perennial streams and some intermittent streams, and the barren or sparsely-vegetated serpentine slopes, all exhibit a fragile ecology and unusual diversity of plants. In addition, the four special status animal species (foothill yellow-legged frog, two-striped garter snake, bald eagle, and western pond turtle) are known to occur in the CCMA and are dependent in some stage of their life cycles on quality stretches of creeks and streams. In total, the Clear Creek and surrounding watersheds support plant and animal communities that are important from a California biodiversity perspective.

Human disturbance to the soils and plants in the serpentine ACEC is a special management concern, because throughout the ACEC, soil formation tends to be slow, and the topsoil shallow. Plant regeneration is also slow, and accelerated erosion from human activities (such as mining, road building and maintenance, and OHV recreation) has negatively impacted soil and vegetative resources over the years.

A high priority for management of the CCMA is to protect existing populations of the San Benito evening primrose and attempt to expand its range to areas that have moderate and high potential habitat for the species. This includes managing to ensure that sensitive species and communities maintain or enhance their condition. The San Benito evening-primrose (*Camissonia benitensis*) is a federally listed threatened plant species which occurs on public lands in the Clear Creek Management Area (CCMA). The Endangered Species Act requires that all Federal agencies ensure that management actions do not jeopardize the continued existence of any endangered or threatened species. The only known locations of the San Benito evening-primrose are limited to serpentine-derived alluvial deposits within the vicinity of the CCMA.

The long-term management of the occupied and potential habitat of *Camissonia benitensis* has included fencing and pipe barrier construction, and a variety of administrative controls, including visitor education, personal contacts, signing, law enforcement, and administrative closures. Monthly compliance monitoring of occupied and high and moderate potential habitat documents the level of compliance, and assists in assigning appropriate priority to repair and protective measures. While the majority of *Camissonia benitensis* habitat areas remain in compliance for protection, some sites continue to receive non-compliance, although compliance in the 2004-2005 use season showed marked improvement. As a result of monitoring during the 2003-2004 use season, the BLM Hollister Field Office implemented an emergency closure in November 2003 for the Larious Canyon Terrace in the CCMA to protect this species. A Federal Register Notice published on February 18, 1998, also closed Upper Clear Creek Canyon ("Upper Hillclimb Canyon") to all vehicle use to protect *Camissonia benitensis* and sensitive riparian habitat. The closed area is encompassed by routes R001, T124, R010, T151, and R008. The San Benito Mountain Research Natural Area has been closed to OHV use since 1972 except for R011, R010, and T158 to protect sensitive resources. Several *Camissonia benitensis* occurrences are located along Upper Clear Creek and San Carlos Creek within these areas. All known occurrences of *Camissonia benitensis* are currently protected. Fencing of the habitat polygon within Upper Clear Creek Canyon was completed in December 2004.

3.4.1 Vegetation Communities

Vegetation communities occurring within the Clear Creek Management Area are described in the Clear Creek Management Area RMP Amendment and FEIS (BLM 1995). The naming of plant communities throughout this document is intended to be as consistent as possible with the classification of Terrestrial Plant Communities of California (Holland, 1986). Individual plant species nomenclature follows The Jepson Manual, Higher Plants of California (Hickman, ed. 1993). Vegetation within the CCMA is divided into two groups based on soil types. The first is vegetation growing on soils derived from sedimentary rock, and includes Non-Serpentine Foothill Pine-Chaparral Woodland, Chamise Chaparral, Valley Oak Savannah, and Non-Native Grassland. The vegetation associated with sedimentary soils mostly occurs outside of the Serpentine ACEC and will henceforth be referred to as non-serpentine. These non-serpentine vegetation communities are not discussed in detail as they have had limited impact due to relatively low OHV recreation use.

The second group consists of vegetation growing on soils derived from serpentine rock, the dominant soil type within the 30,000 acre Clear Creek Serpentine ACEC. Areas with soils derived from serpentinitic rocks are recognized world-wide for their unique flora and fauna, primarily due to the nutrient-poor and chemically harsh composition of these soils. Vegetation communities supported on these soils include Serpentine Barrens, Serpentine Foothill Pine-Chaparral Woodland, the unique Southern Ultramafic Jeffrey Pine Forest (also referred to as the "San Benito Forest" [Kuchler, 1997], comprising a Jeffrey-Coulter-foothill pine and incense cedar association), Serpentine Riparian

Vegetation, Serpentine Vernal Pools, and Serpentine Chaparral (more specifically leather oak [*Quercus durata*] chaparral). A description of these serpentine vegetation communities follows.

Serpentine Barrens

Griffin and Yadon 1989 and Taylor, 2000 have noted that the serpentine barrens are the most striking vegetation feature of the San Benito Mountain landscape. In this document, "serpentine barrens" generally applies to barren talus slopes and openings in wooded and chaparral areas that support little herbaceous or woody vegetation. Approximately ten percent (2,876 acres) of the Serpentine ACEC consists of serpentine barrens ten acres or larger, which have been delineated and mapped formally as barrens within the CCMA. This plant community exhibits slow growth and replacement rate because of naturally poor soil conditions. For example, comparisons between 1932 and 1990 photos of the same hillsides show the same individual trees with little change in their height. These barrens have a living surface layer referred to as a biological crust, which is also referred to as armoring. This biological crust results from a close association between soil particles and micro-organisms such as algae, cyanobacteria, and fungi, which provide critical nutrients to the soil surface such as nitrogen and calcium. Biological crusts are important components for soil cohesion and vegetation establishment in the nutrient poor serpentine soils. Off-highway vehicle use on serpentine barrens breaks down this crust and armoring, and has caused accelerated erosion and negative impacts to plant growth and regeneration. Once these barrens are "scarred," the recovery period appears to be extremely slow. Vegetation on the serpentine barrens throughout the CCMA is particularly sensitive to direct and indirect impacts from intensive OHV recreation use.

Serpentine Foothill Pine-Chaparral Woodland

Serpentine foothill pine-chaparral woodland is the most abundant vegetation community on serpentine soils in the CCMA as elsewhere in California. Typical serpentine endemic plants in this community are leather oak (*Quercus durata*), interior silk tassel (*Garrya congdonii*), and twistflower (*Streptanthus insignis* ssp. *insignis*), as well as non-endemic species such as foothill pine (*Pinus sabiniana*), Mexican (pointleaf) manzanita (*Arctostaphylos pungens*), and California (shining netvein) barberry (*Mahonia dictyota*). The CCMA supports 27 serpentine-endemic plant species that vary in their degree of rarity. Most of these species grow within openings between chaparral shrubs. Four species only occur in the CCMA and in nearby serpentine sites outside the CCMA: the San Benito evening primrose (*Camissonia benitensis*), rayless layia (*Layia discoidea*), San Benito monardella (*Monardella antonina* ssp. *benitensis*), and San Benito onion (*Allium howellii* var. *sanbenitensis*). A small population of a scrub oak species, Palmer oak, (*Quercus palmeri*), which normally grows in non-serpentine chaparral, occurs at one location in the CCMA. The nearest population of this oak otherwise is 60 miles away, west of Paso Robles.

Several other species, while not restricted to the CCMA or serpentine soils, comprise the bulk of herbaceous species for this community in the CCMA:

prairie flax (*Linum lewisii*),
clustered broomrape (*Orobanche fasciculata*),
California groundcone (*Boschniakia strobilacea*),
western wallflower (*Erysimum capitatum* var. *perenne*),
Andrew's bedstraw (*Galium andrewsii*), stiffbranch,
bird's beak (*Cordylanthus rigidus* ssp. *rigidus*),
goosefoot violet (*Viola purpurea*).

These herbaceous plants grow primarily on sparsely vegetated slopes and openings between chaparral, and under forest stands that may also experience OHV recreation use. Because roots of herbaceous plants are shallower and smaller than those of woody shrubs and trees, herbaceous plants are easily severed or dislodged when disturbed, especially on the loose soils and steep slopes found in the CCMA. In localized areas they have been impacted by road construction, OHV travel, and camping. However, their overall survival is not currently threatened, as they remain abundant and are wide-ranging. In many areas, chaparral species are natural obstacles to off route vehicle travel. Where typical chaparral species occur on serpentine barrens or in openings, these species may appear degraded or declining in vigor due to off-road vehicle travel or recreational camping.

Southern Ultramafic Jeffrey Pine Forest

The southern ultramafic Jeffrey pine forest includes a unique assemblage of conifers only known to co-occur in the area of San Benito Mountain in San Benito County. Conifer species in this vegetation type include:

Jeffrey pine (*Pinus jeffreyi*),
foothill pine (*P. sabiniana*),
Coulter pine (*P. coulteri*), and
incense cedar (*Calodrocedrus decurrens*).

This forest within the CCMA has the only central coast population of Jeffrey pine and the largest populations of incense cedar in the region. Coulter pine and Jeffrey pine, and possibly foothill pine hybridize here (Sawyer, Keehler-Wolfe, 1995).

Off-highway vehicle cross country travel has affected forested areas throughout the CCMA, including the southern ultramafic Jeffrey pine forest. . At present the stands of mixed conifer in this unique forest are dominated by mature trees with very low seedling and sapling recruitment. Open OHV use in the Jeffrey pine forest increases the rate of soil loss on forested slopes, exposing tree roots, uprooting saplings and seedlings.

Serpentine Riparian Vegetation

Riparian communities occur where surface water flows all or most of the year, and include adjacent areas of vegetation that are dependent on water tables at or near the ground's surface. Riparian communities are critically important for aquatic plants and animals as well as for terrestrial wildlife for food, water, shelter, and habitat corridors for travel. The serpentine riparian community within the CCMA supports an unusual assemblage of plant species along Clear Creek, the San Benito River, Picacho Creek, San Carlos Creek, Sawmill Creek, White Creek, and many smaller tributaries that flow into Clear Creek and the San Benito River.

Creeks in the CCMA exhibit varying degrees of quality in riparian habitat. Creek areas in proper functioning condition contain a series of small pools one to four feet deep, connected by a slightly meandering but stable streambed that is not deeply down-cut or altered, and provide habitat for plant species not found elsewhere in the CCMA. Brewer's willow (*Salix breweri*), an uncommon serpentine-restricted species, dominates the overstory, and two low-growing grasses, scratchgrass (*Muhlenbergia asperifolia*) and inland saltgrass (*Distichlis spicata*), dominate the ground cover. Interspersed among the willows and grasses are uncommon plants such as:

shortspike hedgenettle (*Stachys pycnantha*),

Hernandez's bluecurls (*Trichostema rubisepalum*), and Guirado's goldenrod (*Solidago guiradonsis*).

More common riparian plants in the CCMA include:

marsh grass-of-Parnassus (*Parnassia palustris*), giant red Indian paintbrush (*Castilleja miniata*), and Van Houtte's columbine (*Aquilegia eximia*).

Pools, meandering streams, and productive vegetative growth all serve to slow down flowing water and retain it longer in the soil, trap and hold sediments, reduce the channelization of stream banks, and raise the water table so that water is available to plants farther from the creek. Examples of riparian areas in proper functioning condition are the upper two miles of Picacho Creek and portions of Clear Creek and Sawmill Creek.

Riparian areas in unsatisfactory condition in the CCMA include areas alongside creeks where riparian vegetation is partially or completely absent, and streambanks and soils have been highly disturbed by historical road construction and as a result of vehicle and camping use. Camping activity has greatly reduced populations of riparian herbs along Clear Creek (Griffin, 1989). Also, disturbance is most obvious in areas where intense vehicle traffic occurs on barren serpentine slopes that lead directly into creeks. When riparian vegetation and soil in and adjacent to creeks are impacted from human disturbance, habitat for invertebrates, fish, and aquatic amphibians and reptiles also deteriorates. Areas in upper Clear Creek Canyon, Sawmill Creek, on the north side of Indian Hill, and north of Staging Area 5 are four examples of such degradation.

Roads constructed in the past within floodplains in the CCMA, such as along Sawmill, San Carlos, and Clear Creeks also impact stream habitats through direct deposition of sediments into creeks. In the past, in extreme cases, road construction and maintenance actually resulted in burying portions of creeks and surrounding vegetation. These areas are a high priority to implement Best Management Practices (Appendix D) to minimize watershed impacts and restore riparian conditions.

Impacted riparian areas in the CCMA include segments of creeks which are shallow and wide, in which sediments accumulate from sources of erosion upstream, such as collapsing hillsides or severely gullied roads. Sediment buildup can divert stream flows into the bottom of adjacent hillsides, and may inundate plants and eventually cause hillside failures. As a result, additional large sediment deposits move downstream and amplify the erosion cycle in the watershed. Past landslides into Clear Creek are visible below some road cuts where the cohesive integrity of unstable hillsides has declined.

Serpentine Vernal Pools

These pools, which typically dry out by late summer, support several plant species not found elsewhere in the CCMA. BLM recognizes that over 90% of vernal pool habitat has been removed from California and considers the protection of remaining pools a high priority. Four vernal pool areas in the CCMA occur in the Spanish Lake area and on the north side of Clear Creek Canyon. Fencing and surrounding chaparral have successfully protected vernal pools in Clear Creek Canyon to eliminate OHV use. In FY 2003, BLM installed pipe barriers by Spanish Lake and small vernal pools nearby to prevent vehicle disturbance.

Serpentine Chaparral

This vegetation community, serpentine chaparral, is scattered throughout Central and Northern California, wherever serpentine outcrops occur. This sclerophyllous scrubland is divided into two groups: Mesic Serpentine Chaparral, dominated by chamise (*Adenostoma fasciculatum*) and toyon (*Heteromeles arbutifolia*); and Leather oak chaparral dominated by Leather Oak (*Quercus durata*), a serpentine endemic. Both chaparral types occur within the CCMA, where soils are shallow, stony, and derived from serpentine. This vegetation community is usually found below 5,000 feet elevation.

3.4.2 Special Status Plant Species

Special status plant species are those species which are: (1) Federally listed as Threatened or Endangered; (2) Federally proposed as Threatened or Endangered; (3) Federal candidates for listing as Threatened or Endangered; (4) State listed as Endangered, Threatened, or Rare; or (5) designated as sensitive by the BLM California State Director.

Seven different special status plant species occur within the CCMA. One of these species, the San Benito evening-primrose (*Camissonia benitensis*), is listed as federally threatened (Appendix F). These plant species are either locally rare populations (geographic endemism) or are only known to exist on serpentine soils (edaphic endemism). The BLM considers special status species in planning any BLM-authorized activity, to ensure that the BLM does not contribute to negative impacts and declines of the species populations and their habitats.

The species described below are also listed by the California Native Plant Society as List 1B. List 1B includes plants that are rare, threatened, or endangered in California; therefore, it is mandatory that they be fully considered during preparation of environmental documents relating to the California Environmental Quality Act (CEQA). All of the plants that make up List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. Extensive inventory and monitoring by protocols is underway for the San Benito evening-primrose and the rayless layia (*Layia discoidea*); the remaining special status plant species in the CCMA will be part of an inventory and monitoring program scheduled for implementation Spring 2004.

Section 7 of the Endangered Species Act (ESA), of 1973, as amended directs Federal departments and agencies to ensure that actions authorized, funded or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats. The ESA mandates agencies to consult when actions may affect listed species or critical habitat and to confer with the appropriate Secretary whenever an action is likely to jeopardize the continued existence of any species proposed for listing as threatened or endangered, or whenever an action might result in adverse modification of critical habitat proposed for listing (50 CFR 402).

On January 25, 1996 the BLM HFO requested formal consultation with the U.S. Fish and Wildlife Service (FWS) on the Clear Creek Management Area/ Resource Management Plan Amendment and Final Environmental Impact Statement and the Proposed Administrative Site Development Plan (1-8-96-F-20). A Biological Opinion was issued in 1997. It was the Service's biological opinion that the Bureau's continued management of the Clear Creek Management Area is no not likely to jeopardize the continued existence of *Camissonia benitensis*. No critical habitat was designated for this species. The BLM continues to manage the CCMA in conjunction with this Biological Opinion. BLM

initiated formal consultation with the FWS on April 14, 2005 on the Proposed Action of the current Plan Amendment and FEIS.

Federally Listed Plant Species

San Benito Evening Primrose (*Camissonia benitensis*)

The US Fish and Wildlife Service proposed to list the San Benito evening-primrose as an endangered species on October 31, 1983 (48 FR 50126) based primarily on the threats to the species from off-highway vehicle (OHV) recreation in the Clear Creek Management Area (CCMA). With respect to protective measures proposed and implemented by the BLM, the Service designated the San Benito evening-primrose as a threatened, rather than endangered, species on February 12, 1985 (50 FR 5758). Additional threats to the species include road construction, recreation activities such as camping along stream terraces, vandalism, mining, and random environmental events (intense rain and flood events). First described by Raven (1969), this small, annual serpentine endemic plant lacks a basal rosette but occasionally has clusters of linear, villous leaves near the base of its wiry purplish-green stem. The inflorescences are either erect or decumbent and are covered with glandular-pubescent and villous hairs. The nodding, radial flowers open at dawn, and rarely at sunset as is typical of the genus *Camissonia*. Although the petals are bright yellow, often with red dots at their base, the species can be cryptic during inclement weather when flowers often remain closed. Excellent descriptions and instructions for distinguishing the *Camissonia* and *Oenothera* species are part of a report to the Bureau about the ecology and life history of the San Benito evening-primrose by Taylor (1990).

The San Benito evening-primrose grows on serpentine alluvial flats, terraces, and debris flows adjoining the creeks and tributaries throughout the Clear Creek Management Area in San Benito and Fresno counties. The substrate for most of the species range is the largest serpentine formation in the southern Coast Ranges (Jennings 1977, USFWS 1998), the New Idria serpentine landform in San Benito County.

Fifty two populations of the primrose are currently known to exist and their distribution is as follows;

<u>Populations by Sub-Watershed</u>	<u>Approximate Acres</u>
29 (42 percent) in the Clear Creek (all public)	213.6
11 in the San Benito River (9 public)	162.14
2 in the Larious Canyon (all public)	12.0
2 in San Carlos Creek (public)	2.3
1 in Lorenzo Vasquez Creek, Sec. 8 (private)	1.0
5 in the White Creek (1 public)	75.6
2 in the Laguna Creek (both private)	1.5
52 TOTAL (47 on public lands within the CCMA)	468.14 ac (465.64 ac in CCMA)*

* This includes one habitat polygon immediately adjacent to the CCMA on San Benito River.

Camissonia benitensis sites exhibit a wide range in size (147.3 acres to 1.0) due to several possible factors, including; amount of surrounding available habitat, terrace size and stability, density of surrounding vegetation, and degree of disturbance to the area. The populations existing in Clear Creek Canyon occur at approximately 2,000' elevation on remnant terraces in proximity to OHV staging and camping areas. The two San Carlos Creek populations grow at nearly 5,000' elevation in deeper soils in an environment with greater moisture than the populations growing on lower canyon terraces. The number of individuals at each population may vary widely from year to year due to

climatic conditions. When environmental conditions are conducive for germination, (e.g. amount and timing of precipitation), population counts can be high at many sites, however, other populations may not manifest any germination that year.

The San Benito evening-primrose habitat occurs in the following vegetation communities; serpentine foothill pine – chaparral woodland, southern ultramafic Jeffrey pine forest and serpentine riparian.

Special Status Species

In addition to the San Benito evening-primrose six other special status species occur in the CCMA. These species are:

Rayless Layia - *Layia discoidea*,
Mount Diablo Phacelia - *Phacelia phacelioides*,
San Benito Spineflower - *Chorizanthe biloba* var. *immemora*,
San Benito Fritillary - *Fritillaria viridea*,
Talus Fritillary - *Fritillaria falcate*, and
Slender Pentachaeta - *Pentachaeta exilis* ssp. *Aeolica*.

These species are described in detail in Appendix F.

Other Plant Species of Concern (CNPS List 4)

In addition to the above special status plant species, several uncommon plant species that are typically associated with serpentinitic soils occur throughout the CCMA as well. The following species are on the CNPS List 4, a watch list for species of limited distribution. These species are:

Carlotta Hall's Lace Fern – *Aspidotis carlotta-halliae*,
Hernandez BlueCurls – *Trichostema rubisepalum*,
San Benito Thornmint - *Acanthomintha obovata* ssp. *Obovata*,
Santa Clara Thornmint – *Acanthomintha lanceolata*,
San Benito Monardella - *Monardella antonina* ssp. *Benitensis*,
Guirado's Goldenrod – *Solidago guiradonis*,
Western Heermann's Buckwheat – *Eriogonum heermannii* var. *occidentale*, and
South Coast Range Morning Glory - *Calystegia collina* ssp. *Venusta*.

These species are described in detail in Appendix F.

3.4.3 Special Status Animal Species

Native Animals of Management Concern in Clear Creek Management Area

The occurrence of any native animal species of management concern on public lands is a factor considered in planning for the CCMA. Bureau wildlife biologists queried the California Natural Diversity Data Base for twenty USGS 7.5-minute quadrangles, including the CCMA and the surrounding region, to augment information in BLM files on native animals species of management concern that do occur and could occur in the CCMA. Biologists did not consider animals such as the Red-legged frog, California tiger salamander, or rare invertebrates, which have not been found within ten miles of the CCMA or that occupy habitats not found in the CCMA. California state species of special concern may not have extensive data to include in this document. All sensitive animal species are part of the CCMA Wildlife Habitat Protection Plan (BLM, 2003). Monitoring programs

are currently being developed. Species descriptions come from the following Internet sources: www.dfg.ca.gov, www.sdnhm.org, sacramento.fws.gov, and endangered.fws.gov/wildlife.html, www.ca.blm.gov/pa/biology/index.html

Special Status Animal Species, Confirmed Occurrences

Five special status animal species (Appendix F) occur in the CCMA. Special status animal species are those species that are: (1) Federally listed as Threatened or Endangered; (2) Federally proposed as Threatened or Endangered; (3) Federal candidates for listing as Threatened or Endangered; (4) State listed as Endangered or Threatened; or (5) designated as sensitive by the BLM State Director.

Foothill yellow-legged frog - *Rana boylei*,

Northwestern pond turtle (*Clemmys marmorata marmorata*),

Southwestern pond turtle (*Clemmys marmorata pallida*),

(The two subspecies of the Western pond turtle (*Clemmys marmorata*) are considered together here due to the difficulty in field identification and overlapping ranges)

Two-striped garter snake - *Thamnophis hammondi*, and

Bald eagle - *Haliaeetus leucocephalus*

California Condor - *Gymnogyps californianus*.

Amphibians

Foothill Yellow-Legged Frog - *Rana boylei*

The foothill yellow-legged frog is a BLM sensitive species and a California Species of Special Concern. This frog usually ranges in size from that of a nickel to a 50-cent piece. Formerly, it occurred from western Oregon south along coastal mountains to Los Angeles County, California and in the Sierra Nevada foothills. It is now rare or absent south of northwestern San Luis Obispo County and the southern Sierra Nevada foothills. The foothill yellow-legged frog inhabits rocky streams, creeks, and rivers in chaparral, woodland, and forest. This frog is associated with the riparian vegetation community, and occurs in all major creeks of the CCMA, with the largest population in Picacho Creek. During warm months, foothill yellow-legged frogs occupy the entire length of Clear Creek.

Reptiles

Northwestern Pond Turtle (*Clemmys marmorata marmorata*) and Southwestern Pond Turtle (*Clemmys marmorata pallida*)

These two subspecies of the Western pond turtle (*Clemmys marmorata*) are considered together here because the two intergrade and are difficult to distinguish in some localities. The Southwestern pond turtle is a BLM sensitive species and a California species of special concern. The Northwestern pond turtle is a California Species of Special Concern. It ranges in size from three to seven inches long. This pond turtle is mainly found east of the Cascade-Sierra Nevada crest in northwest California, with outlier populations in southern California. For part of its life cycle, this turtle depends on streams, or lakes and reservoirs in open woodland, grassland, or open forest associated with the riparian vegetation community, of the CCMA. In the CCMA, the western pond turtle occurs in lower Clear Creek and in the San Benito River but has not been documented in any other CCMA creeks, perhaps because of the lack of large enough pools.

Two-Striped Garter Snake - *Thamnophis hammondi*

The two-striped garter snake is a BLM sensitive species and a California Species of Special Concern. This snake ranges in size from seven to eighteen inches and occurs in perennial fresh water locations such as streams with rocky beds. It can be found from the vicinity of Salinas (Monterey County, California) to northwestern Baja California. Within the riparian vegetation community of the CCMA, the two-striped garter snake occurs in Clear Creek and White Creek sub-watersheds and may occur in all other creeks in the CCMA.

Birds

Bald Eagle - *Haliaeetus leucocephalus*

The bald eagle was listed as endangered in 1970 and declassified as threatened on July 12, 1995. This species has no designated critical habitat. Original declines in bald eagles were attributed to the use of DDT. In 1978, only 40 nest territories were known in California. As of 1997, 142 bald eagle nests were known from the six northern California National Forests, and public and private lands sites in California (CDFG 1998). In the BLM Hollister Field Office area, bald eagles are found during the winter and are generally associated with open bodies of water, such as reservoirs.

Wintering habitat for bald eagles is varied but requires a food source close by, with proximity probably the most important factor influencing perch selection. Favored perch trees are invariably located near feeding areas, and individual eagles consistently use preferred branches (Stalmaster 1976). Winter surveys seem to indicate that bald eagles roost singly in larger trees that may be characteristic for open areas (Isaacs and Anthony 1983). There is no evidence of a communal bald eagle roost within the BLM Hollister Field Office area. Bald eagles winter along open bodies of water in the CCMA area, in particular the San Benito River and the Hernandez Reservoir near the CCMA. U S Geological Survey and California Department of Toxic Substance Control are currently measuring mercury levels in Clear Creek to characterize potential threat to bald eagles in the Hernandez Reservoir. These monitoring studies are ongoing and will be used in adaptive management of the CCMA. Vegetative communities within the CCMA that may serve as roosts or perches can be found in the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas.

California Condor - *Gymnogyps californianus*,

The US Fish and Wildlife Service listed the California condor as federally endangered on March 11, 1967 (32 FR 4001) and currently the California condor is listed by the state of California as endangered. This immense vulture has a wingspan of nearly ten feet and weighs about 22 pounds. It is one of the largest flying birds in the world, as well as one of the rarest. Adults are black except for white under-wing linings and edges of the upper secondary coverts. The head and neck are mostly naked; the skin on the neck area is gray, grading into various shades of yellow, red, and orange on the head. As scavengers, condors do not kill for food but feed on available carrion.

The California condor declined quickly over the past century. The last wild condor was captured in 1987; the US Fish and Wildlife Service 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. In San Benito County a reintroduction program is underway at the Pinnacles National Monument, approximately ten to fifteen miles west of the CCMA.

Habitat for the California condor consists of arid foothills and mountains of southern and central California, and formerly included the San Joaquin Valley. Potential condor foraging and nesting habitat exist within and around the CCMA within the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas. The BLM will consider the habitat needs and food supply for California condors in future planning for the CCMA.

Radio Telemetry and visual surveillance indicates the Clear Creek Management Area is within the flyover range of the California Condor. Roosting has occurred on adjacent private lands. Six California condors are currently flying free at Pinnacles National Monument. They were released in October 2004. Another group of condors is scheduled for release on in September of 2005.

Special Status Species, Potential for Occurrence

Nine special status animal species have a potential to occur in the CCMA. These species are described in detail in Appendix F. Future monitoring, confirmed sightings, or specimens recovered from the CCMA will establish a known occurrence. These new occurrences will become a factor considered in future planning for the CCMA. These species are:

Valley Elderberry Longhorn Beetle – *Desmocerus californicus dimorphus*,
California Red-legged Frog – *Rana aurora draytonii*
Western Mastiff-bat – *Eumops perotis californicus*,
Townsend's Western Big-eared Bat – *Plecotus townsendii townsendii*,
Pallid Bat – *Antrozous pallidus*,
Long-eared Myotis – *Myotis evotis*, and
Yuma Myotis – *Myotis yumanensis*
Fringed Myotis- *Myotis thysanoides*
Small-footed Myotis – *Myotis ciliolabrum*

Other Animal Species of Management Concern

The HFO –BLM notes observations and is developing monitoring protocol for the six DFG California Species of Special Concern which occur in the CCMA. "Species of Special Concern" (SSC) status applies to animals not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist. These species are described in detail in Appendix F.

California Linderiella Fairy Shrimp – *Linderiella occidentalis*,
Coast Horned Lizard – *Phrynosoma coronatum* ssp. *frontale*,
Sharp-shinned Hawk – *Accipiter striatus*,
Golden Eagle – *Aquila chrysaetos*,
Prairie Falcon – *Falco mexicanus*,
Bell's Sage Sparrow – *Amphispiza belli* ssp. *belli*, and
Big-Eared Kangaroo Rat - *Dipodomys elephantinus*

3.4.4 Invasive Weeds

Executive Order 13112 requires BLM to detect, control, and eradicate existing populations of invasive weeds and to prevent further introductions of invasive weeds on BLM managed lands. The most threatening and abundant invasive non-native plant species found within the Clear Creek Management Area is yellow starthistle (*Centaurea solstitialis*). This highly invasive species grows

up to three feet high and is well armed with spines throughout the plant. Yellow starthistle displaces native vegetation and wildlife, renders grasslands and rangelands uninhabitable to humans and livestock and is toxic to horses. The CCMA has an existing infestation of yellow starthistle (*centaurea solstitiatus*) that is expanding in coverage. Approximately 300 acres on the western edge of the CCMA are infested by yellow starthistle, including stabilized terraces that support the San Benito evening-primrose.

At one time yellow starthistle was thought to be intolerant of ultramafic soils, such as those in the CCMA serpentine ACEC, however, ongoing plant surveys indicate the spread of this weed up Clear Creek Canyon on serpentine and sedimentary soils. In addition to the increase in yellow starthistle infestation, rare plant and animal habitat is at risk. Yellow starthistle is most abundant in the oak savannah, stabilized riparian terrace and sedimentary inclusion. At the present time, no yellow starthistle is present in areas to the east of Clear Creek Canyon within the CCMA. Non-serpentine soils are more quickly colonized by yellow starthistle than are serpentinitic soils, most likely because non-serpentine soils have more plant nutrients and a deeper organic layer. However, yellow starthistle is found throughout the Clear Creek Canyon on both serpentine and non-serpentine soils. The primary agents for long-distance seed dispersal, are road maintenance equipment and the undercarriage of motor vehicles (Bossard, et al, 2000.) Yellow starthistle thrives on disturbed sites. A comprehensive weed management program for the CCMA and surrounding area is currently being developed and is a component of the management for the CCMA.

3.4.5 Grazing

Range Management:

Below is a listing of the BLM Grazing Leases within the boundary of the area addressed within the Clear Creek Management Plan. The listing includes the BLM Allotment Number, the Allotment Name, the number of acres included in the BLM grazing lease (note: allotments which also have public lands leased outside of the boundary of the area addressed within the Clear Creek Management Plan are indicated below with an asterisk), the number of acres included in the BLM lease which are within the boundary of the area addressed within the Clear Creek Management Plan, the number of Animal Units Months (AUMs) assigned to each lease, the number of private acres included in the grazing allotment, the season of livestock use and the type of livestock authorized.

Table 3-2
Grazing Leases

Allot. Number	Allotment Name	Total Public Acres	Public Acres Within CCMA	Total Public AUMs	Private Acres	Season of Use	Livestock Class
4301	AKERS	368	368	69	3,060	Yearlong	Cows
4308	BIRDWELL	* 1,389	1,302	72	20,600	Yearlong	Cows
4319	LEWIS FLAT	* 190	47	19	80	Yearlong	Cows
4352	WILLOW SPRING	940	940	80	880	Yearlong	Cows
4359	QUARTER CIRCLE A-1	3,348	3,348	155	2,401	Yearlong	Cows
4374	JOAQUIN ROCKS	* 3,568	1,270	275	8,000	Yearlong	Cows
4379	UPPER LOS GATOS CREEK	4,317	4,317	1,036	895	1/1 - 5/31	Yearlings
4398	ADOBE	* 2,124	1,680	162	6,307	Yearlong	Cows
4401	WILLIAMSON	1,920	1,920	126	859	Yearlong	Cows

Allot. Number	Allotment Name	Total Public Acres	Public Acres Within CCMA	Total Public AUMs	Private Acres	Season of Use	Livestock Class
4409	BAR B	* 1,957	1,884	129	2,606	Yearlong	Cows
4410	HERNANDEZ	2,823	2,823	159	1,185	Yearlong	Cows
4411	ASHURST	* 12,759	2,385	1,965	18,500	Yearlong	Cows
4414	DIAMOND A	* 7,135	3,560	1,804	47,160	1/1 - 4/30	Cows
4418	GOAT MOUNTAIN	440	440	32	420	Yearlong	Cows
TOTALS:		43,278	26,284	6,083	112,953		

Issuance of the grazing authorizations is in conformance with the Hollister Resource Management Plan (RMP) approved in August 1984 and as further amended for Central California Rangeland Health Standards and Guidelines for Livestock Grazing, approved in April 1998. The issuance of the leases has been determined to be in conformance with the RMP as required by regulation (43 CFR §1610.5-3(a)). All public lands authorized livestock grazing and assigned AUMs of permitted use have been determined to be “suitable” for livestock grazing, as defined in the Hollister RMP.

Below is a Table showing the types of public recreational use which has historically occurred on the public lands within each allotment and the type of public access (i.e. foot or equestrian, 4 wheeled vehicles “4WV”, motorcycles “2WV”).

Table 3-3
Grazing Lease Recreation Use

Allot Number	Allotment Name	Types of Recreational Use	Types of Access
4301	AKERS	hunting, hiking	foot, equestrian
4308	BIRDWELL	hunting, hiking	foot, equestrian
4319	LEWIS FLAT	hunting, hiking	foot, equestrian
4352	WILLOW SPRING	hunting, hiking	foot, equestrian
4359	QUARTER CIRCLE A-1	hunting, hiking	foot, equestrian
4374	JOAQUIN ROCKS	hunting, hiking	foot, equestrian
4379	UPPER LOS GATOS CREEK	hunting, hiking	foot, equestrian, 4WV
4398	ADOBE	hunting, hiking	foot, equestrian
4401	WILLIAMSON	hunting, hiking	foot, equestrian
4409	BAR B	hunting, hiking	foot, equestrian
4410	HERNANDEZ	hunting, hiking	foot, equestrian
4411	ASHURST	hunting, hiking, OHV	foot, equestrian, 4WV, 2WV
4414	DIAMOND A	hunting, hiking	foot, equestrian
4418	GOAT MOUNTAIN	hunting, hiking, OHV	foot, equestrian, 4WV, 2WV

For the following allotments with public vehicular access, 4379 Upper Los Gatos Creek, 4411 Ashurst and 4418 Goat Mountain the following Table lists the proposed designated routes occurring in the allotments.

Table 3-4
 Designated Routes on Grazing Leases

Allot Number	Allotment Name	Proposed Designated Routes
4379	UPPER LOS GATOS CREEK	Trails 171A, 171B, 219, 221, 220, Roads 016, 017, 018
4411	ASHURST	Trails 125, 194, 195
4418	GOAT MOUNTAIN	Trails 122, 123, 140

For all of the other allotments there are roads and jeep trails which do not have public access. The roads and jeep trails are designated or proposed to be designated “closed”, with only BLM administrative access. Through the grazing lease authorizations, the BLM grazing lessees are granted administrative access to the roads and jeep trails for the purposes of administrating their livestock grazing. Through their grazing lease authorization they are with specific approval, given the authority to do maintenance of the roads and jeep trails. The roads and jeep trails on the public lands in the grazing authorizations, within the boundary of the area addressed within the Clear Creek Management Plan are listed in the Table below (note: these roads and trails either have not yet been assigned numbers or are not listed/displayed within the Clear Creek Management Area Plan).

Table 3-5
 Existing Routes Within Grazing Leases

Allot Number	Allotment Name	Roads Trails Within Allotment Without Public Access
4301	AKERS	none
4308	BIRDWELL	Pine Canyon Road
4319	LEWIS FLAT	unnamed jeep trail
4352	WILLOW SPRING	KCAC Road, Florence Mack Mine Road
4359	QUARTER CIRCLE A-1	Atlas Mine Road, Upper White Creek jeep trail
4374	JOAQUIN ROCKS	Joaquin Ridge Road, Pine Canyon Ridge Road
4379	UPPER LOS GATOS CREEK	none
4398	ADOBE	Can Carlos Bolsa jeep trail
4401	WILLIAMSON	3 unnamed ridge top jeep trails
4409	BAR B	Cane Canyon Ridge Road
4410	HERNANDEZ	Byles Canyon jeep trail, Tucker Gulch jeep trail, Baker canyon jeep trail
4411	ASHURST	Baker Canyon jeep trail
4414	DIAMOND A	Idria - San Carlos Bolsa jeep trail, San Carlos Bolsa jeep trail, Upper Cantua jeep trail
4418	GOAT MOUNTAIN	none

3.5 RECREATION RESOURCES

The Clear Creek Management Area (CCMA) has been an important weekend recreational destination for central California residents for the past 35 years. The 1995 RMP Amendment and FEIS estimated visitor use at approximately 50,000 visitors a year. Clear Creek is among the top five most popular areas cited by California off-highway-vehicle (OHV) users in a 1990 study conducted by the California Department of Parks and Recreation (CDPR, 1990). The CCMA continues to be popular with motorcyclists who use the area for hill climbing, trail riding, and camping. Other common activities include 4-wheel drive off-highway vehicle touring, hobby gem/mineral collecting, hunting, hiking/backpacking, and sightseeing. Visitor use is most prevalent during the winter months (November – April), because winter rainfall keeps the dust levels lower and cooler temperatures. With the onset of deer season in August through mid-September, visitor use increases. Because of the distance to most urban areas in central California, visits to the CCMA require considerable highway driving. Overall, total recreation use drops off about 80 percent during the summer months. The number of OHV visitors (where one visitor may visit for any portion of the day) is approximately 50,002 per year. Over the last four years there has been an average increase in the number of visitors of three percent per year. This gradual increase may continue, but the rugged terrain, extreme climate, limited overnight and staging facilities, and the asbestos hazard may be constraints to broader visitor use.

Table 3-6
Annual Visitation

Number of Visitors per Year					Four Year Average
2001	2002	2003	2004		
47230	49420	51270	52,090		50,002

Most motorcycle users are from the San Jose/San Francisco metropolitan areas with normal travel time of approximately three hours to get to the CCMA. These users travel very close to the 6,800-acre Hollister Hills State Vehicle Recreation Area (SVRA) en route to Clear Creek. This intensively managed OHV use area is one and one-half hours closer, but the unique challenge of the serpentine soils and the amount of area available for OHV recreation use continue to draw motorcycle riders to Clear Creek.

According to the California State Parks, Taking the High Road issued in 2002, off-highway motor vehicle recreation demand has increased dramatically in the last decade. California has the highest population in the nation (34 million) and the highest number of OHV enthusiasts (3.5 million, or 14.2 percent of all California households). San Benito County has seen a population increase of 45 percent and a 113 percent increase in OHV registrations. Increases over the last decade in OHV registrations by vehicle type statewide are: dirt bikes 30 percent (from 153,304 to 199,142), all-terrain vehicles 96 percent (from 91,984 to 180,273), and dune buggies and sand rails 96 percent (from 17,500 to 34,243). Street licensed 4-wheel drive vehicle registrations have increased 74 percent (from 290,651 to 506,585). During this same period OHV land availability has decreased 48 percent (from 13.5 million to 7.0 million acres). About 100,000 miles of routes and trails are available for OHV use throughout California. Of these 100,000 miles, 10,000 miles (10 percent) represent single-track trails and 16,000 miles (16 percent) represent trails of interest to 4-wheel drive enthusiasts. The remaining 74,000 (74 percent) miles are connector routes for those pursuing a variety of forms of recreation.

Facilities

Visitor facilities are limited to Oak Flat Campground, Jade Mill Area, and six staging areas that have trash receptacles and pit toilets. Bulletin boards with general information and regulatory information are present at these areas and at the entrances to the CCMA. Information posted details upcoming events, campfire requirements, asbestos warnings, and user maps showing routes and other geographic points of interest.

3.5.1 Motorized Vehicle Access Network

Motorized vehicles used throughout the area include two-wheeled drive vehicles, four-wheeled drive trucks and jeeps, all-terrain vehicles (ATV, quads), and motorcycles (MC). There are more than 420 miles of primitive roads and trails currently available for OHV use. There are 189 miles of routes designated on the user map for the CCMA. These routes are designated as paved, improved/unpaved, four-wheeled drive recommended, jeep trail, ATV/MC trail, and single track trail. Of these 189 miles of routes, 50 miles are single track which are accessible by motorcycle, 17 miles are ATV/MC trails which are accessible by quads and motorcycles, and the remaining 122 miles are jeep trails, four-wheeled drive recommended, improved/unpaved, or paved roads which are accessible by four – wheeled drive, ATV, and motorcycle. Only major routes are accessible by two-wheeled drive vehicles which constitute 28 miles of routes.

Motorcycle and ATV riding are the most prevalent recreation activities in the CCMA with almost all of the use occurring within the 30,000 acre ACEC where asbestos is found and the majority of the use occurs within the lower six miles of Clear Creek Canyon. While motorcycle and ATV riding are the most common recreational activities, four-wheeled drive vehicles participate in a variety of recreational activities. Several large organized OHV events are conducted annually in the CCMA. These include, Molina Ghost Run 4-wheel drive tour sponsored by California 4-Wheel Drive Association, the Quicksilver Enduro sponsored by the Salinas Ramblers Motorcycle Club, and the Wild Boar sponsored by the Timekeepers Motorcycle Club.

A combination of regulatory signs, route number signs, directional signs, and fencing is used to direct visitors along the trails identified on the user map. BLM Park Rangers patrol the CCMA, providing visitor assistance and information, and warning visitors about regulatory violations. A BLM Law Enforcement Ranger conducts patrols in the area, warning, citing, and/or arresting regulatory violators as appropriate. San Benito County Sheriff's Department provides additional law enforcement patrols.

Although the BLM Hollister Field Office has not yet conducted specific visitor surveys concerning motorized travel to the Area or about motorized recreation within the Area, the BLM is able to analyze existing data in the public domain to characterize benefits and the clientele for the Area. During the 2004 – 2005 use season, Park Rangers and staff manned a visitor entrance station to provide information to the public and take voluntary registration to begin gathering information about CCMA users. In time, BLM will be conducting surveys to collect information on public opinions and values to provide a sharper characterization of the visitor use, value of recreation activities, and the public willingness to pay for recreation services in the Area.

Publicly available data from government agencies can, however, characterize the importance of motorized access and recreation in the Area. To this end, BLM considers the people living within the area roughly equal to a 150-mile radius as the potential client base for recreation visits. This client “visitor shed” is considered to include all or parts of 21 California counties extending from Santa

Barbara County in the south to San Francisco County in the north, and then east to the divide of the Sierra Nevada from Amador County in the north to Kern County in the south. Some 10,310,000 people reside within the visitor shed. (US Census 2000 data at www.census.gov/epcd/www/zipstats.html). This population comprises about thirty percent of the total population of California.

Fourteen Metropolitan Statistical Areas lie entirely or partly within the visitor shed. As defined by the United States Office of Management and Budget (OMB), an MSA is made up of at least one large city (50,000 population or more), and includes the county or counties in which it is located. Adjacent and other nearby counties meeting certain criteria are also included in the MSA. The MSAs present in the visitor shed are: Bakersfield, Fresno, Merced, Modesto, Oakland, Sacramento, Salinas, San Francisco, San Jose, San Luis Obispo – Atascadero – Paso Robles, and Santa Barbara – Santa Maria – Lompoc, Santa Cruz – Watsonville, Stockton – Lodi, and Visalia – Tulare Porterville. Ninety-three percent of the population in the visitor shed resides in the MSAs. The population is overwhelmingly urban.

Rural and wildland landscapes are becoming increasingly less common as urbanization expands, especially in the San Francisco Bay Area, Central Coast communities, and in the San Joaquin Valley. The wildland experiences in the Clear Creek Management Area are increasingly valuable as the supply of open space decreases in the visitor shed.

The BLM has not estimated the economic benefits generated from recreation-related expenditures by visitors to the Management Area alone. However, the major portion of the Management Area lies inside San Benito County. In San Benito County, the major travel and recreation opportunities involve destinations to the Mission at San Juan Bautista, the Pinnacles National Monument, and to the two major OHV recreation sites at the Hollister Hills State Vehicle Recreation Area and the Clear Creek Management Area. No information at present is available to describe the share of total visitors at these four major visitor destinations in San Benito County. But, in aggregate, travel and recreation in San Benito County generate some \$76,000,000 in spending in the county, \$21,800,000 in earnings, and 1,220 jobs in the county (directly and indirectly). These amounts rank San Benito in place 47 of 58 counties for revenues generated and place 52 of 58 for the number of jobs created (Dean Runyon Associates 2003). The growth in jobs for the travel and recreation-related sectors since 1992 has been less than 150. Jobs related to travel and recreational tourism account for 5.7 percent of all jobs in San Benito County.

Much of the economic benefit for income and employment, from people's expenditures for motorized recreation, appears closer to the urban homes of visitors to the CCMA, than in the communities near the Management Area. Other factors with respect to economic benefit are long distances to the north and south, separate restaurants, lodging, and gas stations from entry points to the Management Area. Purchases of vehicles for recreation use are prime examples of big-ticket expenditures that occur at considerable distances from the Area.

Motorcycles are popular vehicles for motorized recreation in the CCMA. The US Census Bureau 2001 Zip Code Business Patterns (<http://censtats.census.gov/cbpnaic/cbpnaic.shtml>) provide information by zip code, for the number of businesses and categories of numbers of employees at these businesses. The pertinent North American Industry Classification System (NAICS) category 441221 covers vendors of all-terrain vehicles, mopeds, motorbikes, motorcycles, and motorcycle parts and equipments, both new and used.

Within the visitor shed, motorcycle retail outlets concentrate close to their customers. The Business Patterns Report does not specify the actual numbers of employees in each business but sorts businesses by classes based on ranges of numbers of employees. At a minimum, the visitor shed for the Management Area has 1031 jobs in retail motorcycle businesses. Communities with comparatively high employment in retail motorcycle sales are most likely to have impacts if cumulative changes occur in access to motorized recreation on public lands, including the Management Area. The geographic areas most likely to have economic impacts are those currently with high numbers of employees in retail motorcycle sales. Table 3-7 lists the top ten zip code areas provide the largest number of jobs related to retail sales of motorcycles.

Table 3-7 – Top ranked communities within the visitor use region by zip code, with the greatest employment in retail sales of new and used motorcycles (NAICS 441221) in 2001. Source: US Census Bureau Zip Code Business Patterns 2001

City	Zip Code Area	Minimum Estimate of Number of Employees
Santa Cruz	95062	62
Modesto	95351	45
Visalia	93292	42
San Francisco	94103	42
Bakersfield	93301	32
Redwood City	94063	30
Livermore	94550	26
Hayward	94544	24
San Jose	95112	24
San Francisco	94109	22
Concord	94520	22
Fremont	94538	22
Walnut Creek	94596	22
San Jose	95124	22

California Department of Motor Vehicles tracks information on motor vehicles with green-sticker registrations by zip code by month. This information helps the BLM to know where significant populations of OHV recreational users live and, in the absence of visitor profile data specifically collected from visitors while they are visiting the Management Area, what the demographic profile of visitors is and how it differs or is similar to the population as a whole. Table 3-8 shows the top-ten ranked zip code areas within the visitor shed region, with: the highest total green-sticker registrations, the highest frequency of registrations among rural communities (populations between 1,000 and 5,000), among suburban communities (populations less than 25,000), and among urban communities (populations greater than 25,000). These areas represent significant populations with vehicles used in OHV and other motorized recreation.

Table 3-8 – Communities with the largest number of green-sticker registrations and with the highest frequency of green-sticker registrations by community size, located within the visitor use region.

Communities with the Highest Number of Registered Green Sticker Vehicles			Rural Communities with the Highest Frequency of Green Sticker Registrations in the Population		
City	Zip Code	Number of Registered Vehicles	City	Zip Code	Per Capita Frequency of OHV vehicles in the population
1. Bakersfield	93312	2457	1. Friant	93626	14.8%
2. Hollister	95023	2318	2. Creston	93432	11.1%
3. Livermore	94550	1822	3. Hickman	95323	10.6%
4. Tulare	93274	1712	4. Prather	93651	10.5%
5. Clovis	93611	1705	5. Lebec	93243	10.3%
6. Paso Robles	93446	1542	6. Frazier Park	93225	9.5%
7. Wasco	93230	1540	7. La Grange	95329	8.9%
8. Gilroy	95020	1415	8. Herald	95638	8.6%
9. Bakersfield	93308	1371	9. Linden	95236	8.6%
10. Porterville	93257	1350	10. Santa Margarita	93453	8.0%
Suburban Communities with the Highest Frequency of Green Sticker Registrations in the Population			Urban Communities with the Highest Frequency of Green Sticker Registrations in the Population		
City	Zip Code	Per Capita Frequency of OHV vehicles in the population	City	Zip Code	Per Capita Frequency of OHV vehicles in the population
1. Wilton	95693	7.8%	1. Bakersfield	93312	6.1%
2. San Martin	95046	7.6%	2. Hollister	95023	4.8%
3. Templeton	93465	6.9%	3. Paso Robles	93446	4.3%
4. Denair	95316	6.5%	4. Oakley	94561	3.9%
5. Santa Ynez	93460	6.5%	5. Brentwood	94513	3.9%
6. Acampo	95220	6.3%	6. Atascadero	93422	3.8%
7. Pioneer	95666	6.3%	7. Clovis	93611	3.6%
8. Escalon	95320	6.2%	8. Visalia	93292	3.6%
9. Byron	94514	6.0%	9. Sonora	95370	3.2%
10. Hughson	95326	5.7%	10. Bakersfield	93313	3.1%

From comparisons of the communities with high frequency of green-sticker vehicles with the entire population of the visitor shed, the BLM can develop an initial profile of the economic and social characteristics of OHV recreation users and of similarities and differences with the entire population of the visitor shed. Table 3-9 displays selected characteristics of communities where OHV ownership and registration are high as contrasted with the entire population of the Management Area visitor shed.

Table 3-9 – Comparison of selected demographic characteristics of communities identified in Table 3-8, with high frequencies of registered green-sticker vehicles. Source: US Census Bureau, Census 2000 data

Community Groups as Defined in Table 3-8	Population percentage self-identified as white race	Median Age in Years (both sexes)	Average Number of People in Households	Average Number of People in Families	Population Percent of People > 16 years old and employed	Median Number of Rooms in Houses	Per Capita Income 1999
Top 10 Rural Communities	86.9	39.4	2.7	3.6	41.3	5.2	\$20,131
Top 10 Suburban Communities	86.1	38.4	2.3	2.8	43.6	5.7	\$25,334
Top 10 Urban Communities	83.8	34.4	3.0	3.8	44.0	5.6	\$21,294
All Communities in the Visitor Shed	58.5	33.8	2.9	4.3	44.2	4.9	\$25,012
All California	59.5	33.3	2.9	3.4	43.0	4.8	\$22,711

Significant clusters of communities with high percentages of green-sticker vehicle registration occur in the Bakersfield, San Luis Obispo – Atascadero – Paso Robles, eastern Contra Costa County, and Stanislaus County. In communities with relatively high proportions of green-sticker registrations for off-highway vehicles, the populations appear to differ from the total population of California. The proportion of people who identify themselves as white racially is higher than in the population at large. Also, the populations of the rural and suburban communities where OHVs are most common tend to be somewhat older and have smaller families in comparison the total population of the visitor shed.

3.5.2 Barrens

There are approximately 5,900 acres of barren areas scattered throughout the CCMA that include soil types # 768 and 769. Table 3-10 shows a breakdown of acres by State, private, BLM, and existing closed barrens. There are currently 2311 acres of BLM barrens available for use. The user map identifies seven open play areas which are located on a portion of these barrens that the public is encouraged to use. The barrens are used primarily by quads and motorcycles as open play areas with some of more gradual sloped barrens being used for open play areas by 4-wheel drive vehicles. These unique areas provide visitors with challenging hill climbs and more gradual slopes for enjoyment by riders of all skill levels. The majority of the barrens are located adjacent to routes of travel or routes that traverse across the barren complex making them accessible to the various user groups.

**Table 3-10
Barren Acres**

DESCRIPTION	ACRES
Total Barren (all soil # 768 & 769)	4896
State Owned	367
Private	688
BLM	3841
Existing Closed Barrens	
RNA	452
Super Fund	207
Closed Mine	236
Barren in Emergency Closure	257
Barren in Clear Creek Riparian Closure	227
Barren Closure Poly on San Benito River	41
Barren Closure in Creek buffer (300 Ft)	111
Existing Open BLM Barren	2311
Proposed Open Barren	478

3.5.3 Non-OHV Recreation Opportunities

Other recreational opportunities include hobby gem/mineral collecting, hunting, hiking/backpacking, and sightseeing. This plan does not address general recreation use of the CCMA.

Hobby gem and mineral collectors are drawn to the Clear Creek area by the presence of over 100 semi-precious minerals and gemstones. This is one of the most highly mineralized areas in California. Collectable minerals include jadeite, cinnabar, andradite, tremolite, melanite, topazolite, barkevikite, clinocllore, vesuvianite, artinite, natrolite, neptunite, and benitoite. Some minerals such as benitoite are extremely rare and the CCMA is practically the only place in the world where they can be found.

Highly mineralized areas generally occur along faults and inclusions/intrusions in and around the serpentine body. Hobby gem/mineral collecting (or rockhounding as it is commonly called) accounts for about five percent of the total recreation use in the CCMA.

Several commercial gem collectors also maintain mining claims and work infrequently in the area. The only known commercial deposit of benitoite is found on a patented mining claim (private land) in the CCMA. The area's unique geology also attracts geology students and researchers from local and national universities including Stanford and Harvard.

Hunting activities occur primarily on the outskirts of the ACEC boundary. Hunters require access through the Clear Creek Canyon to the remote edges of the CCMA to the east and south of the ACEC. The primary game animals sought are wild boar and deer. Deer season occurs during the months of August and September with boar season occurring throughout the year.

Hiking/backpacking and sightseeing occurs throughout the year. Visitors are drawn to the area to see the unique ecosystems and experience the rugged terrain present on the CCMA. Sport utility vehicles are used by weekend sightseers to traverse the more commonly used routes. These routes provide views of the unique habitats and geological formations found within the CCMA, and views of the Central Valley and the Sierra Nevada.

3.6 CULTURAL RESOURCES

The Clear Creek Management Area (CCMA) is a unique complex of geology, botany, and archeology creating a special cultural landscape. Situated in the CCMA there are complexes of small prehistoric habitation, processing, and interment sites dating back at least five hundred years, perhaps several thousand. The combination of these sites represents the physical remains of Native Californian seasonal villages or extended family residences. There is also a rich historical record of intensive mercury mining that one time reflected the second largest mercury producing area in the United States.

Set in the Diablo range of the Coast Range mountains, the CCMA rests on the divide of two watersheds: the San Benito - Pajaro Rivers and San Joaquin River systems. A variety of upland game resides in this portion of the Diablo Range, including California mule deer and Columbian black-tailed deer, wild pigs, and valley quail, with the highest densities of quail in the grassy openings within the chaparral and the annual grassland/shrubland areas. The current plant regime is characterized as a mixed Blue Oak-Foothill Pine woodland and chaparral, with serpentine endemic plants (such as leather oak) as well as non-endemic species like foothill pines, Mexican manzanita, Indian Valley bush mallow and California barberry. Chaparral also occurs in quite large areas, which includes manzanita, scrub oak, ceanothus, chia, and chamise. Botanical impacts as a result of European colonization have left their imprint on the native ecosystem. Non-native grasses have replaced much of the existing native bunch grasses. European colonization also introduced cows and feral pigs into the region.

The CCMA is predominantly defined by the New Idria serpentine soil body (e.g., Serpentine ACEC), which is surrounded by a Franciscan sandstone formation. Both geological deposits offered a variety of lithic raw materials for prehistoric use and trade. Mercury, cinnabar, cryptocrystalline cherts, and steatite schists would have been readily available for extraction and processing.

Ethnographically, the area may lie within the Chalon Costanoan/Ohlone region. The Chalon were known to have occupied the area around Chalone Creek - bounded to the west towards the Salinas River (Salinan country) and east to headwaters of the San Benito River in the Diablo Mountains that flanks the San Joaquin Valley (towards Tachi Yokuts country). The northern and southern extent of their occupation is less well defined, bounded by the Mutsun Costanoan to the north and the Salinan Indians to the south.

However, it can also be argued that the region lies in an area where exact Native Californian tribal affiliation is unclear. The classic ethnographic literature ascribes the region to the Tachi band of Yokuts Indians, largely on the basis of hydrographic provenance. In the past, watersheds were

typically used in Native Californian ethnographic research, as a defining boundary line for much tribal territorial delineation. More current archeological research in the region has yielded a different interpretation. It is possible that the Chalon band of Costanoan (or Ohlone) Indians may have inhabited the area, based upon material culture identification and mortuary practices observed at CA-Fre-1333. A less investigated hypothesis relies on ethnohistoric data obtained from the baptismal records at Missions of San Antonio de Padua, Mission San Miguel, Mission San Juan Bautista, and Mission Soledad. Based upon general village location information supplied to the padres by the neophytes, the district may belong to the Chene band of the Salinan Indians. Ethnographically the Chene are not recognized as a distinct group, but this may only be a function of limited ethnographic details. The Salinans could only be loosely identified to either a Migueleno dialect (southern Salinan) or an Antoniano dialect (northern Salinan).

With respect to artifacts, the sites appear to be inter-related based upon regional bead and projectile point typologies. Functionally the combination of sites represent a range of domestic subsistence behavior that included plant collection and processing, animal hunting and processing, trade material manufacture, intensive short-term habitation, and interment. The full extent of prehistoric time depth is not fully understood for the CCMA. Based upon observed surface indices in concert with previous excavations and collections, the sites date to approximately 1500-1690 AD. Archeologically, this correlates to Phase 2a of California's Late Period as defined by the Central California Taxonomic System, also referred to as California's Protohistoric period.

There have been two archeological investigations at prehistoric sites conducted in the CCMA. These studies attempted to mitigate the effects of vandalism (at site CA-Fre-1333) and provide invaluable baseline data for the region, as part of a newly drafted management plan (1986) for the CCMA. Current research (2003) involves a Masters-level archeological investigation at site CA-Fre-1331. Information from this project will greatly improve our understanding of the patterns of subsistence, trade, and inter-ethnic socio-cultural affiliation nearly five hundred years ago. Hopefully, tribal affiliation for the region will be clearer as well. This research is also compliant with the CCMA management goals.

Historically, the region was known as the New Idria Mining district. Discovered in the late 1840s – early 1850s by Mexican prospectors, large portions of the Clear Creek Management Area were mined for mercury to produce quicksilver during the California Gold Rush era. Later in time, the district's mercury was used in medical products, paint, and even munitions for World War I. Other materials such as asbestos, magnesite, nickel, and chromium were also extracted. The rare gem Benitoite (California State Gem) is almost exclusively found in this region and nowhere else in the world (save trace amounts found in Kern County, California, and Japan).

The Aurora mine site CA-SBn-192H (also known as the Morning Star mine) was discovered by Mexican prospectors in 1853 looking for silver, but who instead found mercury. The Aurora was mined throughout its history primarily for mercury, and later for chromium. It was worked intermittently until 1911, with other concentrated mining efforts occurring between 1915-1917 and 1930-1943. Smaller scale production continued into the mid-1950s. In 1911 a rotary furnace was installed, but due to technical and logistic supply problems the furnace only ran for one day. Several structures that related to the mining industry at Aurora have been destroyed by other miners seeking material to reuse, dismantled by the BLM for safety reasons, or vandalized by visiting users to the CCMA. The Aurora Mine was part of the New Idria mining district, which was the inspiration for Bret Harte's literary work *The Story of a Mine* (1878).

Another example of historic mercury production was the Alpine Mine, once known as the Esmeralda mine. Regular mercury production began here in 1912, with concentrated output generated sporadically from 1912-1914, 1916-1917, 1928, 1932-1936, and finally in 1945-1950's. In 1915, a 20-ton capacity Scott furnace and four brick condensers were installed to process the mercury (in addition to two pipe retorts already being used) but the furnace only operated until 1917.

3.7 SPECIAL MANAGEMENT AREAS

3.7.1 Area of Critical Environmental Concern

In 1984, the BLM designated approximately 30,000 acres of the New Idria Serpentine Formation within the CCMA as the Clear Creek Serpentine Area of Critical Environmental Concern (ACEC). This ACEC is sometimes referred to as the Hazardous Asbestos Area (HAA). Areas of Critical Environmental Concern are areas of concern where special management attention is required to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards. This Serpentine ACEC was designated because of the health concerns associated with the naturally occurring asbestos within the serpentine soils and because of the unique vegetation and forest types associated with serpentine soil.

Human induced changes within this geologically unique area, and the presence of distinctive plant species associated with the serpentine formation, established the need for special management attention. Human disturbance to the soils and plants in the Serpentine ACEC is a special management concern, because throughout the ACEC, soil formation tends to be slow, and the topsoil shallow. Additionally, plant regeneration is slow, and accelerated erosion from human activities (such as mining, road building and maintenance, and recreation) has negatively affected soil and vegetative resources. Minimizing soil erosion and damage to sensitive plant populations is a management priority. The Serpentine ACEC provides visitors with a variety of recreation experiences. However, due to the high concentrations of naturally occurring asbestos, public health concerns persist over the use of this popular recreation area.

3.7.2 San Benito Mountain Research Natural Area

The San Benito Mountain area was designated as an Outstanding Natural Area in the early 1970's, and lies within the larger Clear Creek Serpentine ACEC. In 1996, the BLM designated the San Benito Mountain Natural Area as a Research Natural Area to encourage research and provide protection of the unique conifer forest on and around San Benito Mountain. The ROD (1999) approved expansion of the SBMRNA to 4,082 acres. Vehicle travel is only allowed on the County roads and "ridge route" within the RNA. Cross-country or off-route vehicle travel is not allowed.

An RNA is an area where natural processes are allowed to predominate and which is preserved for the primary purposes of research and education because the land has one or more of the following characteristics: (1) A typical representation of a common plant or animal association; (2) an unusual plant or animal association; (3) a threatened or endangered plant or animal species; (4) a typical representation of common geologic, soil, or water features; or (5) outstanding or unusual geologic, soil, or water features (43 CFR 8223 - Research Natural Areas). The BLM created the San Benito Mountain Research Natural Area to provide special resource management protection for this unique area with three management goals: 1) to ensure survival of the pine forests in the CCMA; 2) to

maintain the vegetation and soil resources in as natural a condition as possible; and 3) to provide opportunities for scientific and academic research in this unique ecosystem.

The San Benito Mountain Forest is the only forest in the world that supports Jeffrey (*Pinus jeffreyi*), Coulter (*P. coulteri*), and foothill (*P. sabiniana*) pines, and incense cedar (*Calocedrus decurrens*) at the same location. The San Benito Mountain population of Jeffrey pine is the only population of this species in the California Coast Range south of northern Lake County (Kuchler 1977, p. 151). The Jeffrey x Coulter pine hybrids around San Benito Mountain are an important natural source of genetic combinations and have been used in the past for genetic research and breeding programs. This forest also contains groves of incense cedars, the only incense cedars in the inner central California Coast Range. The nearest stands of incense cedars found elsewhere, are in the coastal Santa Lucia Mountains 60 miles to the west and in Napa County 175 miles to the north. The rare talus fritillary (*Fritillaria falcata*) occurs at only nine locations in the world and two of those, including the largest population, occur in the understory of the San Benito Mountain Forest. These distinctions represent the function of CCMA forests to conserve the biodiversity represented by the unusual genetic and species assemblages of this Research Natural Area. Research and education conducted within the CCMA includes programs and studies by the University of California Davis, the California Native Plant Society, the Audubon Society and the United States Geological Services.

In 1986, the BLM started fencing the boundaries of the Research Natural Area easily accessible to vehicle trespass (due to unauthorized OHV use). Continued unauthorized OHV use in the Research Natural Area, primarily on the sparsely vegetated or barren hillsides, adversely affects this unique environment and the values for which it was established. The BLM recently completed an additional three miles of fence to protect the RNA and adjacent Upper Clear Creek Canyon. The chapter on Environmental Consequences discusses these impacts.

3.7.3 Wilderness Study Area

The San Benito Wilderness Study Area designation covers 1,500 acres within the existing SBMRNA. On July 29, 1971, the Director of the Bureau of Land Management officially designated the San Benito Mountain Natural Area. It was designated an "Instant" Study Area with the passage of the Federal Land Policy and Management Act of 1976, due to the pre-existing status as a Natural Area. While Congress considers whether to designate a WSA as permanent wilderness, the BLM manages the WSA in a manner as to prevent impairment of the area's suitability for wilderness designation.

The BLM's management policy is to continue resource uses on lands under wilderness review in a manner that maintains the area's suitability for preservation as wilderness. The Interim Management Policy (IMP) for Lands under Wilderness Review (H-8550-1) will remain in effect on all congressionally mandated Wilderness Study Areas until Congress acts on the Secretary's recommendations. There are six practical effects of provisions in The Federal Land Policy and Management Act (FLPMA) of 1976 with respect to "interim management" of lands under wilderness review (1976 FLPMA Sec 603. (C)).

- The general standard for interim management is that lands under wilderness review must be managed "in a manner so as not to impair the suitability of such areas for preservation as wilderness" (non-impairment standard). This applies to all uses and activities except those specifically exempted from this standard by FLPMA (such as grandfathered uses).

- Permitted activities in WSAs (except grandfathered and valid existing rights (VERs) are temporary uses that create no new surface disturbance, or involve permanent placement of structures.
- Grazing, mining, and mineral leasing uses that existed on October 21, 1976 continue in the same manner and degree as on that date.
- Lands under wilderness review may not be closed to appropriation under the mining laws in order to preserve their wilderness character.
- Valid existing rights (VERs) must be recognized.
- All lands must be managed to prevent unnecessary or undue degradation (1976 FLPMA SEC 302. (B))

An overriding consideration is that the preservation of wilderness values within a WSA is paramount and should be the primary consideration when evaluating any proposed action or use that may conflict with or be adverse to those wilderness values. In other words, the wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness suitability and other competing uses (DM H-8550-1(1)B).

Most recreational activities are allowed on lands under wilderness review. However, some activities may be prohibited or restricted because they require permanent structures, or depend on cross-country use of motor vehicles. The IMP for Lands under Wilderness Review provides the following guidance regarding recreational activities:

- No new, permanent recreational ways, trails, structures, or installations will be permitted, except those that are the minimum necessary for public health and safety in the use and enjoyment of public lands' wilderness values and that are necessary to protect wilderness resource values.
- Hobby collection of mineral and vegetation specimens may be allowed for personal, but not commercial, use, as long as the collection activity methods meet the non-impairment criteria.
- Environmental educational and interpretative programs may be conducted so long as no permanent facilities are required and the use does not cause surface disturbance.
- Camping with recreational vehicles may occur on existing ways as long as this use meets the non-impairment criteria. Primitive campsites for recreational use may be established anywhere in the WSA as long as they meet the non-impairment criteria.
- Cross-country skiing may also be allowed. Downhill (alpine) may be permitted only if any support facilities within the WSA satisfy the non-impairment criteria.
- Aerial activities such as ballooning, sail-planing, hang gliding, and parachuting (sky diving), may be allowed as long as they do not require cross-country use of motorized vehicles or mechanical devices to retrieve equipment, except in areas designated as "open" before October 21, 1976.

- Except for emergency situations, vehicle designations in WSAs are to be handled through the land-use planning process. In general, no vehicle designation in a WSA may allow vehicles to travel off existing ways and trails.
- Organized vehicle events will not be allowed unless they can meet the non-impairment criteria, and are contained on existing ways and trails.

Some lands under wilderness review, particularly among the instant study areas, were subject to stricter protection prior to approval of FLPMA than the IMP requires. In these cases, any use will be controlled by the more strict protection of the wilderness resource, regardless of whether that is provided by the IMP or by a pre-FLPMA withdrawal or regulation that is still in effect.

3.8 SOCIAL AND ECONOMIC CONDITIONS

3.8.1 Social

The North Central Coast comprised of Monterey, Santa Cruz, and San Benito Counties, the southern portion of San Francisco Bay, and the San Joaquin Valley are believed to be the most frequent users of the CCMA. The North Central Coast region occupies an area of more than 5,100 square miles with a population of 710,000 people. Monterey County accounts for 57% of the population, followed by 36% in Santa Cruz County, and 7% in San Benito County. The region is forecast to grow to about 921,000 persons by 2020.

The San Francisco Bay Area, located two to three hours from the CCMA, has a population of 6,800,000 and is expected to grow to 7,400,000 by 2010. Based upon 2000 census data, approximately 50% of the population was classified as White, 19% Hispanic, 19% Asian, and 7% Black or African American in the Bay Area. The median household income is \$62,000 with 8% of the population at the poverty level. Primary occupations for the area are management/professional (44%), sales/office (26%), service (13%), and production and transportation (10%). Santa Clara County is the largest county in the San Francisco Bay Area, measuring approximately 1,316 square miles, and ranks as the fifth highest populated county in the state. Santa Clara County and San Jose have a population of 1,680,000 with similar demographics. Santa Clara's economic base is dominated by services and manufacturing industries.

Fresno County, located in the San Joaquin Valley has a population of 800,000 with an ethnic make-up of Hispanic (44%), White (40%), Asian (8%), and Black or African American (5%). The median household income is \$34,700 with the primary occupations being management/professional (30%), sales/office (26%), service (16%), and production and transportation (13%). Leading industry sectors for employment are education, health, and social services; retail trade, agriculture, and manufacturing.

San Benito County covers 1,397 square miles with a population of 53,200 persons. San Benito County is one of the state's fastest growing counties with a 45.1 percent increase over 1990 census data. Hollister, the largest city and county seat, recorded a growth of 79.1 percent over a ten-year period. San Benito County's total population is expected to increase 63 percent by 2020 to a population of 86,800. San Benito's civilian workforce is 28,000 with an unemployment rate of 8.3 percent. The varied economic base is dominated by the government, retail trade, and manufacturing industries, with the following primary occupations, management/professional (30%), sales/office (25%), service (15%), and production and transportation (13%). The ethnic percentage of the population is Hispanic (48%), White (46%), Asian (2%), and Black or African American (1%). Median household income is \$57,500.

The dominant land use within the North Central Coast region is agriculture with approximately 1,626,000 agricultural acres (393,000 farmed acres). About 81 percent of the farmed agriculture land is in the Salinas Valley with 14 percent in San Benito County. The region has a significant amount of land in open space and recreation, including County and State parks, wilderness, National Forest, and Department of Interior lands, totaling over 500,000 acres. In Monterey and Santa Cruz counties urbanized development occupies about three percent of the land area. Approximately 97 percent of San Benito County is unincorporated land, with 90 percent being used as farmland, rangelands, forest, and public lands.

3.8.2 Economic

California encompasses a number of distinct economies and labor markets. According to 2000 Census data, California had the largest population growth of all fifty states. California's labor force echoed a similar growth trend, bringing the total labor force to over 17 million persons. Current industry projections indicate total non-farm employment will increase by an estimated 22 percent, with the majority of growth in the services, trade, and government industries.

Major industry components of the North Central Coast region are tourism, agriculture and related food processing, manufacturing, commercial fishing, quarrying, and power and oil production. The gross agricultural crop value for 1999 was \$2.5 billion in Monterey County, \$180 million in San Benito, and \$256 million in Santa Cruz.

Historically, San Benito is a largely agricultural county, possessing a varying landscape of vineyards, crop land, fruit and nut orchards, and grazing pastures for cattle and sheep. The agricultural industry supports 14.1 percent of industry employment and occupies over half of the county's land area. Government employment is the largest industry in the county (18%), and has been growing steadily over the past five years. Non-farm industry projections estimate government employment will increase by 420 jobs by 2006. Retail trade provides 17 percent of industry employment, with wholesale trade providing 8.4 percent. According to industry projections, the counties trade industry is expected to grow by 31 percent or 1160 jobs by 2006. An equal number of gains is projected for both wholesale and retail trade. With 16 percent of the total employment, manufacturing is the third largest industry in San Benito, and experienced moderate growth in 2001 (up 1.6%). Manufacturing is expected to grow by 660 jobs by 2006, with the durable goods component estimated to gain the most. San Benito's labor market future presents new opportunities and challenges to the region. In addition to industry growth, out-of-county employment is a significant factor in the local economy as many residents commute to Santa Cruz, Monterey and Santa Clara counties. Residential expansion, development of transportation systems, and proximity to the Silicon Valley, continue to encourage economic development and support job growth. Job growth creates opportunity and is considered to be one measure of economic health. San Benito County has recorded consistent job growth since 1997.

There are nine counties which significantly contribute to the economy of the San Francisco Bay Area; Alameda, Contra Costa, San Mateo, Marin, Napa, San Francisco, Solano, Santa Clara, and Sonoma. Santa Clara County borders Santa Cruz and San Benito counties to the south. The civilian labor force in Santa Clara County is just over 1 million. Services are the largest industry in the county, accounting for 35 percent of total employment. Projections forecast that services in the county will increase by 35 percent from 1999-2006. The business services component is expected to account for the largest share of this growth. Another major industry expected to increase employment in Santa Clara's future is manufacturing. Currently accounting for almost 25 percent of total employment, industry projections forecast an increase of 14,300 jobs from 1999-2006, primarily in the durable

goods sector. Santa Clara is part of the Silicon Valley with dense concentrations of electronics and computer companies. After several years of strong employment growth, in the last two years there has been an increase in the civilian workforce at a time of decline in this industry sector. These factors have resulted in a substantial increase in unemployment; however industry projections forecast growth in all major industries through 2006.

OHV recreation use contributes more than \$3 billion statewide to the California economy, including generating 1.6 billion in personal income and 43,000 jobs. OHV recreation users spend considerable sums purchasing the specialized vehicles and support equipment needed to participate in this recreation activity. It is estimated that Californians spend \$1.2 billion annually to purchase off-road-vehicles. A portion of these expenditures contributes to the regional economy in the form of purchases for off-highway vehicles; parts, repairs, accessories, and equipment; fuel; and groceries and restaurants. No studies have been conducted to determine local expenditures by Clear Creek recreation users. Studies have been conducted by the State Off-Highway Vehicle Commission and California State Parks to determine expenditures by visitors to OHV recreation areas. These studies indicated that the average OHV recreation user expended about \$50 per visitor day. Applying these figures to Clear Creek users would indicate that off-road-vehicle recreation use in the area could contribute as much as \$2.5 million annually to the regional economy. With 3.5 million OHV recreation users statewide, per capita spending averages approximately \$1,000 per year. Other recreation use of the CCMA also contributes to the local economy, through expenditures for gas, food, and miscellaneous supplies.

3.8.3 Environmental Justice

Executive Order 129898, requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. The planning area is comprised of a diverse racial and ethnic make-up. San Benito County is 46 percent non-Hispanic White and 48 percent Hispanic, with small percentages of other minorities. Fresno County is 40 percent non-Hispanic White, 44 percent Hispanic, 8 percent Asian, and 5 percent Black or African American. The San Francisco Bay Area's racial-ethnic group includes 50 percent non-Hispanic White, 19 percent Hispanic/19percent Asian, and 7 percent Black or African American. Median household income ranges from \$35,000 in Fresno County to \$57,000 and \$62,000 respectively for San Benito County and the San Francisco Bay Area. Individuals living below the poverty level range from 8.6 percent of the population in the San Francisco Bay Area, to 10 percent in San Benito County, and 23 percent in Fresno County.

CHAPTER FOUR

ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This chapter provides a description of the environmental impacts of the proposed action described in Chapter Two, and focuses on the anticipated physical, biological and social consequences of implementing the land use decisions. The following resources are analyzed for each of the alternatives:

- Air Quality
- Watershed Resources
- Human Health
- Biological Resources
- Recreation Resources
- Cultural Resources
- Special Management Areas
- Social Economic Conditions
- Environmental Justice

The proposed action would not have significant impacts on mineral, visual, prime farmlands, wilderness, wild and scenic rivers, wildlife (except for sensitive plants and animals), rangeland management, or Native American relations, and therefore were dropped from further analysis and discussion.

The impact analysis of the proposed action is based on an average of 50,000 visitors annually. Based on population trends and OHV recreation demand, it is expected that moderate increases in visitation could occur at the CCMA, though significant increases may be constrained relative to the asbestos hazard, remote location, carrying capacity, and lack of facilities.

4.2 AIR QUALITY

Impacts would be in the form of gaseous and particulate matter that is released in the air as a result of motorized vehicle use of the route network. As air quality impacts are related to the number of visitors and the vehicle miles traveled, and not the miles of route network, little change in impacts is expected over existing conditions as the number of visitors is not expected to change significantly as a result of designation of the route network. All of the pollutants subject to analysis are addressed in Federal, State, and local laws, regulations, and rules. Motorized vehicles are the primary source of emissions associated with this project. Motorized vehicle use of routes of travel and barrens, directly emits air pollutants from the vehicle exhaust, as well as from the particulate matter produced by

driving on dirt surfaces. The principal pollutants of concern are PM₁₀ and airborne asbestos resulting from motorized OHV use on unpaved surfaces. Soil disturbance activities, such as motorized vehicle travel, can contribute substantial sources of fugitive dust depending on the level of activity, the specific activity being conducted, and the type of soil. On-site emissions are proportional to the number of visitors, vehicle miles traveled, length of activity and season (wet/dry conditions) of use. Road maintenance, grading, and construction activities are also a potential source of PM₁₀ and asbestos emissions, however the BLM is required to conform to the Monterey Bay Unified Air Pollution Control District (MBUAPCD) ATCM for airborne asbestos by implementing Best Management Practices and dust control measures to prevent the generation of visible emissions.

This analysis will be primarily limited by the need to consider changes in emissions that would occur as a result of the proposed action. The activities associated with this Designation project that would have an impact on air quality include OHV activities and restoration of closed routes. Changes in these activities would result in changes to soil disturbance rates and corresponding changes in PM₁₀ emissions. OHV activities are not expected to change as a result of designation of the route network. The effects of asbestos emissions, is covered in section 4.3 Human Health. Both ozone and PM₁₀ emissions are important considerations because portions of the project area are classified as a non-attainment or moderate non-attainment area for these pollutants.

State Implementation Plans (SIP) are prepared for Federal non-attainment and maintenance areas. These SIPs are designed to result in compliance with the National Ambient Air Quality Standards, and are implemented through a series of rules. Air quality is highly regulated by a number of Federal, State, and regional regulations which apply to many of the activities considered in the alternatives. It is assumed that all activities must be conducted in compliance with the applicable rules and regulations, and that emissions generated as a result of the proposed action would not be regionally significant. The NCCAB meets Federal particulate matter and 8-hour ozone standards and therefore does not have Federal plans addressing those standards. Fresno County is classified as nonattainment for both of these standards. BLM's National Science and Technology Center recently analyzed PM₁₀ and PM_{2.5} emissions related to OHV use. This analysis took into account vehicle miles traveled, soil type and silt content, loading, and moisture, among other factors for each alternative, and is included in Appendix G. The emissions estimates were similar under all action alternatives due to assumptions that visitor use and miles traveled would remain fairly constant regardless of the alternative.

In relationship to the 1995 planning process, BLM received a memo from the MBUAPCD, which stated that for this NCCAB, "Direct and indirect emissions of VOC and NO_x are below the threshold level of 100 tons/year applicable to the North Central Coast Air Basin; thus a general conformity finding is not necessary." Additionally in the memo, the MBUAPCD stated that; "Since the NCCAB is unclassified for the federal PM₁₀ standard, a general conformity finding is not needed for PM₁₀ emissions."

The conformity regulations of the Clean Air Act were determined not applicable to the Fresno County portion of the planning area because the direct and indirect emissions are below de minimis levels due to the remote nature of the area, the minimal use of the area, and the distance from the major contributing factors to nonattainment.

Proposed Action

The proposed action would allow OHV use on 242 miles of unpaved roads and trails and 478 acres of barren play areas. Compared to existing conditions, the air quality would likely remain unchanged and in particular as related to emissions of particulate matter and PM₁₀ concentrations. The amount of

OHV use would remain unchanged as a result of the proposed action. Reductions of disturbed areas that have a potential to emit pollutants, and stricter emission standards for vehicles and motorcycles could contribute to some minor improvement in air quality. There could be some potential for reductions in fugitive dust and particulate matter due to the additional miles of closed roads that would eventually be reclaimed and the substantial reduction of open barrens where soil disturbing activities would be eliminated. Though the particulate emissions varied among the alternatives, the difference among all alternatives was nominal. The proposed action had the highest emissions. Particulate emissions for the proposed action are as follows;

Temporary dry season use restrictions were implemented in June of 2005 to restrict public use and motorized access of the serpentine ACEC through October 15. These restrictions could reduce particulate emissions by as much as 39 percent, providing a substantial, but temporary, improvement to air quality.

There will be fewer roads, trails, and barren areas designated as open compared to current conditions. Overall, there will be a reduction of approximately 40 percent of the miles of unpaved routes available for use, and an 83 percent reduction in acres of barren play areas. In addition, the designation of routes and areas and the enforcement of these designations should result in less off route travel and route proliferation. Off route travel creates new roads, which increases the particulate matter emissions due to vehicle use and wind blown emissions. The proposed action also includes the mitigation requirement to restore closed routes to a natural landscape. This will result in fewer emissions due to the inability to easily use closed roads and in a reduction in emissions due to wind. Compliance with the ATCM for airborne asbestos, by implementing Best Management Practices and dust control measures related to road maintenance will also contribute to a reduction in airborne emissions for these operations. In the proposed action all barren play areas within the San Joaquin Valley Air Basin portion of the CCMA will be closed, and would contribute to a reduction in particulate matter emissions from these lands for the air basin. Environmental impacts related to ozone precursor emissions would likely remain unchanged from present conditions.

Proposed Mitigation Measures

- Designated Closed routes would be selected and prioritized for restoration and reclamation, to allow return to natural state to reduce vehicle and wind generated emissions.
- BLM will comply with all provisions of the Monterey Bay Unified Air Pollution Control District's ATCM regulation for control of airborne asbestos emissions relating to construction, road maintenance, and grading activities.

4.3 WATERSHED RESOURCES

4.3.1 Water Quality

Proposed Action

The proposed action would allow OHV use on 242 miles of unpaved roads and trails and 478 acres of barren play areas. Compared to existing conditions, water quality should exhibit a gradual improving trend over a number of years. Impacts related to OHV use of the barrens would be limited to the Clear Creek watershed. By eliminating unregulated use, eliminating vehicle access to all remaining abandoned mines, continuing completion of abandoned mine remediation projects, and by completing

significant road repairs and improvements, the BLM would minimize the potential for additional human-caused impacts to the subject waterways. Reducing the number of miles of unpaved roads by 40 percent, and reducing soil disturbing activities at remaining mine sites, would contribute to reducing off-site transport of metals and asbestos. The extent of the contribution of heavy metals and asbestos into the Hernandez Reservoir remains an issue, and some continued natural contribution of mercury and asbestos may be unavoidable. Water sampling data through 2002 indicates a possible overall slight downward trend in mercury concentrations in Clear Creek. However data from 2004/2005 indicates exceedance of the numeric objective for mercury in Clear Creek.

The available data indicate that the San Benito River is currently meeting water quality objectives for mercury. The data also indicate that Hernandez Reservoir is currently meeting water column objectives for mercury (1998 data), however mercury in fish tissues is at levels which do not meet stated objectives. The Central Coast Regional Board's Technical Report¹ indicates that sediment loading into the creek is roughly at background levels throughout most of the Clear Creek watershed, which suggests that the OHV activities are not causing any significant mercury loading. Based on both the water and sediment data collected by the Regional Board, it appears that high-use OHV areas are not a significant source of mercury loading.

As additional data becomes available, this information will be valuable in monitoring the implementation of management actions, to determine whether restricting use in mine areas and reducing the miles of routes available for vehicle use, is having the desired effect of reducing contaminated sediment delivery downstream. The Aurora Mine site area would be completely closed between the Aurora grade and SBMRNA reducing soil disturbance and the potential for off-site transport of contaminants.

The proposed action would reduce the miles of available routes in the Larios and San Carlos watershed where the highest levels of background concentrations of hazardous metals are present, thereby reducing the potential for human exposure and contaminated sediment delivery. Additional routes accessing the following mine areas (Chromium, Mercury, Asbestos) would be closed: Larios watershed – Larios, Sampson, Spanish, and Wonder Mines; San Carlos watershed – San Carlos and Molina Mine; Cantua watershed – Del Mexico, Anita, Sec. 28 asbestos, and Coalinga asbestos Mines; San Benito watershed – Big Ridge Mine; White Creek watershed – Big Ridge, Tromby, Archer, Byles, and Butler Mines. Any motorized OHV use on highly erosive areas such as barren slopes and on unpaved roads and trails, would disturb soils containing hazardous metals, and increase erosion and transport of sediment above natural background levels. Closure of routes accessing these mines and a corresponding reduction in soil disturbance from OHV's at these areas, would contribute to improvements in water quality by reducing the potential for contaminated sediment delivery.

In general, designated beneficial water uses identified for streams associated with the CCMA would be enhanced through a reduction in miles of routes and acres of barrens available for OHV use, reductions in stream crossings, and implementation of Best Management Practices to minimize watershed impacts. The proposed action includes 5.15 miles of routes within riparian areas², which is a 58 per cent reduction from existing conditions. The 122 stream crossings in the proposed action represent a 58 per cent reduction from the existing route inventory. Considering estimates that nearly half the sediment delivered to streams within the CCMA come from stream and swale crossings, this

¹ Central Coast Regional Water Quality Control Board, Staff Report; *Total Maximum Daily Load, Technical Support Analysis for Mercury Impairment of Clear Creek and Hernandez Reservoir*, March 10, 2004.

² This includes routes that transect within a 40 foot buffer of perennial and ephemeral streams. The majority of this mileage includes the identified stream crossings, rather than routes that parallel streams within the riparian buffer.

reduction in the number of crossings should result in substantial reductions in sediment delivery. BLM and the USGS will monitor the volume of sediment measured in tons, on a daily and monthly basis. This information will assist in evaluating the effectiveness of route designation & barren area closures, along with other watershed restoration projects. Historical water quality data for Clear Creek is in Appendix H.

Though some recent actions by BLM appear to have implemented the mercury-loading controls necessary to achieve the TMDL, Clear Creek is not yet fully attaining standards. Therefore BLM has committed to the Regional Board a five year program of quarterly sampling and monitoring. The Regional Board has not requested any additional implementation efforts as the remedial actions of BLM appear to be causing a decrease in sediment concentrations of mercury in Clear Creek. Achieving the load allocations in Clear Creek is reasonably expected to achieve the load allocations in Hernandez Reservoir and restore beneficial uses of the reservoir.

Proposed Mitigation Measures

- All remaining mine areas would be closed to OHV use through route closure or construction of fencing and physical barriers.
- Seasonal access closures and restrictions would continue to be enforced to limit vehicle use during periods of extreme wet and muddy conditions.
- Designated Closed routes would be selected and prioritized for restoration and reclamation.
- California State Soils Loss Standards and Monitoring would be implemented on all designated open routes and surveys completed on an annual basis. Routes may be temporarily closed until corrective maintenance repairs can be completed if necessary.
- BLM would continue to monitor water quality, soil erosion, and sediment conditions within the watersheds of the CCMA. The BLM would implement Best Management Practices (BMP) to reduce impacts to watershed resources, and would continue to evaluate and update these measures as needed to minimize impacts to water quality, control erosion and sediment production. These measures include drainage improvements, construction of rolling dips, water bars, rock armored/hardened stream crossings, hardened sills, and half-pipe bridges, and are contained in Appendix D. These site treatments are incorporated into BLM's annual corrective route maintenance plan.
- Implement barren area protection plan to minimize off-site sediment transport through repair of erosion scars, construction of drainage improvements, sediment control and trapping treatments, and re-vegetation of vegetative buffers. Designated Closed barrens would be selected and prioritized for restoration and reclamation employing these same techniques.
- Construct fence and barriers to preclude access to riparian areas and closed barrens to prevent vehicle disturbance and off-site transport of metals and sediments.

4.3.2 Soil Loss and Erosion

When soil is disturbed by human caused activities, such as OHV recreation use, it is more susceptible to erosion. Erosion increases the sediment available for transport by surface waters. Intense OHV use in steep areas and barren play areas (hillclimbs), yields significant increases in erosion, sediment

yield to streams, and mechanical displacement of soils. Continued motorized OHV use at any level, use on highly erosive areas such as barren slopes and on unpaved roads and trails, would disturb soils, and increase erosion and transport of sediment above natural background levels. This analysis will be primarily limited by the need to consider changes in erosion and sediment delivery that would occur as a result of the proposed action. The activities associated with this Designation project that would have an impact on soil loss and erosion, include OHV activities, vehicle route and area designations, and restoration of closed routes. Changes in these activities would result in changes to soil disturbance rates and corresponding changes in sediment yields to CCMA watersheds, relative to existing conditions. The magnitude of OHV activities is not expected to change as a result of route designation. The sediment yield at the mouth of Clear Creek from undisturbed soil conditions is estimated to be approximately 31,000 tons/year or approximately 3 tons/acre per year.

Table 4-1. Sediment Yield from Trails and Barrens

Trail Types – Total Sediment Yields		
	Proposed Action	Existing Condition
Route Designation (miles)		
Open (including county roads)	227	400
Limited	15	0
Total Miles – Recreation Use	242	400
Limited Administrative Use	31	0
Paved	Na	Na
Trail Types	Sediment Yield - Tons	
Improved	2723.2	2953
4-wheel Drive	2135.2	2618
Jeep	3462.4	5430
ATV	1905.6	3258
Single Track	4804	8776
Sub-Total Tons per Year (sediment)	15,030.4	23,035
Barrens	Sediment Yield - Tons	
Open Barren	2390	14,000
Total Disturbed Soils		
Total	17,420.4	37,035

Proposed Action

The proposed action would allow OHV use on 242 miles of unpaved roads and trails and 478 acres of barren play areas. Compared to existing conditions, the proposed action would result in a reduction in erosion and sediment yield to streams within the CCMA and planning area. This would be accomplished by eliminating unregulated use, implementing Best Management Practices, completing significant road repairs and improvements, and reducing soil disturbing activities by reducing the number of miles of unpaved roads by 40 percent and reducing the acres of barren play areas by 83 percent. A key component of the long term reduction in sediment yields is the rehabilitation and restoration of closed routes to a natural condition, so that they trend towards undisturbed soil erosion and sediment delivery rates. 50 to 100 miles of roads and trails would be closed and restored under the proposed action over a 5 year period. Route and barren closures in high erosion sub-watersheds,

including Upper Clear Creek Canyon, South Fork of Clear Creek, and Larious Canyon would contribute to reductions in sediment delivery in these sensitive areas. A portion of R008 contributing significant amounts of sediment to the sub-watershed, riparian areas, and sensitive habitat would be closed. In addition, the designation of routes and areas and the enforcement of these designations, should result in less off route travel and route proliferation. Wet season closures would also contribute to reducing erosion. The following table breaks down the sediment yields by trail type per watershed and includes the undisturbed or background erosion. Total sediment yield for the proposed route network is **15,030.4 tons/year**. Total sediment yield from background erosion is **128,688 tons/year**.

Table 4-2. Sediment Yield from Trails by Watershed

Route Type	Sediment Yield - Tons													
	Watersheds													
	Larious		Clear Creek		San Carlos		San Benito		Los Gatos		Cantua		White Creek	
	Miles	Tons	Miles	Tons	Miles	Tons	Miles	Tons	Miles	Tons	Miles	Tons	Miles	Tons
Improved	0		9.1	1059.2	4.54	528	5.03	585.6	0		3.27	380.8	1.46	169.6
4WD	1.88	208	14.47	1263.2	0		7.02	612.8	0		0.59	51.2	0	
Jeep	0		18.55	1259.2	2.55	172.8	16.89	1146.4	10.22	693.6	1.57	106.4	1.24	84
ATV	6.7	389.6	5.44	316.8	0.1	5.6	5.33	310.4	2.79	162.4	6.76	393.6	5.63	327.2
STT	5.69	276	26.54	1286.4	0		34.67	1680.8	0		23.51	1140	8.68	420.8
Total		873.6		5184.8		706.4		4336		856		2072		1001.6
Background Erosion	15519		29073		5925		30732		15213		18627		13599	

Only the Clear Creek watershed would have designated barren play areas. In the other watersheds, all barrens would be closed to OHV use. Barrens within the three Clear Creek sub-watersheds with the highest erosion would be closed, contributing to a reduction in sediment yield. Concentrating OHV use on the designated open barrens in the Clear Creek watershed may diminish some of the expected reduction in erosion; however, barrens selected in the proposed action typically have high hydrographic positions, natural vegetation buffers, and sediment trapping capabilities. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed, with a corresponding reduction in sediment yield of 1750 tons per year to the Clear Creek watershed. The remaining watersheds would see a reduction of approximately 11,610 tons per year over existing conditions.

The impacts of OHV recreation use on approximately 478 acres of barrens and on approximately 242 miles of unpaved vehicle roads and trails would continue to contribute to erosion and sediment yields over existing natural conditions. The erosion and sediment yield associated with roads, would contribute approximately 15,030 tons per year, affecting watersheds within the CCMA. This is a reduction of 35 percent compared to existing conditions. The erosion associated with barren play areas, would contribute approximately 2,390 tons of sediment per year affecting the Clear Creek watershed only, which is an 83 per cent reduction in sediment yield from existing conditions. Overall roads and barren play areas would contribute approximately 17,420 tons of sediment per year to streams within the CCMA, above the natural background sediment delivery from undisturbed soils. However, this is a reduction of approximately 19,615 tons per year (53 per cent) for watersheds within the CCMA, compared to existing conditions. The 122 stream crossings in the proposed action the proposed action represent a 58 per cent reduction from the existing route inventory. Ten of these are hardened stream crossings on Clear Creek Road. Considering estimates that nearly half the sediment delivered to streams within the CCMA come from stream and swale crossings, this

reduction in the number of crossings should result in substantial reductions in sediment delivery. Based upon watershed erosion estimates, the proposed action is expected to decrease erosion and sedimentation by approximately 53 per cent from the existing baseline conditions.

Proposed Mitigation Measures

- Seasonal access closures and restrictions would be enforced to limit vehicle use during periods of extreme wet and muddy conditions.
- Designated Closed routes would be selected and prioritized for restoration and reclamation.
- California State Soils Loss Standards and Monitoring would be implemented on all designated open routes and surveys completed on an annual basis. Routes may be temporarily closed until corrective maintenance repairs can be completed if necessary.
- BLM would continue to monitor water quality, soil erosion, and sediment conditions within the watersheds of the CCMA. The BLM would implement Best Management Practices (BMP) to reduce impacts to watershed resources, and would continue to evaluate and update these measures as needed to minimize impacts to water quality, control erosion and sediment production. These measures include drainage improvements, construction of rolling dips, water bars, rock armored/hardened stream crossings, hardened sills, and half-pipe bridges, and are contained in Appendix D. These site treatments are incorporated into BLM's annual corrective route maintenance plan.
- Implement barren area protection plan to minimize off-site sediment transport through repair of erosion scars, construction of drainage improvements, sediment control and trapping treatments, and re-vegetation of vegetative buffers. Designated Closed barrens would be selected and prioritized for restoration and reclamation employing these same techniques.
- Construct fence and barriers to preclude access to riparian areas and closed barrens to prevent vehicle disturbance and off-site transport of sediments.

4.4 HUMAN HEALTH

Under the proposed action, management of the CCMA would continue to accommodate 50,000 visitor use days per year, and users would continue to have an increased risk of contracting asbestos-related diseases based upon their frequency of use. As impacts to human health are not necessarily related to the selection of a specific route network, little change in impacts is expected over existing conditions as the recreation use patterns are not expected to change significantly as a result of designation of the route network. Direct impacts to air quality and human health would result primarily from continued vehicle use in the area, causing asbestos dust and particulate matter generation, and human exposure via the inhalation of asbestos fibers. The result of long-term exposure from the inhalation of asbestos fibers could result in serious illnesses such as lung cancer and other asbestos related diseases. These impacts to human health would be analyzed in a subsequent planning process addressing broader recreation use and access of the CCMA. This FEIS does not address or characterize exposure to asbestos for common activities such as OHV recreation, camping, dispersed recreation, or occupational activities in the CCMA.

Proposed Action

The proposed action would allow OHV use on 242 miles of unpaved roads and trails and 478 acres of barren play areas. Continued OHV use on unpaved roads, trails, and barrens would generate asbestos emissions, and visitors in these areas could have increased cancer risks from exposure to naturally occurring asbestos. An overall reduction in the miles of routes available for vehicle access may have little effect to reduce airborne asbestos emissions. Closure of 2000 acres of barrens would contribute to an overall reduction in asbestos dust generation and transport from wind sources, and would contribute to lower levels of asbestos transported to watercourses and impacts to beneficial uses of streams. Potential health risks and air quality impacts from airborne asbestos emissions of the proposed action are relatively unchanged compared to existing conditions, and include an elevated risk of contracting serious and/or life-threatening asbestos-related diseases from exposure to asbestos fibers. Any reductions in impacts to human health would come primarily from mitigation and administrative measures.

Dust suppression activities have proven ineffective and costly in reducing airborne particulate matter.

All BLM road maintenance and grading activities would continue to be conducted in compliance with MBUAPCD ATCM for airborne asbestos, to prevent visible emissions during these operations. Education programs related to asbestos exposure and hazards would continue to be expanded. Closure of all remaining mine areas and restricting vehicle access to these areas would further reduce public exposure to hazardous contaminants and transport of hazardous metals to streams.

EPA Health Risk Assessment

In September of 2004, the EPA initiated an asbestos exposure health risk assessment (HRA) study within the CCMA after the release of the DEIS and RMP amendment for the CCMA. This new exposure evaluation is being conducted to provide updated and accurate information on asbestos exposure from disturbance of soil containing asbestos from a variety of activities. Sampling was conducted in September and November of 2004, and again in February of 2005. Preliminary sampling from September 2004 revealed substantially higher exposure values than those used in the 1992 HRA, and indicate that the 1992 risk assessment likely underestimates asbestos exposure. Results from the September sampling event found up to .955 fibers per milliliter for the tail rider in a line of three motorcycles, which is nine times the highest concentration reported for a tail rider in the 1992 assessment and nine times the OSHA permissible exposure limit. In February 2005, BLM received EPA's Technical Memorandum "Human Health Risk Assessment -Asbestos Air Sampling Clear Creek Management Area, California," regarding sampling on September 15, 2004 (Appendix I). These air sampling studies being undertaken by EPA in connection with an ongoing risk assessment at CCMA indicate a higher risk from airborne asbestos exposure in CCMA than EPA and BLM previously thought.

The purpose of this technical memorandum is to evaluate the potential human health risks for asbestos inhalation exposures during recreational activities, based on the data obtained during the asbestos air sampling pilot study conducted at the Clear Creek Management Area (CCMA) on September 15, 2004. Potential excess Lifetime Cancer Risks (ELCR) were estimated for the Lead Motorcyclist, First Trailing Motorcyclist, and Second Trailing Motorcyclist receptors (Table 1, Appendix I).

The ELCR was calculated for three exposure scenarios, representing three levels of user activity: one-day per year exposure (low use); five days per year (designated "reasonable maximum exposure"

(RME); 12 days per year (high use). These scenarios were developed by BLM for their 1992 asbestos exposure and risk assessment, and were used in EPA's technical memorandum to facilitate comparisons between the results of the two studies. EPA's final study report will evaluate a larger range of exposure scenarios.

The estimated ELCR values were compared to EPA's health risk management range. For all three exposure scenarios, the estimated ELCR values were within or exceeded the health risk management range (Table 2, Appendix I). This range is equal to an increased cancer risk for one in 10,000 persons (1E-04) to one in 1,000,000 persons (1E-06). When ELCR values fall within this range (i.e. more than 1 in 10,000 persons are affected), EPA would generally support remediation (e.g., removal or treatment) of the cancer-causing substance. Because naturally occurring asbestos cannot be removed or treated, more aggressive risk management may be the best option. Therefore, within this range, health risk may be managed by reducing exposure through administrative or other means (e.g. by use limitations).

Proposed Mitigation Measures

- Use of the designated route network may be limited or restricted to protect human health, as new information becomes available. BLM will continue working with EPA, consulting at least annually, to evaluate new data and ensure visitor safety.
- Construction of a public vehicle wash facility will begin in 2006, to reduce transport of asbestos dust and indirect impacts related to off-site contamination and secondary exposure.
- Seasonal access closures and restrictions would be enforced to limit vehicle use during periods of extreme wet and muddy conditions and during periods of extreme dusty conditions. Augment existing public asbestos hazard information program through improved signing, handouts, advisories, monitoring, public contact, and education programs. Any new risk assessments completed by EPA would be incorporated into the educational materials.
- Designated Closed routes would be selected and prioritized for restoration and reclamation, to allow return to natural state to reduce vehicle and wind generated emissions.
- BLM will comply with all provisions of the Monterey Bay Unified Air Pollution Control District's ATCM regulation for control of airborne asbestos emissions relating to construction, road maintenance, and grading activities.
- All remaining mine areas would be closed to OHV use through route closure or construction of fencing and physical barriers.

4.5 BIOLOGICAL RESOURCES

4.5.1 Affected Vegetation Communities

The Clear Creek Management Area (CCMA) includes 30,000 acres of the Idria serpentine formation (ACEC) that supports serpentine vegetation communities that are the occupied or potential habitat of 37 sensitive plant and animal species and the globally unique San Benito Mountain conifer forest.

Public lands surrounding the serpentine ACEC include approximately 33,000 acres of sedimentary soils that extend into areas with relatively limited public motorized access, and are lacking adequate soil, plant and animal surveys. The non-serpentine vegetation communities are not discussed in detail as they have had limited impact due to relatively low OHV recreation use. All routes on sedimentary soils considered for designation in this plan amendment have undergone assessment according to State soil loss and monitoring protocols. Implementation of resource management decisions will be subsequent to this environmental analysis. Under the proposed action there are routes, trails and barren areas within habitat that sensitive species are dependant upon.

The proposed action will provide greater resource protection throughout the serpentine ACEC by way of limiting and designating OHV use and expanding the boundaries of the SBMRNA to further protect important vegetation communities. The following table lists the acres and miles of routes within each vegetation community.

Table 4-3. Designated OHV Use in Each Vegetation Type

Alt.	Serpentine Barrens (acres)	Serpentine Foothill Pine / Chaparral Woodland (miles)	Southern Ultramafic Jeffrey Pine Forest (miles)	Serpentine Riparian Vegetation (miles)	Serpentine Vernal Pools	Serpentine Chaparral (miles)	Non-Serpentine (miles)
Proposed Action	478	2.45	53	6.5	0	157	23
Existing	2311	3.1	92	13.5	0	256	54

Proposed Action

The proposed action would allow OHV use on 242 miles of unpaved roads and trails and 478 acres of barren play areas. The long-term protection of the sensitive habitat and species that occur throughout the CCMA would be enhanced, compared to existing conditions. This would be accomplished by eliminating unregulated use, implementing Best Management Practices, completing significant road repairs and improvements, reducing the number of stream crossings and miles of routes in riparian areas, and reducing soil disturbing activities by reducing the number of miles of unpaved roads by 40 percent and reducing the acres of barren play areas by 83 percent.

A key component of the long term reduction in sediment yields benefiting riparian areas is the rehabilitation and restoration of closed routes to a natural condition, so that they trend towards undisturbed soil erosion and sediment delivery rates. Over 150 miles of roads and trails would be closed and restored under the proposed action over a 5 to 7 year period. Closure and restoration of barrens would benefit riparian vegetation and increase the acreage of barrens which would be able to support vegetation and special status species. Route and barren closures in high erosion sub-watersheds, including Upper Clear Creek Canyon, south fork of Clear Creek, and Larious Canyon would contribute to reductions in sediment delivery and impacts to sensitive species habitat. A portion of R008 contributing significant amounts of sediment to the sub-watershed, riparian areas, and sensitive habitat would be closed. In addition, the designation of routes and areas and the enforcement of these designations should result in less off route travel and route proliferation.

The 122 stream crossings in the proposed action represent a 58 per cent reduction from the existing route inventory. Considering estimates that nearly half the sediment delivered to streams within the CCMA come from stream and swale crossings, this reduction in the number of crossings should result

in substantial reductions in sediment delivery and associated impacts to riparian and sensitive species habitat. The proposed action includes 5.15 miles of routes within riparian areas¹, which is a 58 per cent reduction from existing conditions.

In the proposed action there are 4.04 miles (2.94 miles of county roads) of routes in proximity to potential habitat polygons for the San Benito evening-primrose. This is a reduction of 38 percent compared to existing conditions. Routes affecting this habitat are primarily lower Clear Creek Road and R015 (KCAC, paved.) which are part of the county road network. There is an 80 percent reduction in single track trails (STT) affecting these habitat polygons from existing conditions. Remaining STT (0.35 miles) affecting this potential habitat, occur primarily where trails connect with Clear Creek Road and R015. There is a significant reduction of routes in these polygons, including the closure of a portion of R008 (south fork of Clear Creek) and several trails that intersect with R015 in the San Benito River watershed.

In the proposed action there are 5.70 miles of routes in proximity to potential habitat polygons for rayless layia (*Layia discoidea*). This is a reduction of 46 percent compared to existing conditions. There is an 82 percent reduction in single track trails (STT) affecting these habitat polygons from existing conditions. There is a significant reduction of routes in these polygons, including the Larios and San Benito River watersheds. An overall reduction of 43 percent of routes in San Benito evening-primrose and rayless layia potential habitat would substantially increase the protection given to these habitats.

Several Staging areas (terrace sites) in lower Clear Creek Canyon would continue to experience impacts related to camping and day-use activities. Fencing and barriers protect most sensitive resources in these areas. The continued erosion of topsoil in high vehicle use areas would decrease the productive soil horizons and inhibit natural re-vegetation of some areas.

The current status of known San Benito evening-primrose populations on public lands in the CCMA would be maintained or enhanced due to route closure, avoidance through routing away from sensitive areas, fence protection, habitat manipulation, and public education. A discussion of environmental impacts related to vegetation communities follows.

Serpentine Barrens

The proposed action would allow open OHV (primarily motorcycle) use on 478 acres of serpentine barrens and would close approximately 2000 acres throughout the CCMA.

Only the Clear Creek watershed would have designated barren play areas. In the other watersheds, all barrens would be closed to OHV use. Barrens within the three Clear Creek sub-watersheds with the highest erosion would be closed, contributing to a reduction in sediment yield. Concentrating OHV use on the designated open barrens in the Clear Creek watershed may diminish some of the expected reduction in erosion, however, barrens selected in the proposed action typically have high hydrographic positions, natural vegetation buffers, and sediment trapping capabilities. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed, with a corresponding reduction in sediment yield of 1750 tons per year to the Clear Creek watershed. Barrens within the Clear Creek watershed would contribute 2330 tons per year of sediment yield. All

¹ This includes routes that transect within a 40 foot buffer of perennial and ephemeral streams. The majority of this mileage includes the identified stream crossings, rather than routes that parallel streams within the riparian buffer.

barrens within ¼ mile of Clear Creek would remain closed. The remaining watersheds would see a sediment reduction of approximately 11,670 tons per year over existing conditions.

Most routes and all barrens would be closed in the Larious Canyon watershed benefiting watershed resources, sensitive species habitat, and the Federally Threatened San Benito evening-primrose. Continuing OHV non-compliance into protected areas in this watershed, require closure of this area to OHV recreation. OHV use of barrens and trails within the Larious watershed have contributed to route proliferation, non-compliance, and trespass into sensitive resource areas, requiring implementation of more stringent management protection measures. Closure of these barrens will also contribute to reductions in sediment yield to terraces with occupied and potential habitat for the San Benito evening-primrose. Barrens in the south fork of Clear Creek will be closed in this high erosion sub-watershed reducing sediment yields and benefiting riparian vegetation, the San Benito evening primrose, and sensitive species habitat.

In all remaining watersheds in the CCMA, including the San Benito River, Sawmill Creek, and San Carlos Creek, barrens would be closed and slated for restoration, substantially reducing impacts to resources in this vegetation community. Closure and rehabilitation of some roads associated with barrens and closure of off-road vehicle open use areas would increase the total acreage of protected serpentine barrens. The rate of soil erosion on closed barrens would lessen and soil formation would increase over the long-term as the biotic crust reforms.

Affected Plant Species

The following species will benefit by reducing the numbers of open barren acres to 478 and protecting 350 acres in the Clear Creek watershed, and closing 1989 acres outside of the Clear Creek watershed from OHV use; Brewer's streptanthus (*Streptanthus breweri*), Carlotta Hall's Lace Fern (*Aspidotis Carlotta-halliae*), rayless layia (*Layia discoidea*), Santa Clara thornmint (*Acanthomintha obovata* ssp *obovata*), San Benito evening-primrose (*Camissonia benitensis*), San Benito monardella (*Monardella antonina* var. *benitensis*), Talus fritillary (*Fritillaria falcata*), San Benito fritillary (*F. viridea*).

Open barren use proximal to Clear Creek Canyon would limit OHV use to barrens easily accessible for soil erosion control. Sediment deposition on Clear Creek stream terraces, which is San Benito evening-primrose (*Camissonia benitensis*) primary occupied and potential habitat, would continue and would need to be closely monitored and controlled. All San Benito evening-primrose populations would continue to be protected and monitored.

Serpentine Foothill Pine-Chaparral Woodland

Under The proposed action, 2.45 miles of designated routes and trails would be designated as open in the serpentine foothill pine-chaparral woodland, which is a 21 percent reduction from existing conditions.

Overall the implementation of the proposed action would allow for recovery of areas that have been impacted by OHV recreation use in the Serpentine Foothill Pine – Chaparral Woodlands.

Affected Plant Species

There would be increased protection given to the Carlotta Hall's lace fern, Mt. Diablo phacelia, south coast morning glory, talus fritillary, San Benito fritillary, rayless layia, Santa Clara and San Benito

thornmint, and San Benito monardella because of the reduction in routes and trails throughout this vegetation community.

Some populations of San Benito fritillary and San Benito morning glory and some habitat for these species could continue to be impacted; however these impacts would be moderately less than existing conditions. There appears to be sufficient numbers of populations distributed over a large enough area that impacts to some populations or habitat should not jeopardize these species, which may soon be removed from the federal list of special-status species.

Southern Ultramafic Jeffrey Pine Forest

The Southern Ultramafic Jeffrey Pine Forest would gain protection by increasing the total acreage within the San Benito Mountain Research Natural Area to 4147 acres. The added upland habitat would include all of upper Clear Creek, and most of the San Carlos Creek and Sawmill Creek watersheds, which supports significant forest stands, and all the pine forest and woodland beyond the northern and eastern perimeters of the existing SBMRNA. This transition zone between the serpentine and non-serpentine areas on the northeast side of the SBMRNA will provide additional protection for this vegetation community. Open use within the forested ecosystem would be prohibited which would assist in forest regeneration and sensitive plant and animal protection. There would be a substantial reduction in motorized access in this community with the only routes authorized for OHV access being R011 (Spanish Lake Road), T158B (Sawmill Creek Road), a portion of T153, and R013, reducing disturbance to this forest community. This forest community in the Sawmill Creek watershed would also see increased protection. Overall there would be a 42 percent reduction of routes within this vegetation community.

Affected Plant Species

There would be increased protection given to Coulter pine, Foothill pine, Jeffrey pine, Incense cedar, Brewer's streptanthus, San Benito fritillary, talus fritillary and the rayless layia, because of the reduction in routes and trails throughout this vegetation community. Likewise, the health of the entire herbaceous community in this vegetation community would be benefited.

Serpentine Riparian Vegetation

Overall the implementation of the proposed action would reduce the number of miles along riparian corridors in the CCMA from approximately 13.5 miles to 6.5 miles. The remaining miles would primarily be along the existing county road network. Closure of riparian areas to OHV access throughout the CCMA would allow for the recovery of some riparian areas that have been impacted by intensive motorized recreation activities. Implementation of Best Management Practices (BMP's) on previously disturbed areas would help control sediment delivery. All barrens depositing directly onto this habitat would be closed. There would be 122 stream crossings under the proposed action, representing a 58 per cent reduction from the existing route inventory. Considering estimates that nearly half the sediment delivered to streams within the CCMA come from stream and swale crossings, this reduction in the number of crossings should result in substantial reductions in sediment delivery and associated impacts to riparian and sensitive species habitat, and particularly to habitat for the San Benito evening-primrose. The remaining crossings in the route network would be stabilized by implementing BMP's over the course of several years.

A key component of the long term reduction in sediment yields benefiting riparian areas is the rehabilitation and restoration of closed routes to a natural condition, so that they trend towards

undisturbed soil erosion and sediment delivery rates. Closure and restoration of barrens would benefit riparian vegetation and special status species habitat in the majority of sub-watersheds within the CCMA. Route and barren closures in high erosion sub-watersheds, including Upper Clear Creek Canyon, south fork of Clear Creek, and Larious Canyon would contribute to reductions in sediment delivery and impacts to the San Benito evening primrose and riparian habitat. All barrens of low hydrographic position were screened out through the designation criteria. A portion of R008 contributing significant amounts of sediment to the sub-watershed, riparian areas, and sensitive habitat would be closed. Closure of this sub-watershed would directly benefit habitat for the San Benito evening-primrose. In addition, the designation of routes and areas and the enforcement of these designations should result in less off route travel and route proliferation. There would be a significant reduction of routes affecting this vegetation community in the Larious watershed, and in particular closure of all routes in the upper east fork of Larious Creek affecting rayless layia within this riparian community.

Concentrating OHV use on the designated open barrens in the Clear Creek watershed may diminish some of the expected reduction in erosion and related impacts to riparian areas; however, barrens selected in the proposed action typically have high hydrographic positions, natural vegetation buffers, and sediment trapping capabilities. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed, with a corresponding reduction in sediment yield of 1750 tons per year to the Clear Creek watershed. All barrens within ¼ mile of Clear Creek would remain closed. The remaining watersheds would see a reduction of approximately 11,610 tons per year over existing conditions providing a significant benefit to the Serpentine Riparian vegetation community.

Affected Plant Species

Nearly all remaining suitable San Benito evening-primrose habitat (both terrace sites and temporary streamside habitat) along Clear Creek would be maintained or enhanced due to enforced limited use vehicle restrictions, fence protection, habitat manipulation, and public education. Management actions related to the introduction of the San Benito evening primrose at 33 medium- and high-priority terrace sites could increase the number of populations. Additional protected riparian habitat within the expanded SBMRNA would also benefit this species.

Greater protection of the San Benito evening-primrose potential and occupied habitat would occur under the proposed action because of significantly reduced route, trail, and barren designations within this vegetation community. Roads and areas that impact this species would be rerouted or closed. The Larious watershed would be closed to motorized vehicles, providing enhanced long-term protection for this important species population there and contribute to recovery efforts. Upper Clear Creek Canyon would be included in the expanded RNA and coupled with further vehicle restrictions in the RNA, would facilitate and enhance management to protect this species there. Large proportions of Clear Creek Road, Sawmill Creek Road, San Benito River Road, and San Carlos Creek Road would be managed for introducing the primrose into suitable habitat.

Portions of Clear Creek terraces used for camping and as off-road vehicle staging areas and portions of 28 terraces used for main roads would remain unsuitable as San Benito evening-primrose habitat. OHV use in lower Clear Creek Canyon would remain relatively unchanged compared to existing conditions and would therefore see the smallest change in riparian impacts as a result of the route designation process. Most of the serpentine riparian habitat in lower Clear Creek is fenced; however additional fencing and protection measures may be required.

The substantial reduction in stream crossings and 52 percent reduction in miles of routes in this riparian vegetation community, would have significant beneficial impacts by reducing sediment delivery to habitat for the San Benito evening-primrose and the following riparian plant species; rayless layia, Guirado's goldenrod, Heerman's buckwheat, Hernandez bluecurls, and Brewer's salix; particularly outside lower Clear Creek Canyon.

Serpentine Vernal Pools

All known vernal pools within the CCMA are currently protected by fencing and pipe barriers to prevent disturbance by OHV recreation activities. Vernal pools will continue to be protected under the proposed action.

Affected Plant Species

All serpentine vernal pool plant species will benefit by the existing protection measures.

Serpentine Chaparral

Route designations within the serpentine chaparral would result in 157 miles of routes and trails for OHV recreation under the proposed action. This is a reduction of 39 percent in this vegetation community, compared to existing conditions. Designation of routes and trails will have long-term benefits within the serpentine chaparral by implementing closure and restoration of routes and trails, and eliminating unregulated use, cross-country travel, implementing Best Management Practices, completing significant road repairs and improvements, and reducing soil disturbing activities.

Affected Plant Species

There would be increased protection given to the Carlotta Hall's lace fern, Mt. Diablo phacelia, south coast morning glory, talus fritillary, San Benito fritillary, rayless layia, Santa Clara and San Benito thornmint, and San Benito monardella because of the reduction in routes and trails throughout this vegetation community. Chaparral shrub and herbaceous plant species remain quite extensive in this vegetation community within the CCMA, and while small localized areas may experience impacts from OHV recreation and camping, their overall survival is not threatened because they remain abundant, and in many areas serve as natural obstacles to off-route travel.

Non-Serpentine Vegetation Communities

Under the proposed action, 23 miles of routes and trails have been identified for OHV use on non-serpentine vegetation types. This is a 58 percent reduction in the miles of routes compared to existing conditions. These routes are primarily in the Condon Peak area and a small area on the east side of the CCMA in the Cantua Creek watershed. As in all vegetation communities, route and trail designation will be beneficial to the biological resources by limiting motorized use and disturbance. The sedimentary soils outside of the serpentine ACEC generally exhibit lower erosion rates than serpentine soils and corresponding impacts to vegetation related to OHV use.

Affected Plant Species

The following plant species would benefit by OHV designations, a reduction in the miles of routes, and ongoing protection in the non-serpentine vegetation communities; Mt. Diablo Phacelia, San

Benito monardella, San Benito thornmint, Santa Clara thornmint, slender pentachaeta , south coast range morning glory, San Benito fritillary, talus fritillary and San Benito spineflower.

Proposed Mitigation Measures

- Portions of Clear Creek, Sawmill Creek, San Benito River, and San Carlos Creek would be managed for introducing the San Benito evening-primrose into suitable habitat.
- All populations of the San Benito evening-primrose and protection measures in place would be monitored for compliance relating to OHV trespass and adaptive management would determine additional management actions to protect this species.
- Designated Closed routes would be selected and prioritized for restoration and reclamation to minimize impacts to vegetation communities.
- California State Soils Loss Standards and Monitoring would be implemented on all designated open routes and surveys completed on an annual basis. Routes may be temporarily closed until corrective maintenance repairs can be completed if necessary.
- BLM would continue to monitor water quality, soil erosion, and sediment conditions within the watersheds of the CCMA. The BLM would implement Best Management Practices (BMP) to reduce impacts to watershed resources, and would continue to evaluate and update these measures as needed to minimize impacts to water quality, control erosion and sediment production. These measures include drainage improvements, construction of rolling dips, water bars, rock armored/hardened stream crossings, hardened sills, and half-pipe bridges, and are contained in Appendix D. These site treatments are incorporated into BLM's annual corrective route maintenance plan.
- Implement barren area protection plan to minimize off-site sediment transport through repair of erosion scars, construction of drainage improvements, sediment control and trapping treatments, and re-vegetation of vegetative buffers. Designated Closed barrens would be selected and prioritized for restoration and reclamation employing these same techniques.
- Construct fence and barriers to preclude access to riparian areas and closed barrens to prevent vehicle disturbance and off-site transport of sediments. Specifically fence along R002 to control OHV access into the Larious watershed and fence along T113 to controls access to closed barrens in a high erosion watershed on the south side of Clear Creek. Protective measures would be implemented for all remaining open BLM routes bisecting San Benito evening-primrose habitat to include corridor fencing as necessary.
- Monitor all unprotected populations of rayless layia, Mount Diablo phacelia, and talus fritillary for possible adverse impacts from vehicles and other uses and implement protective actions as warranted.
- Inventory suitable habitat for all sensitive plant species
- Monitor any new populations of these species documented during future inventories for adverse impacts and implement protective actions as warranted.

- Implement long-term studies to determine how disturbances such as human use, storms, and erosion, impact the viability of the above species. Employ adaptive management in the CCMA to help improve conditions for these species.

4.5.2 Affected Special Status Animal Species

Proposed Action

Designation of routes and trails and barrens for use within the CCMA will enhance the long-term protection of the sensitive habitat and species that occur throughout the CCMA, by reducing unregulated use, erosion, sediment yield, and impacts to watershed resources, as described below. There would be a net positive effect to all animal species that occur or have the potential to occur within the CCMA by implementation of the proposed designations, compared to existing conditions.

The reduction of open routes and barrens, and the elimination of cross-country use will diminish habitat fragmentation, auditory disturbance, and the probability of being crushed by vehicles will be lessened through all action alternatives in upland and riparian wildlife habitats. The elimination of all barrens of low hydrographic position will reduce the sediment flow into watersheds within the CCMA increasing the protection and decreasing the negative impacts to the sensitive riparian areas and animal species.

Currently, all vernal pool communities are protected within the CCMA. This continued protection, will benefit the following species, which have the potential to occur, under all action and no action alternatives, Vernal pool fairy shrimp, Conservancy fairy shrimp, and Vernal pool tadpole shrimp.

The following species will benefit through the designation of routes and trails, elimination of cross-country travel, recovery of impacted areas, and the habitat protection an increased SBMRNA would provide; foothill yellow-legged frog, northwestern pond turtle, and southwestern pond turtle, two-striped garter snake, valley elderberry longhorn Ciervo aegialian scarab beetle, San Joaquin dune beetle, California condor, bald eagle, western mastiff-bat, Townsend's western big-eared bat, pallid bat, long-eared myotis, Yuma myotis, fringed myotis, small-footed myotis coast horned lizard, sharp-shinned hawk, golden eagle, prairie falcon, Bell's sage sparrow, and the big-eared kangaroo rat.

Impacts to four BLM sensitive species, foothill yellow-legged frog, two-striped garter snake, and the northwestern and southwestern pond turtles, known to populate riparian areas within the CCMA will be decreased through the proposed action. Route and barren designation will decrease impacts in adjacent upland habitats, decrease potential erosion, and sediment yield, contributing to reductions in habitat degradation in riparian areas. This would be accomplished by reducing the number of stream crossings and miles of routes in riparian areas by approximately 50 percent, and reducing soil disturbing activities by reducing the number of miles of unpaved roads by up to 40 percent and reducing the acres of barren play areas by up to 79 percent. Considering estimates that nearly half the sediment delivered to streams within the CCMA come from stream and swale crossings, this reduction in the number of crossings should result in substantial reductions in sediment delivery and associated impacts to riparian and sensitive species habitat.

Concentrating OHV use on the designated open barrens in the Clear Creek watershed may diminish some of the expected reduction in erosion and related impacts to riparian areas; however, barrens selected in the proposed action typically have high hydrographic positions, natural vegetation buffers, and sediment trapping capabilities. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed, with a corresponding reduction in sediment yield of

1750 tons per year to the Clear Creek watershed. All barrens within ¼ mile of Clear Creek would remain closed. The remaining watersheds would see a reduction of approximately 11,610 tons per year over existing conditions providing a significant benefit to riparian animal species and habitat. Sediment yield from routes affecting riparian habitat would be reduced by an average of 8000 tons per year, substantially improving conditions for riparian species.

Impacts to the bald eagle, a BLM sensitive species known to occur within the CCMA will be decreased through the expansion of the research natural area, the restoration of routes and trails, improved water quality through reduced transport of hazardous metals, and the elimination of cross-country travel. This will provide a large contiguous expanse of habitat, contribute to protecting existing habitat, and decrease further habitat fragmentation.

Habitat fragmentation, auditory disturbance, and the probability of being crushed by vehicles will be minimized to species of special management concern within the upland and riparian habitats of the CCMA. The SBMRNA would be expanded to 4147 acres, providing a large contiguous expanse of species habitat within the CCMA that is closed to vehicle traffic.

Proposed Mitigation Measures

- Develop monitoring and inventory studies to determine status of animal species with the potential to occur within the boundaries of the CCMA. Modify management actions and strategies as new data warrants.
- Continue current monitoring program, and modify management actions and strategies as new data warrants.
- Designated Closed routes would be selected and prioritized for restoration and reclamation to minimize impacts to sensitive species and sensitive species habitats.

4.5.3 Invasive Weeds

The CCMA has an existing infestation of yellow starthistle (*centaurea solstitiatus*) that is expanding in coverage. At one time yellow starthistle was thought to be intolerant of ultramafic soils, such as those in the CCMA serpentine ACEC, however, ongoing plant surveys indicate the spread up Clear Creek Canyon on serpentine and sedimentary soils. In addition to the increase in yellow starthistle infestation, sensitive species habitat is at risk. Yellow starthistle is most abundant in the oak savannah, stabilized riparian terraces, and sedimentary inclusions.

Proposed Action

The continued spread of invasive, non-native plants, in particular yellow starthistle could continue. Yellow starthistle seed is transported on the undercarriage of vehicles (Di'Tomaso et al. 1999, Bossard et al, 2000) and colonization is occurring on both serpentine and non-serpentine soils. Non-serpentine soils contain greater amounts of nutrients necessary for plant growth and are therefore colonized by yellow starthistle at a faster rate. Routes and trails that are outside of the Serpentine ACEC are at greater risk of infestation than those within the ACEC. Sensitive species habitat could be impacted in the CCMA, including some *Camissonia benitensis* occupied sites. A comprehensive weed management program was implemented in 2004. Riparian areas and all areas where sedimentary soils are embedded are most vulnerable to invasion. A controlled burn was used to manage yellow starthistle in lower Clear Creek Canyon in 2005, and these efforts will continue.

Proposed Mitigation Measures

- Implement invasive weed management program.
- Install public vehicle wash facility.

4.6 RECREATION RESOURCES

The CCMA has been an important weekend recreational destination for central California residents for the past 35 years. The recreation resources analyzed under the various alternatives include a variety of casual recreation types, the barren play areas, and the route/trail network. All routes within the CCMA will be designated as open, limited, or closed, and were screened through the criteria in Appendix A and include a designation record and rationale. All routes not designated open or limited, would be designated as closed. All barrens within the CCMA will be designated as open, limited, or closed, and were screened through the criteria in Appendix B, and include a designation record and rationale. All barrens less than 10 acres in size would remain closed. Within the CCMA Limited Use Area, all casual use would be restricted to designated open or limited routes that are signed for use. Routes selected for analysis in this Plan Amendment were from the existing database of inventoried routes (approximately 440 miles).

The establishment of a designated route system throughout the CCMA would have both positive and negative recreation impacts: Maps, signing and trail maintenance would add a degree of safety and security for those riding in the backcountry, yet fencing projects, routine trail maintenance, and the designated route system would result in a much more regulated environment. These changes would reduce the quality of the recreation experience for some users who value recreating in an environment with few obvious societal restraints and controls. Available camping areas would continue to be congested during the winter use season with conflicts between user groups, particularly during the evening hours when alcohol consumption, noise, illegal fireworks, and gunfire aggravate adjacent users.

Full implementation of any of the proposed action is not expected to result in any changes in the number or type of recreation user, with the exception of seasonal restrictions which could limit numbers for that time period. Visitation trends are expected to remain fairly constant with moderate yearly increases. This analysis is based on approximately 50,000 visitors per year. Due to the lack of facilities, limited carrying capacity, and distance to population centers, substantial increases in use are not expected.

4.6.1 Motorized Vehicle Access Network

The proposed action designates 227 miles of routes as open and 15 miles of routes as limited for a total of 197 trails. See Appendix A for a detailed list of open, limited, and administrative use only trails and trail closures under the various alternatives. The trails system proposed provide access to the majority of the CCMA that is commonly used today. By implementing the sign plan and providing maps of these routes, the CCMA route system will be easily navigated by the novice or the experienced rider.

Aerial digital imagery coupled GPS would be used to complete the route inventory of those routes not included in the existing database for the CCMA. Upon completion of soil loss assessment, up to an additional 28 miles of routes under the proposed action may be added to the designated route network after evaluation utilizing the criteria developed in this environmental impact statement. This could

result in as much as a 270 mile network of routes. Protection of sensitive species habitat would remain a priority. Consideration would be given for connector routes facilitating loop trails that contribute to the overall route network. The majority of these additional routes could be highly desirable routes, such as single track, all-terrain vehicles (ATV), and jeep trails.

The statewide average of these types of trails which are sought after by 4-wheel drive enthusiast and single-track motorcyclists is 16 percent. The CCMA route system would provide 188 miles of routes of interest to these OHV users which comprise 78 percent of the total routes available. There are 135 miles of single track and ATV trails (56 percent of total routes), and 53 miles of jeep trails (22 percent of total routes). These routes provide for substantial exploration opportunities for the off road enthusiast, particularly in the remote southeast portion of the CCMA. The 135 miles of single track type routes give event (Quicksilver Enduro, Wild Boar, Molina Ghost Run, etc.) holders a variety of course combinations that can be varied from year to year.

There would be some closures of popular riding areas. These areas include Larius Canyon, San Carlos Peak, portions of San Carlos watershed, and Cantua watershed. These unique habitat areas would be protected from off road use.

Proposed Action

The proposed action provides 197 trails comprising 242 miles of routes ranging from paved roads to single track trails. Under the proposed action, the route network includes 135 miles of single track and ATV trails (56 percent of routes), and 53 miles of jeep trails (22 percent of routes). The proposed action (map 1-1) in the Appendix depicts the location of these routes. Route mileages of the proposed action by trail type are in Table 2-1. Of the 242 miles of routes open for casual recreation use, 15 miles would be limited and the limitation would be no motorcycles. These routes are located on the southern end of the CCMA in the Condon Peak area, and would be limited to reduce off-route travel, route proliferation, and conflicts with other recreation uses. These routes are generally used by hunters on ATV and four-wheel drive vehicles. The remaining 227 miles of routes would be open to all motorized vehicles. The 31 miles of administrative use only routes are comprised of improved and four-wheel drive trail types, and would be restricted to permittees, licensees, rights-of-way holders, the Federal government, and authorized representatives. These routes would not be available for casual recreation use. Routes in Cane, Tucker, Byles, and Baker Canyons, where there is limited public access would be restricted to administrative use.

Routes in the Condon Peak area would still provide access to a large portion of this area for hunting and other activities. The majority of routes within the Larius Creek watershed would be closed under the proposed action to protect sensitive species habitat and watershed resources, except for trails T125 and T126. Most routes in the South Fork Clear Creek watershed would be closed, including a portion of R008 due to high watershed erosion rates and sensitive species habitat.

R010, T154, and T155 provide access through the SBMRNA, closed mine areas, and to areas to the east in the San Carlos Bolsa watershed that have had limited public motorized access. Closing these routes would provide better protection of sensitive species and watershed resources within and adjacent to the RNA. R010 ("Ridge Route") in particular traverses through the heart of the RNA, and closure of this route would contribute to reducing off-route and cross country travel within the RNA, and protecting the values for which established. Vehicle travel would be restricted to Spanish Lake Road, Sawmill Creek Road, T153, and R013 within the RNA. T212 provides access outside the ACEC into the Cantua Creek watershed, and closing this route would prevent motorized access to this

remote area of the CCMA. T242 is currently closed due to resource protection issues along R001 and it would remain closed under the proposed action.

While there would be some isolated areas where vehicle travel would be restricted, the 242 mile network of routes would still span the majority of the CCMA and provide a variety of motorized vehicle recreation opportunities, experiences, and challenges. The proposed action would continue to provide vehicle access for rockhounding, sightseeing, and wildlife watching. Non-motorized recreation activities would be enhanced through providing more areas for these activities and reduced conflicts with motorized use. Though unlimited motorized exploration of trails would no longer be allowed, the substantial route network in the more remote southeast portion of the CCMA would still provide opportunities for exploration and the challenge of navigating this remote environment. Some historical routes used in enduro and permitted events would no longer be available, however the route network, including 135 miles of ATV/Single Track trails would offer a variety of course combinations that can be varied from year to year.

Proposed Mitigation Measures

- A difficulty rating system would be implemented for all designated open and limited routes. Ratings would be identified on route markers.
- Install signs identifying the CCMA as a Limited Use Area with all vehicle travel restricted to designated open routes. Clearly mark and identify the designated route network.
- Produce and distribute a new user map to allow recreation users to understand the appropriate type of use and clearly identify where OHV use is permitted.
- Develop a recreation user education and awareness program to inform the public of the concepts of designated use, encourage safe and environmentally responsible behavior, and an understanding of multiple-use management.
- Increase Law Enforcement patrols and use of Law Enforcement response teams to monitor and enforce compliance with designations.

4.6.2 Barrens

Proposed Action

The proposed action provides 478 acres of open play areas for public use (see map 1-1 in Appendix). There would be a 79 percent reduction in barrens available for recreation use from the complete barren inventory (2311 acres). Barrens considered for open designation would be limited to those within the Clear Creek watershed. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed, which are primarily on the south side of the canyon in high erosion sub-watersheds. These barrens are in close proximity to the majority of recreation use. Limiting use to barrens in the Clear Creek watershed would confine impacts to one watershed rather than contributing to watershed impacts throughout the CCMA. This would facilitate focusing of any mitigation measures related to OHV use to a smaller area. Law enforcement would benefit by having a smaller area in closer proximity to monitor compliance with barren designations. OHV recreation users would know to travel to this general area for hill climbs and open play activities. These areas would be easily marked and mapped. The novice rider would be able to distinguish the boundaries of the open play areas, therefore remaining in compliance with BLM rules and regulations. Concentrating use to this set of barrens in the Clear Creek watershed could lead to potential overcrowding and user conflicts, however a substantial portion of barren OHV activity already occurs

there. Barrens in the Larious Canyon watershed would be closed, limiting open play riding opportunities in that area. It would be readily identifiable to the recreation user that outside the Clear Creek watershed, OHV use is not authorized on any barrens. In addition many barrens outside the Clear Creek watershed have had less intensive OHV use and therefore are more suitable for restoration.

Proposed Mitigation Measures

- Install signs identifying the CCMA as a Limited Use Area with all vehicle travel restricted to designated open routes and areas. Clearly mark and identify the designated barren areas.
- Produce and distribute a new user map to allow recreation users to understand the appropriate type of use and clearly identify where OHV use is permitted.
- Develop a recreation user education and awareness program to inform the public of the concepts of designated use, encourage safe and environmentally responsible behavior, and an understanding of multiple-use management.
- Increase Law Enforcement patrols and use of Law Enforcement response teams to monitor and enforce compliance with designations.
- Construct fence to control unauthorized use of closed barrens, including adjacent to R002 and T113.

4.6.3 Non-OHV Recreation Opportunities

Non-OHV recreational opportunities include camping, hobby gem/mineral collecting, hunting, hiking/backpacking, wildflower hikes, wildlife watching, hang gliding, geocaching, and sightseeing. These users are adequately provided for in all alternatives proposed. The majority of this type of use occurs along the major routes which would remain in all alternatives. These user groups also spend a large amount of their time on foot, traversing the entire CCMA. This would still occur and even though a trail is closed to motorized access it would still be open for foot traffic. There are some trail closures that could limit the dispersion of these users into certain areas.

Proposed Action

The proposed action provides 197 trails comprising 242 miles of routes ranging from paved roads to single track trails. This route network would provide access throughout the CCMA for a wide variety of non-motorized recreation activities. Two routes would be closed in the Condon Peak area; however several miles of route would remain open to 4-wheeled vehicles, providing access to a substantial portion of traditional hunting areas. The Condon Peak hiking trail would be closed to motor vehicles and provide an improved hiking experience. Passive recreation opportunities (hiking/backpacking, wildlife watching, nature study) would be enhanced under the proposed action with areas free of motorized disturbance and user conflicts. Non-motorized recreation activities and opportunities for ecological study would be significantly improved in the SBMRNA.

4.7 CULTURAL RESOURCES

The CCMA was previously inventoried for cultural resources in order to generate baseline data to be used in CCMA planning efforts. The report was entitled "Archeological Survey of the Clear Creek ORV Project, Bureau of Land Management," completed under contract (No. 04040-PH5-120) in May

1975 by L. Kyle Napton of the Institute for Archaeological Research, California State University, Stanislaus (formerly California State College). The inventory conformed to the BLM Class II sample survey (refer to BLM Manual Series 8100). Based upon that report and other data accumulated over the years, a comprehensive cultural resources management strategy for the region has been developed (refer to CCMA RMP: 1986 and 1995). As such, protection efforts for cultural resources include:

- site avoidance (route design and use)
- physical barriers (fenced out areas or gated roads)
- site monitoring by BLM personnel (Archeologists, Law Enforcement Officers, Park Rangers, some Implementation Team members) and volunteers (members of the CASSP program)
- concurrent review of proposed undertakings to address potential effects to sites or other cultural resources.

Subsequent inventory efforts have been and are currently being performed on a project-specific basis as needed, specifically when a proposed project or event moves beyond those projects/activities not included in the “Exempt Undertakings” section, outlined in Appendix C of the 1998 Programmatic Agreement (PA) between the California Bureau of Land Management (BLM) and the California State Historic Preservation Officer (SHPO). The 1998 PA is designed for the BLM to “integrate its historic preservation planning and management decisions with other policy and program requirements to the maximum feasible extent in the public interest” (1998:2). The PA meets the Section 106 requirements of the NHPA to “take into account the effects of the agency’s undertaking on properties included in or eligible for the National Register of Historic Places” (NRHP) as cited in 36CFR800.1(a).

There are at least two dozen prehistoric and historic archeological sites and localities in the CCMA. Many of these sites and localities have been affected over the past years by mining use and reuse, OHV-related vandalism and erosion, and begin neglect. The most visible archeological resources are the mining landscape and related features from the past boom and bust cycles related to mercury extraction and beneficiation (cinnabar and metacinnabar ores). The remnants of these historic mining resources are being evaluated for their cultural values as part of the Abandoned Mine Lands (AML) inventories concurrent with the PA and National Environmental Policy Act (NEPA).

Although the creation of campsites in the CCMA has affected several prehistoric archeological sites (lithic scatters), the most significant impacts have been from illegal and uncontrolled artifact collection. Collectors have probably removed most of the outstanding examples of Native Californian workmanship from the CCMA, but perhaps there are more examples of their crafts in situ. Likewise, historic mine sites have been collected from or used as firewood and/or target practice by the camping public. A program of archeological site monitoring for parts of the CCMA was implemented by the BLM in 1989 to observe changes to archeological sites from either human or natural causes. Based upon a successful program after four years, the monitoring program was extended and similar efforts were concentrated at other sites.

Overall, the sites appear to be in a relatively static condition. No new observable impacts or changes to the sites have occurred since monitoring has been implemented. For example, CA-SBn-167 has been fenced out from the public on either side of Clear Creek road. CA-SBn-170 was fenced out from the public (FY1999) to protect the archeological resource and T&E botanical habitat from

unauthorized OHV access. No new impacts to either site have been observed since the fences' construction.

The guidance for successful routes designation within the CCMA has been outlined in the previous chapter of this DEIS (Chapter 2 Description of Proposed Action and Alternatives) and in the attached appendices (Appendix C Implementation Plan and Appendix D Best Management Practices). By adhering to the "guiding criteria" affecting access to routes (Chapter 2.2, National Historic Preservation Act), utilizing applicable management guidance established by the BLM (Chapter 2.3, the BLM CA 1998 PA for Cultural Resources), and relying on a solid route/barren designation methodology that balances science and user need (Chapter 2.4 and 2.4.1, cultural and paleontological resources review as a potential resource concern, TIER 1), route and barren designation for the CCMA should not adversely affect any cultural resources.

Proposed Action

Under the proposed action, using the current database of known cultural (and paleontological) resources for the CCMA should be adequate for establishing the route designation process. Incorporating the strategies outlined in Appendices C and D will also provide the tools and mechanisms for maintaining designated routes while affording cultural resource protection. Of course, as new information is gathered from archeological inventory and excavation and new ethnographic data is revealed from Native American concerns, future undertakings and projects within the CCMA would address this new data and management strategies would change if warranted (also see Chapter 2.10 Sensitive Resource Requirements subpart c).

4.8 SPECIAL MANAGEMENT AREAS

4.8.1 Serpentine Area of Critical Environmental Concern

Environmental consequences related to concerns associated with the naturally occurring asbestos within the serpentine soils and the unique vegetation and forest types associated with serpentine soil, are discussed throughout Chapter Four in the corresponding resource chapter sections.

4.8.2 San Benito Mountain Research Natural Area (SBMRNA)

Expansion of the San Benito Mountain Research Natural Area would result in high-quality areas containing nearly all of the CCMA's unique habitats and species being included in the RNA. There would also be an increase in the overall integrity of the RNA due to boundary adjustments which would include whole sub-watersheds instead of only portions of them. A RNA management plan will be completed within one year, establishing detailed management objectives and prescriptions for the area. An interim management plan is in Appendix E providing a framework and guidance for management of the RNA, identifying preliminary management objectives, monitoring components, and allowable uses. All alternatives will provide special resource management protection for this unique area and contribute to fulfilling the management goals for the RNA: 1) to ensure survival of the pine forests in the CCMA; 2) to maintain the vegetation and soil resources in as natural a condition as possible; and 3) to provide opportunities for scientific and academic research in this unique ecosystem. Values for scientific research and resource protection will be enhanced through the following action:

- Added upland habitat that would result in the inclusion of the majority of the upper Clear Creek watershed, which supports significant forest stands, and all the pine forest and woodland on the northern and eastern perimeters of the existing Natural Area boundaries.
- Within the expanded boundaries of the San Benito Mountain Research Natural Area, three of the San Benito evening primrose populations would be protected instead of the one currently protected, the number of acres of occupied primrose terrace habitat would increase to thirteen acres from one acre, and three miles of streambank primrose habitat along upper Clear Creek would be protected.
- Within the expanded boundaries of the San Benito Mountain Natural Area, the number of known populations of Category 2 candidate plant species would be increased to eight (from two) and an unknown amount of these species' habitat would be added.
- An approximately one-half mile-wide, two mile-long area of transitional habitat between the serpentine and non-serpentine blocks north of the current Natural Area boundaries would be included.
- Seven and one-half miles of serpentine riparian habitat within the Natural Area would be protected. This increase would include four miles of upper Clear Creek.

Proposed Action

The expansion of the San Benito Mountain Research Natural Area to 4147 acres would increase protection of the existing Southern Ultramafic Jeffrey Pine forest habitat. The added upland habitat would include most of the upper Clear Creek, San Carlos Creek, and Sawmill Creek watersheds; all of which support unique forest stands. All of the pine forest and woodland beyond the northern and eastern perimeters of the existing SBMRNA would be protected in the transition zone between the serpentine and non-serpentine areas. In addition to providing a high value for scientific study, this transition zone also contains one of only two known populations of the Mt. Diablo phacelia within the CCMA. Open use or cross-country travel within the forested ecosystem would be prohibited, which would assist in forest regeneration and sensitive plant and animal protection.

Inclusion of buffer zones contiguous to the existing RNA would enhance the integrity of the Southern Ultramafic Jeffrey Pine Forest and the San Benito Mountain Research Natural Area, and would aid in preventing OHV trespass into sensitive areas. The BLM would protect the SBMRNA from any future mineral exploration to ensure long-term protection of this unique forest ecosystem. The overall integrity of the RNA would increase because boundary adjustments would include whole sub-watersheds instead of only portions of them.

R010, T154, and T155 would be closed to OHV recreation use resulting in significant reductions in off-route and cross country travel in these areas, thus affording greater protection to the plant communities within the SBMRNA.

Within the expanded boundaries of the SBMRNA, three of the known San Benito evening primrose populations would be protected instead of the one currently protected; and the number of acres of occupied primrose terrace habitat would increase to thirteen acres from one acre. Three additional miles of streambank primrose habitat along upper Clear Creek would be incorporated into the RNA, furthering the long-term protection of this species.

Proposed Mitigation Measures

- Portions of Clear Creek, Sawmill Creek and San Carlos Creek would be managed for introducing the San Benito evening-primrose into suitable habitat.
- All populations of the San Benito evening-primrose and protection measures in place would be monitored for compliance relating to OHV trespass and adaptive management would determine additional management actions to protect this species.
- Designated Closed routes would be selected and prioritized for restoration and reclamation to minimize impacts to vegetation communities.
- California State Soils Loss Standards and Monitoring would be implemented on all designated open routes and surveys completed on an annual basis.
- BLM would continue to monitor water quality, soil erosion, and sediment conditions within the watersheds of the CCMA. The BLM would implement Best Management Practices (BMP) to reduce impacts to watershed resources, and would continue to evaluate and update these measures as needed to minimize impacts to water quality, control erosion and sediment production.
- Implement barren area protection plan to minimize off-site sediment transport through repair of erosion scars, construction of drainage improvements, sediment control and trapping treatments, and re-vegetation of vegetative buffers. All barrens within the RNA would be selected and prioritized for restoration and reclamation employing these same techniques.
- Construct fence and barriers to protect boundaries and preclude unauthorized motorized access and trespass into the RNA. Complete corridor fencing of Spanish Lake Road (R011) through the RNA.
- Monitor all unprotected populations of rayless layia, Mount Diablo phacelia, and talus fritillary for possible adverse impacts from vehicles and other uses and implement protective actions as warranted.
- Inventory suitable habitat for all sensitive plant species
- Monitor any new populations of these species documented during future inventories for adverse impacts and implement protective actions as warranted.
- Implement long-term studies to determine how disturbances such as human use, environmental conditions, and erosion, impact the viability of the above species. Employ adaptive management in the CCMA to help improve conditions for these species.

4.8.3 San Benito Wilderness Study Area

In all alternatives, the BLM's management policy will continue resource uses on lands under wilderness review in a manner that maintains the area's suitability for preservation as wilderness, and in accordance with the Interim Management Policy (IMP) for Lands under Wilderness Review (H-8550-1).

4.9 SOCIAL AND ECONOMIC CONDITIONS

4.9.1 Socio-Economic

Social impacts relate to the effects to social well being from the proposed action. The types of impacts that could affect social well being include the types and quantities of the recreation experience that is available. It may also include the perception of conflict concerning resource use and an individuals decisions relating to their experience. The proposed action is not expected to affect the demographics of the region described in the Affected Environment (Chapter Three). Likewise, the proposed action is not expected to change the economics of San Benito County or the extended 21 county visitor use region.

For the discussion of social and economic impacts on people, this section treats the five-county area that covers San Benito County and its adjacent counties. Over the next forty years, the human environment will change greatly in California and in the region around the CCMA. The rate of population growth between 2000 and 2010 in the region will slightly exceed the rate of population growth for California as a whole. San Benito County will have the fastest rate of growth among counties but will continue to remain the least populated county in the CCMA region. San Benito County will have a projected growth to a population in 2040 that is just one-quarter of the projected population for the next smallest county in the region, Merced County. Based on current land use patterns, most of the growth would be concentrated in the northern quarter of the county.

Table 4-4 – Population Growth in San Benito and Adjacent Counties

County	Population July 1, 2000	Estimated Population Jan 1, 2003	Estimated Population July 1, 2010	Percent Increase 2000-2010	Population Est. July 1, 2040	Percent Increase 2000-2040
Fresno	811,179	841,400	953,457	17.5percent	1,521,360	87.5percent
Merced	218,256	225,100	264,398	22.8percent	460,020	113.7percent
Monterey	401,886	415,800	479,638	19.3percent	855,213	112.8percent
San Benito	51,853	56,300	68,040	31.2percent	114,922	121.6percent
Santa Clara	1,763,252	1,729,900	2,021,417	14.6percent	2,595,253	47.2percent
Total	3,243,426	3,268,500	3,786,972	16.8percent	5,546,768	71.0percent
All California	34,653,395	35,590,605	39,957,616	15.3percent	58,731,006	69.5percent

Source: California Department of Finance, Demographic Research Unit, County Population Projections (1998) at <http://www.dof.ca.gov/HTML/DEMOGRAP/repndat.htm#estimates>

For many people, an important feature of San Benito County is its open space, with beautiful vistas of oak savannah ranch lands, and hills and mountains covered with mixed conifer and hardwood forests. Popular demand for open space in which to recreate and to relax will grow as the populations in adjacent counties grow. BLM will need to continue contributing to maintaining open space for the American people. It can do this in two ways: (1) promoting nature resource stewardship that conserves landscapes and ecosystems that American people wish to spend time; and (2) supporting ranchers and other private landowners in San Benito economically through grazing allotments, rights of way, and other carefully conceived developments to maintain open space and rural countryside on their lands.

In the region surrounding the CCMA there will continue to be areas having a higher population density than the rest of California. The CCMA will provide a significant getaway for many more people and especially for the largely urban residents in the future Santa Clara County. Although San Benito and Santa Clara counties have nearly the same area in square miles, Santa Clara County will have an estimated population density that is 24 times greater than San Benito County in 2040.

Table 4-5 – Population Densities of People in San Benito and Adjacent Counties, 2000 to 2040

County	Density 2000	Estimated Density 2003	Estimated Density 2010	Estimated Density 2040	County Area (Square Miles)
Fresno	134.8	139.8	158.4	252.8	6,017.4
Merced	109.2	114.2	134.1	233.3	1,971.9
Monterey	106.6	110.3	127.2	226.8	3,771.1
San Benito	37.3	40.5	48.9	82.6	1,390.8
Santa Clara	1352.2	1326.6	1550.2	1990.2	1,304.0
Total	224.4	226.1	262.0	383.7	14,455.2
All California	211.7	217.4	244.1	358.8	163,695.5

Sources: California Department of Finance, Demographic Research Unit, County Population Projections (1998) at <http://www.dof.ca.gov/HTML/DEMOGRAP/repndat.htm#estimates>; California Digital Library at <http://countingcalifornia.cdlib.org/pdfdata/csa02/A01>

This FEIS assumes that the number of visitors to the CCMA remains at 50,000 people annually with moderate increases into the foreseeable future. Restricting access may be necessary if significant increases in visitation occur over a number of years. Methods available to BLM could include: restricting access once a threshold number of visitors arrive on any given weekend, charging admission fees, or requiring an annual pass based on a lottery system. The scope of this FEIS does not address the options for maintaining the number of visitors at 50,000 annually. But, the future needs of people for access to the CCMA may require BLM to adapt management to provide the best services to a growing population.

Proposed Action

The proposed action would result in a decrease in the routes and areas available for OHV recreation, though it is not anticipated that this would result in a curtailment of OHV recreation related activities. Field observations indicate that the majority of OHV recreation use occurs within the designated route network proposed in the proposed action. It is expected that the proposed action would support current user levels and visitation with slight increases. With projected trends in population increases and OHV registrations, the proposed action would not likely support substantial increases in OHV recreation use over the long term. The projected growth rate of OHV recreation use may be somewhat lower than in the past, due to the perception that there may be less recreation opportunities for OHV use. Impacts from potential implementation of the Recreation Fee Demonstration program related to visitor use fees, are not expected to be significant, as fees would be comparable to those collected at other OHV recreation areas.

The BLM has not estimated the economic benefits generated from recreation-related expenditures by visitors to the Management Area. Studies have been conducted by the State Off-Highway Vehicle Commission and California State Parks to determine expenditures by visitors to OHV recreation

areas. These studies indicated that the average OHV recreation user expended about \$50 per visitor day. Applying these figures to Clear Creek users, conservative estimates would indicate that off-road-vehicle recreation use in the area could contribute as much as \$2.5 million annually to the regional economy. Much of the economic benefit for income and employment from people's expenditures for motorized recreation appears closer to the urban homes of visitors to the Management Area than in the communities near the Management Area. Purchases of vehicles for recreation use are prime examples are big-ticket expenditures that occur at considerable distances from the Area. Motorcycles are popular vehicles for motorized recreation in the Management Area. Within the visitor use region, motorcycle retail outlets concentrate close to their customers and frequently cluster as the result of zoning. The region supports approximately 1030 jobs in retail motorcycle businesses. Communities with comparatively high employment in retail motorcycle sales within the region are most likely to have impacts if cumulative changes occur in access to motorized recreation on public lands, including the Management Area. The BLM is not able at present to state the magnitude of economic impacts to vehicle sales and traveling costs on the basis of how the proposed action in this FEIS would affect recreation access and use of the Management Area. However, the geographic areas most likely to have economic impacts are those currently with high numbers of employees in retail motorcycle sales, within the region. With visitor use levels remaining fairly constant or experiencing slight increases, economic impacts are not expected to negatively affect current local or regional sales and purchases of OHV equipment or related supplies. Enduro and other Special Recreation Permit type events would continue to take place, and the associated economic benefits from these events would be maintained. Closure of some routes and areas to motorized use could result in increases in non-motorized recreation activities and associated economic benefits.

Rural and wildland landscapes are becoming increasingly less common as urbanization expands, especially in the San Francisco Bay Area, Central Coast communities, and in the San Joaquin Valley. The wildland experiences in the Clear Creek Management Area are increasingly valuable as the supply of open space decreases in the visitor shed. Even though the designated open route system is less than the entire inventoried network, recreation users would still be able to experience solitude, the wildlands character, and a sense of exploration, due to the size of the area and the extensive open route network that would be provided. This reduction of routes would benefit the non-motorized recreation experience and reduce user conflicts between motorized and non-motorized recreation use.

4.9.2 Environmental Justice

The BLM has analyzed the effect of the proposed action related to the environment, which includes ecological, cultural, human health, and social or economic impacts. In addition, the proposed action is not expected to have disproportionately adverse impacts on minority or low-income populations. Individuals of all social and economic backgrounds have access to the designated routes and areas within the CCMA. There are presently no fees associated with general public recreation use of the CCMA. Should a user fee be implemented under authority of the Recreation Fee Demonstration program, fees would be comparable to fees charged by other agencies. It is possible that use of Hollister Hills State Vehicle Recreation Area may increase as some users find that increased regulations, lack of recreation facilities and camping areas, and the additional driving distance make Clear Creek a less desirable destination than Hollister Hills.

The analysis of green sticker permit holders from the California Department of Motor Vehicles with Census 2000 data showed that owners of green-sticker off-highway vehicles tend to come from communities very similar to all communities within the visitor shed for the CCMA, except for one

feature. Communities with high percentages of OHV green-sticker permit holders have considerably higher populations of Caucasians than the population as a whole in the CCMA visitor shed.

At present, the BLM has no reliable data on the cultural heritage and race of the visitors to the CCMA. Executive Order 12898 ensures that the services that the federal government provides to the American people do not have disproportionate impacts on low-income or minority populations. Projections of the cultural and racial background of residents in the CCMA region show that Hispanics will comprise nearly one-half the populations and Asian American / Pacific Islanders will comprise more than a quarter of the future population. If OHV recreation remains a preference principally of white residents of the region, the BLM must eventually adopt management that also meets the other 75 percent of the future population in the CCMA region. Likewise, BLM currently has little information about whether the preferences for recreation among residents from differing cultural or racial backgrounds are indeed different. Information from BLM lands in southern California (Chavez 1999 – get citation from the Meccacopia) would indicate that sensitivity to diverse population groups is critical to meeting the needs of regional residents fairly.

Table 4-6 – Project composition of residents in the CCMA region by cultural heritage or race, 2000 – 2040

County	Hispanic American			Asian American / Pacific Islander		
	2000	2010	2040	2000	2010	2040
Fresno	39.3percent	42.3percent	51.6percent	5.2percent	12.0percent	15.2percent
Merced	36.4percent	40.4percent	51.5percent	10.8percent	14.1percent	19.7percent
Monterey	41.1percent	52.0percent	79.2percent	7.3percent	7.1percent	5.1percent
San Benito	42.6percent	41.5percent	46.5percent	2.2percent	2.6percent	3.1percent
Santa Clara	24.2percent	26.8percent	38.0percent	24.2percent	31.0percent	43.8percent
Total	31.1percent	35.1percent	49.4percent	16.1percent	21.5percent	27.2percent
All California	30.8percent	34.9percent	47.8percent	11.5percent	13.3percent	15.5percent

County	African American			Native American		
	2000	2010	2040	2000	2010	2040
Fresno	4.8percent	5.0percent	5.2percent	0.9percent	1.0percent	1.0percent
Merced	4.0percent	3.6percent	2.6percent	0.6percent	0.5percent	0.4percent
Monterey	5.9percent	5.4percent	3.7percent	0.6percent	0.5percent	0.3percent
San Benito	0.4percent	0.5percent	0.5percent	0.5percent	0.5percent	0.5percent
Santa Clara	3.6percent	3.5percent	3.0percent	0.3percent	0.3percent	0.2percent
Total	4.1percent	4.0percent	3.6percent	0.5percent	0.5percent	0.4percent
All California	6.7percent	6.4percent	5.5percent	0.6percent	0.6percent	0.5percent

Sources: California Department of Finance, Demographic Research Unit, County Population Projections (1998) at <http://www.dof.ca.gov/HTML/DEMOGRAP/repndat.htm#estimates>

4.10 CUMULATIVE EFFECTS

4.10.1 Introduction

Cumulative Impact Assessment (CIA) is not a process or a document that is separate from NEPA (National Environmental Protection Act), but rather an integral part of the NEPA process. CEQ (Council on Environmental Quality) regulations implementing the procedural provisions of NEPA define cumulative effects as: “The impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or nonfederal) or person undertakes such actions” (40 CFR 1507). Cumulative impacts must be considered along with direct and indirect impacts in assessing environmental effects on the human environment.

The cumulative effects region (CER) for which effects of the proposed action and other past, proposed, and reasonably foreseeable actions would be cumulatively recorded or experienced includes San Benito, Fresno, and Monterey counties. Therefore, this analysis considers additional effects arising from the proposed action with effects of other known past, present, and reasonably foreseeable actions in the CER.

4.10.2 Air Quality

San Benito and Fresno Counties are in non-attainment for PM₁₀ with Clean Air Act National Ambient Air Quality Standards. The Proposed Action would contribute to short-term cumulative impacts on air quality, particularly to the San Joaquin Valley, during periods of high OHV recreation use. Particulate matter and asbestos airborne emissions are the major sources of impacts. Impacts following high-use periods would dissipate within 48 to 72 hours depending upon weather conditions. Reducing the number of unpaved roads available for OHV use in the San Joaquin Valley portion of the CCMA, would help mitigate cumulative impacts to this air basin. Under the Proposed Action, these cumulative impacts could be reduced as a result of restrictions to OHV riding during the dry season. Particulate matter emissions are not expected to contribute to cumulative air quality impacts to Monterey or San Benito Counties due to prevailing winds. OHV recreation use as a result of this route designation project is not expected to contribute to cumulative impacts for ozone.

Other pollutants associated with exhaust from motorized vehicles are: reactive organic gases (ROG), nitrogen oxides (NOX), and carbon monoxide (CO). Implementation of stricter motorized street-legal vehicle and off-road vehicle emissions standards would lessen contributions for these emissions. Overall, any motorized vehicle use on unpaved roads would contribute some level to emissions inventories for the affected air basins, but the cumulative impacts would be negligible because recreation use levels are anticipated to remain near current levels with only slight increases over the life of this Plan.

4.10.3 Watershed Resources

4.10.3.1 Water Quality

Heavy metals and asbestos are concerns in the CCMA; the BLM contracted a water quality study (Dynamac, 1998) to determine the magnitude of heavy metals being deposited into streams from 15 abandoned mines. The background concentration of metals detected in soils tended to be above stated federal standards, and is consistent with the natural geochemistry of the area. However, differences in the water samples taken from below and above abandoned mine sites, indicated that

disturbed areas are contributing to metal concentrations over and above the naturally high levels. Disturbance by vehicles has also been a factor in increasing concentrations of metals transported downstream in the water.

Compared to existing conditions, under the Proposed Action, water quality should exhibit a gradually improving trend over many years. Impacts related to OHV use of the barrens would be limited to the Clear Creek watershed. By eliminating unregulated use, eliminating vehicle access to all remaining abandoned mines, continuing completion of abandoned mine remediation projects, and by completing significant road repairs and improvements, the BLM would minimize the potential for additional human-caused impacts to the subject waterways, and maintain or enhance current water quality conditions while minimizing effects to human health. Reducing the number of miles of unpaved roads by 45 percent, and reducing soil disturbing activities at remaining mine sites, would contribute to reducing off-site transport of metals and asbestos. The extent of the contribution of heavy metals and asbestos passing into the Hernandez Reservoir remains an issue, and some continued natural contribution of mercury and asbestos may be unavoidable. Recent water sampling data indicates a possible downward trend in mercury concentrations in Clear Creek.

The Aurora Mine site area would be completely closed between the Aurora grade and SBMRNA reducing soil disturbance and the potential for off-site transport of contaminants. The Proposed Action would reduce the miles of available routes in the Larious and San Carlos watershed where the highest levels of background concentrations of hazardous metals are present, thereby reducing the potential for human exposure and contaminated off-site sediment delivery.

Any motorized OHV use on highly erosive areas such as barren slopes and on unpaved roads and trails, could disturb soils containing hazardous metals and asbestos, and increase erosion and transport of sediment above natural background levels. Closure of routes accessing these mines and a corresponding reduction in soil disturbance from OHV's at these areas, would contribute to improvements in water quality by reducing the potential for contaminated sediment delivery.

In general, designated beneficial water uses identified for streams associated with the CCMA would be enhanced through decreased miles of routes and acres of barrens available for OHV use, reductions in stream crossings, and implementation of Best Management Practices to minimize watershed impacts. Riparian areas would have about 50 percent less miles of OHV routes¹, and the number of stream crossings would decline as well compared to the existing route inventory. Nearly half the sediment delivered to streams within the CCMA comes from stream and swale crossings. Therefore, a reduced number of crossings would reduce substantially sediment delivery offsite. BLM and the USGS will continue to monitor the volume of sediment measured in tons, for daily and monthly quantities.

4.10.3.2 Soil Loss and Erosion

In part, high rates of erosion in the serpentine watersheds is a natural consequence of the erosive soils formed from highly sheared and fractured serpentine rock containing abundant chrysotile asbestos and small amounts of other types of asbestos. On these barren slopes, run-off from winter storms causes extensive rill and gully erosion, which in turn contributes to sediment yields in stream channels. Stream diversions and through-cut roads cause gullies to form, and gullies have been large

¹ This includes routes that transect within a 40 foot buffer of perennial and ephemeral streams. The majority of this mileage includes the identified stream crossings, rather than routes that parallel streams within the riparian buffer.

contributors to sediment yield from the CCMA route system. Under the Proposed Action, the approximate 50-percent reduction in sediment yield and number of stream crossings would reduce off-site transport of sediments and corresponding impacts. A key component of the long-term reduction in sediment yields is the rehabilitation and restoration of closed routes to a natural condition, so that they trend towards undisturbed soil erosion and sediment delivery rates. 50-100 miles of roads and trails would be closed and restored under the Proposed Action over a 5-year period. Conducting annual soil loss assessments and performing corrective route maintenance will also contribute to reducing erosion.

The Proposed Action will provide more protection to the soils within the CCMA. By decreasing the number of roads, trails, and barrens available for OHV activity, the impacts from erosion and soil loss from disturbed areas that could impact special status species in upland habitat and riparian areas will be reduced when compared to current levels. The elimination of OHV use in high erosion sub-watersheds will also contribute to reducing off-site impacts. Overall as a result of the reduced size of the route network, soil erosion will be reduced through the maintenance of these routes and trails and limiting barren use to those with high hydrographic position. The majority of barrens with low hydrographic position are eliminated in the Proposed Action.

BLM currently employs Best Management Practices (Appendix D) related to trail and route maintenance to reduce impacts to watershed resources. BMPs include annual soil loss monitoring, trail stabilization, construction of hardened crossings, water bars, and rolling dips, out-sloping, and vehicle barriers and fencing in riparian zones. These BMPs, combined with the Proposed Action will have a long-term positive cumulative impact on soil loss and erosion.

4.10.4 Human Health

The presence of airborne asbestos dust, a known carcinogen, poses a potential human health risk in the serpentine portion of the CCMA. Studies have proven that the vast majority of airborne asbestos dust in the Clear Creek area is generated by human activities, primarily vehicle use. Continued OHV use on unpaved routes, trails, and barrens would generate asbestos emissions, and visitors in these areas could have increased cancer risks from exposure to naturally occurring asbestos. An overall reduction in the area available for vehicle access may have little effect to reduce airborne asbestos emissions. Closure of 2000 acres of barrens would contribute to an overall reduction in asbestos dust generation and its transport by wind off-site, and would contribute to lower levels of asbestos transported to watercourses and reduced impacts to beneficial uses. Potential health risks and air quality impacts from airborne asbestos emissions associated with OHV recreation use would still include an elevated risk of contracting serious and/or life-threatening asbestos-related diseases from exposure to asbestos fibers. Any reductions in impacts to human health would come primarily from mitigation and administrative measures. Dry season vehicle restrictions would contribute to reduced impacts to human health. Vehicle caused airborne asbestos emissions and public exposure could be reduced by dust suppression with water trucks, on six miles of the lower Clear Creek Canyon road during periods of high use. A public vehicle wash rack for removing dust, mud and other asbestos-containing materials from vehicles could substantially reduce the impacts from off-site transport of asbestos by OHV user vehicles and subsequent exposure.

Furthermore, surface disturbing activities would only be permitted during periods when air concentrations of asbestos fall below OSHA action levels for a given activity. All BLM road maintenance and grading activities would be conducted in compliance with MBUAPCD ATCM for airborne asbestos, to prevent visible emissions during these operations. Education programs related to asbestos exposure and hazards would be expanded, and any new risk assessments would be

incorporated into informational materials. Closure of all remaining mine areas and restricting vehicle access to these areas would further reduce public exposure to hazardous contaminants and transport of hazardous metals to streams and corresponding off-site transport. The result of long-term exposure and short term exposure of high concentrations of asbestos through the inhalation of asbestos fibers, could result in serious asbestos related diseases and cancer. It is estimated that OHV use on unpaved roads, trails, and barrens would still generate airborne asbestos emissions and potential exposure, which would increase the probability of an individual's risk to contracting cancer by 5 in 100,000.

Most OHV enthusiasts avoid use of the area during the summer months due to the very dry and dusty conditions. The surface water exposure pathway would appear to present a minimal risk to recreation users of the CCMA, because of the limited number of days that a typical user visits, and the fact that the surface water is generally not used as a potable water source. Therefore, the Proposed Action would have minor cumulative impacts to human health, but BLM will coordinate with EPA to determine the appropriate management response to naturally occurring asbestos upon release of the EPA's CCMA health risk assessment in 2006.

4.10.5 Biological Resources

4.10.5.1 Wildlife and Vegetation; Threatened, Endangered, and Special Status Plant and Animal Species

Compared to existing conditions, the Proposed Action will contribute to enhancing the long-term protection of the sensitive habitat and special status species that occur throughout the CCMA. This would be accomplished by eliminating unregulated use, implementing Best Management Practices, completing significant road repairs and improvements, reducing the number of stream crossings and miles of routes in riparian areas by 50 percent, and reducing soil disturbing activities by reducing the number of miles of unpaved roads and substantially reducing the acres of barren play areas. Considering estimates that nearly half the sediment delivered to streams within the CCMA come from stream and swale crossings, this reduction in the number of crossings should result in substantial reductions in sediment delivery and benefit riparian vegetation communities and sensitive species habitat.

A key component of the long term reduction in sediment yields benefiting riparian areas is the rehabilitation and restoration of closed routes to a natural condition, so that they trend towards undisturbed soil erosion and sediment delivery rates. Over 150 miles of roads and trails would be closed and restored over a 5-year period. Closure and restoration of barrens would benefit riparian vegetation and increase the acreage of barrens which would be able to support vegetation and special status species. Route and barren closures in high erosion sub-watersheds, including Upper Clear Creek Canyon, south fork of Clear Creek, and Larious Canyon would contribute to reductions in sediment delivery and impacts to sensitive species habitat. A portion of R008 contributing significant amounts of sediment to the sub-watershed, riparian areas, and sensitive habitat would be closed. In addition, the designation of routes and areas and the enforcement of these designations should result in less off route travel and route proliferation.

There is a substantial reduction in routes and in particular, single track trails (STT) affecting habitat polygons for the San Benito evening-primrose and rayless layia compared to existing conditions. This reduction would substantially increase the protection given to these habitats. The current status of known San Benito evening-primrose populations on public lands in the CCMA would be maintained or enhanced due to route closure, avoidance through routing away from sensitive areas, fence protection, habitat manipulation, and public education. Expansion of the Research Natural

Area would provide long term protection and beneficial impacts to vegetation communities, and positively affect the conservation of associated plant and animal species. Cumulative impacts in relation to threatened and endangered species would occur if unauthorized motorized vehicle incursions into habitat continue.

Several Staging areas (terrace sites) in lower Clear Creek Canyon would continue to experience impacts related to camping and day-use activities. Fencing and barriers protect most sensitive resources in these areas. The continued erosion of topsoil in high vehicle use areas would decrease the productive soil horizons and inhibit natural re-vegetation of some areas.

Impacts to vegetation and wildlife habitats may be caused through sedimentation, erosion, loss of soil, crushing, habitat destruction, removal and use for fuel. The Proposed Action would have a beneficial effect, to differing degrees, upon wildlife and wildlife habitat, as altered habitat and impacted vehicle routes and barrens are returned to the land base, creating an increase in wildlife habitat. Fragmentation of small species' habitats would be decreased as altered habitat and impacted routes become restored and illegal off route travel is curtailed. There would be a lowered potential for vehicle incursions with small animals and of harassment of all species by people through route designation and enforcement of travel on approved routes. Impacts to species found within the riparian areas are expected to decrease as route designation, maintenance and enforcement limit use to stable routes, trails and barrens of low hydrographic potential. The reduction of stream crossings, the use of hardened stream crossings and the elimination of trails in creek beds will yield positive effects. Riparian vegetation impacts are expected to diminish as erosion and sediment flows diminish.

Any future inventoried routes will be screened through resource evaluation criteria for the presence of known or potential sensitive resources, proximity to sensitive resources, and an analysis of potential impacts of routes from non-compliant use. Where conflicts exist with resource condition objectives and protection of sensitive resources, routes will be closed. As a result, the Proposed Action will have a long-term beneficial cumulative impact to biological resources.

4.10.5.2 Invasive Weeds

At the present time, yellow starthistle is found throughout the Clear Creek Canyon on both serpentine and non-serpentine soils, except for the area to the east of Clear Creek Canyon. The primary agents for long-distance seed dispersal are road maintenance equipment and the undercarriage of motor vehicles (Bossard et al, 2000.) Yellow starthistle thrives on disturbed sites. As a result, there is potential under the Proposed Action for yellow starthistle to spread to additional areas within the CCMA and displace native vegetation and wildlife habitat. The displacement of native vegetation and wildlife habitat would be considered a negative cumulative impact. However, BLM is in the process of developing a comprehensive weed management program for the CCMA and surrounding area, which will contribute to mitigating these impacts.

4.10.6 Recreation Resources

The demands for OHV recreation in other areas are affected by the Proposed Action in this document. The implementation of the expansion of the San Benito Mountain Research Natural Area and potential closure of areas containing threatened species within the CCMA may spatially displace visitors throughout the management area. Repeat OHV users in the CCMA may feel displaced and frustrated by the closures of routes which have been historically used for the past 30 years. The Proposed Action would decrease vehicle travel on unpaved public land routes due to route closure and/or rehabilitation. OHV popularity in California continues to rise and legal opportunities for OHV

recreation continues to decrease. Overall, the reduction in numbers of available routes in the CCMA would contribute to statewide losses in OHV opportunities.

There are six State Vehicle Recreation Areas (SVRA) available for OHV use throughout the state, three of which are located in central California with the remaining three SVRAs are located in southern portion of the state. Specifically they are Prairie City, Carnegie, Hollister Hills, Oceano Dunes, Hungry Valley, and Ocotillo Wells. There are numerous designated OHV areas managed by the BLM, Forest Service, counties, cities, and other jurisdictions along the eastern border of the state. However, the nearest BLM OHV area is located over 250 miles from the CCMA. Several opportunities for four-wheel drive recreation exist on Forest Service lands on the west side of the Sierra Nevada adjacent to the San Joaquin Valley. OHV recreation opportunities are also present in the Los Padres National Forest in Monterey and San Luis Obispo Counties. The BLM also manages the Cow Mountain and Knoxville OHV areas in Lake and Napa Counties.

The following areas provide the closest mix of OHV opportunities similar to those found at the CCMA. However, none of the areas quite match the unique character of the CCMA in providing a variety of terrain and OHV experiences in this remote setting, and in particular the open play experience on the barrens. Some OHV users could be displaced to these State Park facilities.

Carnegie SVRA is located between Livermore and Tracy, offers 1,500 acres for trail riding, hill climbing, and a moto-cross track. Hollister Hills is located outside of Hollister. This SVRA is one of the most heavily used OHV parks and most intensively managed. The lower ranch offers more than 2,400 acres and 68 miles of trails for motorcycles and ATVs. There are moto-cross tracks for practice and a special area designated for small vehicles and children. Overall there are nearly 6,800 acres of mixed chaparral, oak woodland, and grassland in the park.

Oceano Dunes is located near Grover Beach in San Luis Obispo County and contains 1,500 acres of open sand dunes for off-highway motor vehicle recreation. This is the only State Park in California where vehicles are permitted to drive and camp on the beach. Out of the 1,100 miles of California shoreline identified by the California Coastal Commission, Oceano Dunes represents the last 5 ½ miles of beach that are accessible by vehicles. Though this area provides some degree of open OHV use on dunes it would probably not attract CCMA users that recreate on the barren areas.

Hungry Valley is the second largest park in the SVRA system. It is located between Bakersfield and Los Angeles. The area consists of 19,000 acres and more than 130 miles of OHV trails for motorcycles, ATVs and four-wheel drive vehicles. This area provides an extent of trail riding opportunities that closest resemble those available at the CCMA.

Prairie City is located 20 miles east of downtown Sacramento and its proximity to a burgeoning suburban area, this 836-acre park is destined to become the model for future urban OHV parks and provides a mix of both motorized and non-motorized forms of off-road recreation, including BMX facilities, world class moto-cross tracks, skateboard parks, mountain bike trails and rock climbing facilities. This urban setting provides OHV recreation experiences quite different than the CCMA.

The establishment of a designated route system throughout the CCMA would have both positive and negative cumulative impacts to recreation: Maps, signing and trail maintenance would add a degree of safety and security for those riding in the backcountry, yet fencing projects, routine trail maintenance, and the designated route system would result in a much more regulated environment. These changes would reduce the quality of the recreation experience for some users who value recreating in an environment with few obvious societal restraints and controls. There would be some

closures of popular riding areas. These areas include Larious Canyon, San Carlos Peak, San Carlos watershed, and Cantua watershed. These unique habitat areas would be protected from off road use by the Proposed Action.

In Fiscal Year 2003, approximately 50,000 casual and permitted users visited the CCMA and spent 400,000 visitor hours there. It is not anticipated that implementation of the route and area designations will decrease visitation and OHV recreation use of the area. Non-OHV recreation opportunities would benefit by having some additional areas to recreate without interference of motorized vehicles and reduced user conflicts. Competitive events would continue to be allowed, although there would not be as extensive a route network to select from. Two competitive motorcycle enduros (races) with over 1,000 participants and two noncompetitive events with over 250 participants are typically authorized by the Hollister Field Office within the CCMA. It is anticipated that Special Recreation Permit activity will moderately increase in the reasonably foreseeable future, consistent with continued population growth anticipated in the region and the increasing popularity of OHV recreation. The Hollister Field Office continues to get new inquiries from prospective permittees requesting information about how to apply for a permit to conduct competitive and noncompetitive events in the Clear Creek Management Area.

Therefore, the anticipated cumulative impacts of the Proposed Action to recreation resources are negligible.

4.10.6.1 Motor Vehicle Access Network

Motor vehicle access and opportunities for recreation are spread thinly in central California. Route designation in the CCMA would further limit vehicular access to some BLM administered lands. The incremental decrease proposed in this planning effort is moderate. Virtually all improved and 4-wheel drive routes would remain open under the Proposed Action. There would be some overall reduction in jeep and single track trails that would impact some users. Field observations indicate that the majority of OHV recreation use occurs on routes within the proposed route network. It is not expected that route designation will reduce the number of visitors, but that visitation would continue to experience moderate increases from year to year. There would be a substantial reduction in OHV recreation opportunity for open play on barrens, impacting this type of activity and the availability for cross-country travel. The CCMA would still contribute to meeting regional recreation demand for OHV and other types of recreation activities.

While there would be some isolated areas where vehicle travel would be restricted, the 242 mile network of routes would still span the majority of the CCMA and provide a variety of motorized vehicle recreation opportunities, experiences, and challenges. This alternative would continue to provide vehicular access for rockhounding, sightseeing, wildlife watching, and a variety of other recreation opportunities. Non-motorized recreation activities would be enhanced through providing more areas for these activities and reduced conflicts with motorized use. Though unlimited motorized exploration of trails would no longer be allowed, the substantial route network in the more remote southeast portion of the CCMA would still provide opportunities for exploration and the challenge of navigating this remote environment. Some historical routes used in enduro and permitted events would no longer be available, however the route network, including 100 miles of ATV/Single Track trails would offer a variety of course combinations that can be varied from year to year.

Opportunities to escape the sights and sounds of the mechanized world would be heightened in areas closed to motorized vehicles. The limitations on motor vehicle travel are not such that access to sites

for non-motorized activities would be substantially affected. Therefore, the cumulative impacts of the Proposed Action to the motor vehicle access network would also be negligible.

4.10.7 Cultural Resources

The current database of known cultural and paleontological resources for the CCMA is adequate for establishing the route designation process. Incorporating the strategies outlined in Appendices C and D will also provide the tools and mechanisms for maintaining designated routes while affording cultural resource protection. As new information is gathered from archeological inventory and excavation and new ethnographic data is revealed from Native American concerns, future undertakings and projects within the CCMA would address this new data and management strategies would be adapted if warranted. In addition, some of the designated open routes in the CCMA were old mining access routes and have been used since mining activity began in the early 1940s. Mining activities ceased in 1997. While the integrity of these resources has been depleted through many years of continued use and sometimes has been substantially altered or lost in areas, evidence remains in areas of earlier times, and continues to be at risk until survey and recovery is complete for these eligible properties.

Destruction of cultural resources contributes to the loss of irreplaceable, scientifically important information contained in known and unknown cultural resources in the CCMA. Therefore, the proposed action would have the beneficial cumulative impact of preserving cultural resources by directing OHV use away from these areas.

4.10.8 Special Management Areas

Expansion of the San Benito Mountain Research Natural Area would result in high-quality areas containing nearly all of the CCMA's unique habitats and species being included in the RNA, and preservation of the values for which established. There would also be an increase in the overall integrity of the RNA due to boundary adjustments which would include whole sub-watersheds instead of only portions of them.

Historic vehicle use has led to the current impacts to the Clear Creek Serpentine Area of Critical Environmental Concern, San Benito Mountain Research Natural Area, and San Benito Mountain wilderness study area. Illegal vehicle use within these areas would be reduced through closure of some routes, barriers, increased enforcement, and education efforts provided by all action alternatives.

Benefits associated with route designation and the reduction of illegal OHV activity; include minimizing impacts to watershed resources, the protection of wilderness values, the protection and preservation of important historic, cultural, and scenic values, plant and wildlife resources, and life and safety from natural hazards. The expanded RNA would contribute to the preservation of an area where natural processes are allowed to predominate and which is preserved for the primary purposes of research and education. Natural re-vegetation processes could occur along with the restoration of locations impacted by past vehicle use, resulting in overall positive effects. In addition, the expansion of the San Benito Mountain Research Natural Area will allow for greater protection of the federally threatened San Benito evening-primrose. There would be greater protection of natural resources and protection of wilderness values within the WSA, yielding positive effects across the landscape. As a result, the Proposed Action would have a beneficial cumulative impact on special designations in the CCMA.

4.10.9 Socio-economic Resources

The Proposed Action would result in a decrease in the number of routes and barren areas available for OHV recreation. However, BLM does not anticipate that these decreases would curtail OHV recreation activities. Field observations indicate that most OHV recreation use currently occurs within the designated route network identified in the Proposed Action. With projected population increases and OHV registrations, the proposed route network would likely not support substantial increases in OHV recreation use over the long term and would result in some as yet unquantifiable impacts to local and regional economies. The projected growth rate of OHV recreation use may be somewhat lower than in the past, due to the widespread perception of less recreation opportunities available for OHV use. Neighboring State Vehicular Recreation Areas in Hollister, Livermore, and Santa Clara are not likely to incur significant impacts as a result of this designation project. The BLM also offers OHV opportunities throughout the state; however, these areas are located over 300 miles from Clear Creek.

Impacts from potential implementation of the Recreation Fee Demonstration program related to visitor use fees are not expected to be significant, as fees would be comparable to those collected at other OHV recreation areas. The BLM has not estimated the economic benefits generated from recreation-related expenditures by visitors to the Management Area. Studies have been conducted by the State Off-Highway Vehicle Commission and California State Parks to determine expenditures by visitors to OHV recreation areas. These studies indicated that the average OHV recreation user expended about \$50 per visitor day in regional and local communities. Applying these figures to Clear Creek users, conservative estimates would indicate that off-road-vehicle recreation use in the area could contribute as much as \$2.5 million annually to the regional economy. The Proposed Action would likely contribute to moderate benefits to local economies. With visitor use levels remaining fairly constant or experiencing slight increases, economic impacts are not expected to negatively affect current local or regional sales and purchases of OHV equipment or related supplies. Enduro and other Special Recreation Permit type events would continue to take place, and the associated economic benefits from these events would be maintained. Closure of some routes and areas to motorized use could result in increases in non-motorized recreation activities and associated economic benefits.

Rural and wildland landscapes are becoming increasingly less common as urbanization expands, especially in the San Francisco Bay Area, Central Coast communities, and in the San Joaquin Valley. The wildland experiences in the Clear Creek Management Area are increasingly valuable as the supply of open space decreases in the visitor shed. Even though the designated open route system is less than the entire inventoried network, recreation users would still be able to experience solitude, the wildlands character, and a sense of exploration, due to the size of the area and the extensive open route network that would be provided. A reduction of routes would benefit the non-motorized recreation experience and reduce user conflicts between motorized and non-motorized recreation use. Therefore, the cumulative impacts of the Proposed Action to socio-economic resources is negligible.

4.11 ADAPTIVE MANAGEMENT

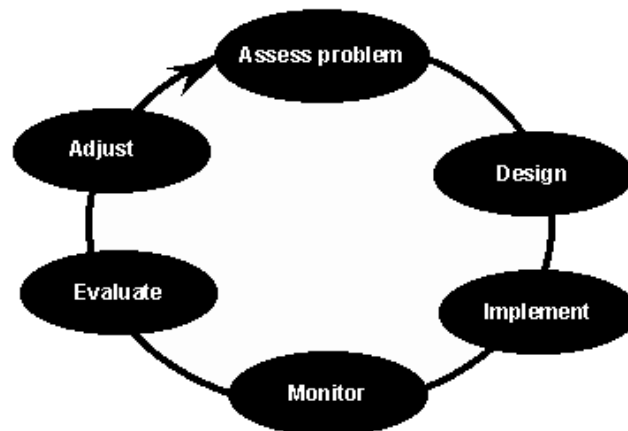
4.11.1 Adaptive Management Implementation Strategy

Introduction

This section outlines the adaptive management implementation strategy for the Clear Creek Management Area. Adaptive management can be defined as a systematic process for continually improving management policies and practices by learning from the outcomes of actions over time. It employs management programs that are designed to continually compare selected policies or practices and modify actions when warranted.

Adaptive management is based upon a growing realization of the limits of our scientific and management knowledge regarding ecosystems and the capacity to apply that knowledge to land management decisions in ways that lead to predictable outcomes. Adaptive management recognizes that unknowns and uncertainties exist in the course of achieving any resource management goals. In such a setting, management actions (e.g., policies, prescriptions) become hypotheses; the results constitute outcomes, and by examining actual results in relation to those anticipated in our hypotheses, we enhance our capacity to learn and adapt.

There are generally six steps involved in the adaptive management process: planning or assessing the problem, design, implementation, monitoring, evaluation, and adjustments, as necessary. Planning involves defining the scope of the management problems, objectives and actions, identifying indicators for each management objective, designing a management plan, and monitoring program. Implementation, monitoring and evaluation occurs and the results of the monitoring are communicated to appropriate parties, and the management objectives and actions are modified based on results, if necessary.



Objectives and Goals

The main objective of an adaptive management strategy is to allow flexibility for multiple use activities, resource protection and sustained yield, while meeting management objectives. The management objectives, for the CCMA, can be summarized as follows:

For Air, Land and Water Resources Management, the planning area will be managed to maintain or enhance air, land, and water resources while protecting human health

For Biological Resource Management, the planning area will be managed to protect biological resources, Special Status Species, and in particular, as a priority, the protection of existing populations of the San Benito evening-primrose and attempting to expand its range to areas that have moderate and high potential for the species. The BLM is committed to managing the CCMA to ensure that sensitive species and communities maintain or enhance their condition.

For Recreation Management, the BLM's goal for the management of off-highway vehicle (OHV) recreation at the CCMA is to provide for quality recreation opportunities, while reducing impacts to sensitive resources, minimizing conflicts with other resource uses, and promoting sustainable resources.

For Cultural Resource Management, the planning area will be managed to protect important cultural resources while allowing for educational research and appropriate interpretative uses.

For Special Management Areas, the planning area will be managed to protect unique resources of the San Benito Mountain Research Natural Area, and Serpentine ACEC and the values for which established

For Social, Economic, and Environmental Justice conditions, the planning area will be managed to meet changing recreational demands.

The adaptive management strategy complies with the intent of the Federal Land Policy and Management Act (FLPMA) by providing a combination of balanced and diverse resource uses and taking into account the long-term needs of future generations. Chapters 2, 3, 4 and 5 of this document outline the planning stages and appendix C and D outline the implementation, monitoring, goals, objectives, evaluation and adjustments for the CCMA's adaptive management strategy.

CHAPTER 5

CONSULTATION & COORDINATION

5.1 INTRODUCTION

The Hollister Resource Management Plan (RMP), adopted in 1984, provides management guidance for the Clear Creek area. The RMP outlined management goals and resource management decisions, and established the 30,000 acre Clear Creek Serpentine Area of Critical Environmental Concern within the CCMA. A more detailed activity plan was prepared in 1986 for the CCMA, to implement decisions adopted in the Hollister RMP. This Clear Creek Management Plan was developed to manage a complex ecosystem comprised of sensitive and unique plant communities, a highly erosion-prone watershed, and unique serpentine soils containing naturally occurring asbestos.

In 1993, a draft Environmental Impact Statement was issued for the Clear Creek Management Area, in which six alternatives for management were analyzed. After public comment, involvement with the Clear Creek Technical Review Team (TRT), intensive review of comments, and re-analysis of data, the BLM issued a final EIS (FEIS) in 1995 with a substantially modified proposed action and subsequent ROD (1999). BLM also received a Biological Opinion from the USFWS in 1997. The 1995 amendment to the Hollister RMP re-evaluated existing land use decisions. This amendment was based upon new information which became available on asbestos related health risks and rare plant species, and responded to these new issues and addressed existing public uses within both the CCMA and the Serpentine ACEC.

During the development of the 1995 Clear Creek Management Plan Amendment, three public scoping meetings were held to identify issues and concerns that would be incorporated into the Draft RMP Amendment and DEIS. The 1995 scoping meetings were held in San Jose, Salinas, and Hollister. Each meeting was well attended due to the strength of off-highway vehicle organizations in the local area and the perception that BLM's goal was to close the area to motorized access. Most of the comments received were in favor of maximizing vehicular access and reflected general dissatisfaction with implementation strategies to protect sensitive habitats and the lack of public involvement in the BLM decision-making process.

In June of 2002, three separate environmental assessments (EA) were initiated to address issues in the 1995 Plan Amendment; including designation of routes and barrens, and identifying the boundaries of the expanded RNA. Several meetings were conducted with the Clear Creek TRT to gather input for this process and to foster open communication. The TRT assembled in 1992 continued to meet through September of 2003, to ensure that all the issues and concerns from various internal and external publics would be represented in the Draft RMP Amendment and DEIS. The TRT met quarterly to discuss OHV Grants and the development of the 2004 Draft RMP Amendment & DEIS. TRT members and attendance varied over time, but generally was comprised of representatives from a variety of stakeholders, including BLM, the Central California Resource Advisory Council (RAC), US Fish & Wildlife Service, California State Parks, Air and Water Quality Control Boards, the Department of Toxic Substances Control, California Department of Fish & Game, OHV organizations (American Motorcyclists Association, Blue Ribbon Coalition, Salinas Ramblers, etc.), and environmental organizations (CNPS, Sierra Club, Ventana Wilderness Alliance.)

In December 2002 the three separate EA's were combined into one plan amendment. BLM issued a Notice of Intent (NOI) to prepare an amendment to the Hollister Resource Management Plan (RMP)

for the Clear Creek Management Area in the *Federal Register* on April 29, 2003. This Notice was posted on the Hollister Field Office web page (<http://www.ca.blm.gov/hollister/news>) as well. This NOI also initiated the public scoping period. Following the release of the NOI, BLM sent a letter inviting public input to CCMA stakeholders and members of the TRT. An official comment period of thirty (30) days followed the release of the NOI from April 29, 2003 to May 28, 2003. The scoping period was extended to June 16, 2003 through publishing of news release and public notice after comment from the public. BLM continued to accept scoping comments throughout the development of the CCMA route designation and SBMRNA expansion alternatives. As this Proposed Plan Amendment and EIS are tiered to the 1995 RMP Amendment/EIS, input from previous public meetings and written comments in response to previous designations efforts were also considered in the planning process.

A stakeholders meeting was convened on November 12, 2003 with the BLM California State Office, Hollister Field Office, and several of the previously mentioned interested parties to discuss key issues related to the CCMA. A tour of the CCMA followed on the next day with the stakeholder group to view and further discuss issues related to OHV recreation and protection of sensitive resources. As a result of the on-going public involvement, public comment, and the high level of controversy involved with the proposed CCMA route designation and SBMRNA expanded boundaries, BLM determined that it would be necessary to conduct a complete environmental impact statement, instead of an environmental assessment as previously anticipated. BLM issued a Notice of Availability (NOA) on July 19, 2004 that contained a correction to the original Notice of Intent (NOI) to formalize this decision.

5.2 CONSULTATION AND COORDINATION

Coordination with other agencies and consistency with other plans for the Draft EIS were accomplished through frequent communications, meetings, and cooperative efforts between the BLM interdisciplinary team and involved federal, state, and local agencies and organizations. This included interaction and meetings with the Clear Creek TRT, Regional Water Quality Control Board, Monterey Bay Unified Air Pollution Control District, California State Parks Off-Highway Motor Vehicle Recreation Division, and annual OHV grant workshops. BLM also notified elected officials in regard to CCMA route designation and SBMRNA expansion through personal briefings, phone calls, and letters describing the management situation. These included US Senators Barbara Boxer and Diane Feinstein, US Congressman Sam Farr, and San Benito County officials.

Formal Consultation the U.S. Fish and Wildlife Service (USFWS) was conducted on the 1995 amendment to the Hollister RMP for Clear Creek with a Biological Opinion issued in 1997. Subsequent coordination with the USFWS has been ongoing throughout the planning process with frequent communications (phone, email, submission of reports), meetings, and onsite visits to the CCMA. On January 12, 2005 an initial Request for Initiation of Formal Section 7 Consultation on the Draft Resource Management Plan Amendment and Draft Environmental Impact Statement for the Clear Creek Management Area was sent to the USFWS. A subsequent memorandum dated April 14, 2005, transmitted the Biological Assessment and supporting documentation in relation to the Request for Initiation of Formal Section 7 Consultation.

Coordination with the U.S. Environmental Protection Agency (EPA) by phone, through various meetings, and coordination of studies and site management activities at the CCMA has occurred throughout the planning process. Topics discussed include comments on the Draft EIS, air and water

quality, human health risks associated with exposure to naturally occurring asbestos, and general project updates.

Coordination with other agencies and consistency with other agency and local and state government plans were accomplished through frequent communications and cooperative efforts between BLM and involved federal, state, and local agencies. The California Governor's Clearinghouse received 15 copies of the Draft EIS for comment and review to ensure consistency with ongoing state plans. The California Office of Historic Preservation (OHP/SHPO) also received a copy of the Draft EIS. No comments were received. Meetings were held with the respective county planners and commissioners to promote greater understanding of goals, objectives, and resources of both the counties and BLM.

5.3 NATIVE AMERICAN INTERESTS

Consultation with Native American interests began in September 2004, with letters and copies of the DEIS sent to the Federally recognized Santa Rosa Rancheria Tachi Yokuts Tribe and to the Indian Canyon Ohlone/Costanoan group (non-Federally recognized). Additional face-to-face consultation occurred with the Tachi Yokuts in November 2004; no specific concerns were raised in the course of consultation with this Tribe. In December 2004, representatives from the Ohlone Bear Clan (non-Federally recognized) approached the Hollister Field Office seeking to conduct Native ceremonies in the CCMA. At that time a face-to-face meeting was initiated to discuss their concerns, a copy of the DEIS was provided to them and consultation/coordination began. Specific concerns focused around the ability to maintain access to areas in CCMA for Native socio-cultural and religious uses. Hollister Field Office and the representatives from the Ohlone Bear Clan continue to coordinate for uses and needs in the CCMA as they arise.

5.4 PUBLIC PARTICIPATION

5.4.1 Scoping

In compliance with the National Environmental Policy Act (NEPA), BLM posted a "Notice of Intent To Prepare an Amendment to the Hollister Resource Management Plan for the Clear Creek Management Area in the Southern Portion of San Benito County and Western Fresno County, CA" in the Federal Register on April 29, 2003. Supplementary information in the NOI stated:

"Public input from previous public meetings and written comments in response to previous designations efforts will be used to define issues. Preliminary issues identified include: Providing for off-highway vehicle use; providing vehicle access for other casual uses; visitor safety; providing protection for listed and sensitive species and habitats; protection and viability of the unique forest and vegetation communities within the San Benito Mountain Research Natural Area. Planning criteria will include honoring valid existing rights. The amendments will be consistent with officially approved resource related plans, policies and programs of other Federal agencies, and State and local governments, so long as the guidance and plans are consistent with the purposes, policies and programs of Federal laws and regulations applicable to public lands. The proposed route of travel and barrens designation changes to the Hollister RMP for the Clear Creek Management Area, including designation of the boundaries of the San Benito Mountain Research Natural Area,

requires a formal plan amendment before the designations can be implemented. The amendment process and ORV trail designations shall be conducted in compliance with the Federal Land Policy Management Act of 1976 (FLPMA), planning regulations (43 CFR 1600), ORV trail designation regulations (43 CFR 8340), BLM manual guidance, and all applicable Federal laws affecting BLM land use decisions and ORV designations. The Bureau intends to rely largely on route inventory data, soil loss surveys, information obtained from coordination with other federal, state, and local agencies, consultation with the Technical Review Team, and public comments.”

The following notice also appeared on the Hollister Field Office webpage (<http://www.ca.blm.gov/hollister/news>) in April 2003:

Clear Creek Management Area Environmental Assessment (EA)

The Hollister Field Office is preparing an E.A./Plan Amendment that will revise the Hollister Resource Management Plan for the Clear Creek Management Area. Expected completion date of the E.A. is September, 2003. The primary purpose of the E.A./Plan Amendment is to implement the limited use designation within the CCMA. The E.A. will address route, trail and barren play area designation, and the boundary expansion of the San Benito Mountain Research Natural Area. The E.A./Plan Amendment will be posted on the Clear Creek Management Area web site for public review and comment.

Following the release of the Notice of Intent to prepare an environmental assessment for route designation and SBMRNA expansion in the Federal Register in April 2003, BLM sent a letter inviting public input to CCMA stakeholders and members of the TRT. An official comment period of thirty (30) days followed the release of the NOI from April 29, 2003 to May 28, 2003.

BLM received *approximately* 179 letters from various members of the public and other agencies. One-hundred and sixty-three (163) of these letters were form letters distributed by the Blue Ribbon Coalition stating their concerns of illegal closure of existing trails and open play areas, lack of public participation in analysis and decisions to close available routes, and potentially ‘significant’ changes to Clear Creek Management Plan that would require an environmental impact statement (EIS) rather than an EA.

The remaining sixteen (16) letters represented a variety of issues and concerns from local residents, Clear Creek MA visitors, state agencies, and environmental and OHV groups.

In response to public comments and a high level of controversy involved with the proposed CCMA route designation and SBMRNA expanded boundaries, BLM determined that it would be necessary to conduct a complete environmental impact statement, instead of an environmental assessment as previously anticipated. BLM issued a Notice of Availability (NOA) on July 19, 2004 that contained a correction to the original Notice of Intent (NOI) to formalize this decision.

5.4.2 Public Meetings

Public meetings are part of the National Environmental Policy Act (NEPA) process and are used to receive comments from the public on the Draft Environmental Impact Statement (DEIS). As noted above, BLM published the “Notice of Availability (NOA) of a Draft Resource Management Plan Amendment and Draft Environmental Impact Statement (DRMP & DEIS)” in the Federal Register on July 19, 2004 (Volume 69, Number 137). The NOA marked the beginning of a 120-day public

comment period that closed on November 15, 2004. On August 30, 2004, the Bureau of Land Management (BLM) Hollister Field Office announced a series of public meetings to accept comments on the Clear Creek DRMP & DEIS.

Public meetings were held as follows:

Coalinga: Sept. 14, 2004, Harris Ranch, 24505 W. Dorris Ave.

Hollister: Sept. 15, 2004, Veterans' Memorial Bldg, 649 San Benito St.

San Jose: Sept. 16, 2004, Sheriff's Auditorium, 55 West Younger Ave.

Each meeting started with an open house, where information about the DRMP & DEIS was provided for the public. The open house sessions allowed meeting participants to review displays, maps, and literature for the Clear Creek Management Area DRMP & DEIS. Staff members from the BLM were present to discuss the proposed project and answer questions. Comment cards and repositories were available for anyone who wanted to provide a written comment about the proposed project and Alternatives.

After the open house, BLM invited the public to provide oral comments. Following a brief introduction by BLM, members of the public had the opportunity to provide oral comments of approximately 3 to 5 minutes, depending on the number of citizens requesting to comment. A meeting facilitator was present at the meetings to ensure all commenters were heard. A court reporter recorded all of the oral comments given during the public meetings, which are available at the Hollister Field Office. A total of approximately 275 persons attended the public meetings and open houses in Coalinga, Hollister, and San Jose.

5.4.3 Public Notices

The Hollister Field Office issued a public notice in the following newspapers on August 31, 2004 to announce the public comment meetings for the CCMA Draft RMP Amendment to be held in September 2004.

San Jose Mercury News
Santa Cruz Sentinel
Fresno Bee
The Salinas Californian

5.4.4 Newsletters

The BLM Hollister Field Office distributes a monthly CCMA Bulletin to inform public land visitors about upcoming events, activities, and planning information. The CCMA Bulletin also includes results from air samples collected by BLM employees while working in the CCMA.

5.4.5 Web Site

The Hollister Field Office also maintains a website to inform public land visitors about upcoming events, activities, and planning information. The website can be disconnected from the internet periodically, pending court orders, but it is commonly used to announce the availability of environmental review documents, including the Draft RMP Amendment and Draft EIS for CCMA.

5.4.6 Distribution List

Federal Agencies

Copies of the Draft RMP Amendment and Draft EIS were submitted to the following federal agencies:

- U.S. Environmental Protection Agency (EPA)
- U.S. Geological Survey (USGS)
- U.S. Fish and Wildlife Service (FWS)
- U.S. Forest Service (FS)
- U.S. National Park Service (NPS)
- U.S. Office of Environmental Policy and Compliance (OEPC)

State of California

Copies of the Draft RMP Amendment and Draft EIS were submitted to the following state agencies:

- California Governor's Office of Planning & Research (OPR)
- California Department of Fish and Game (DFG)
- California State OHV Commission, OHMVR Division
- California Department of Toxic Substances Control (DTSC)
- California State Parks Resources Agency (State Parks)
- Monterey Bay Unified Air Pollution Control District (MBUAPCD)
- San Joaquin Unified Air Pollution Control District (SJUAPCD)
- California State Water Resources Control Board (WRCB)
- Central Coast Regional Water Quality Control Board (RWQCB)

Elected Officials

Copies of the Draft RMP Amendment and Draft EIS were submitted to the following federal, state, and local government elected officials:

Federal:

- Congressman Sam Farr
- Senator Diane Feinstein
- Senator Barbara Boxer

State:

- Senators and Representatives of Counties

Local Governments:

- San Benito County Sheriff's Dept

Central California Resource Advisory Council

Copies of the Draft RMP Amendment and Draft EIS were submitted to members of the Central California Resource Advisory Council.

Libraries

Copies of the Draft RMP Amendment and Draft EIS were submitted to the following local libraries:

San Benito County Library
Monterey Public Library
Coalinga State Library
Fresno County Central Library
Santa Cruz Public Library
Steinbeck Library
King City Branch Library
San Jose Dr. Martin Luther King, Jr. Library

5.4.7 Comments & Responses

In addition to the comments gathered during the public meetings, BLM received approximately 848 written comments and electronic mail (e-mail) letters from agencies, individuals, and organizations in response to the CCMA Draft RMP Amendment and DEIS. The breakdown of respondents and numbers of comments is as follows:

5 comment letters from public agencies – see Appendix J

6 comment letters from organizations – see Appendix J

57 verbal comments and 46 written comments from individuals at public meetings – see Appendix K

837 comment letters (written and e-mail) received by the Hollister Field Office from individuals, of which 365 were form letters – see Appendix K

Copies of the comment letters received from agencies and organizations and BLM responses to these comments are located in Appendix J. Numerous comments from agencies and organization related to the general issues of air quality and human health risks from exposure to naturally occurring asbestos; protection of habitat for rare, threatened, and endangered species; and significant impacts to the human environment from loss of OHV recreational opportunities.

A summary of comments gathered at public meetings and written comments received by the Hollister Field Office is contained in Appendix K. These comments generally involved nine recurring themes: Process, Trails/OHV Use Areas, Alternatives, Protection of Sensitive Species and Habitat, Management of Area by BLM, Safety and Enforcement, Air Quality and HAZMAT, Socioeconomics, and the Draft RMP/DEIS Document.

To further analyze and respond to the public comments on the Draft RMP and DEIS, BLM grouped all the written comments and comments gathered at public meetings into 99 categories, by theme, and developed a response for each one. These responses are located in Appendix K. Also included in Appendix K is a complete list of individual commenters and the issues they identified in written comments and comments gathered at public meetings.

5.5 LIST OF PREPARERS

Table 5-1. List of Preparers

BLM Hollister Field Office

Name	Job/Project Title	DEIS/FEIS Responsibilities
Hollister Field Office		
George Hill	Field Manager	Project Lead
Elizabeth Allen	Park Ranger	Recreation
Jason Clark	Trails Coordinator/GIS	Route Inventory
Bruce Cotterill	Range Specialist	Riparian Resources
Julie Delgado	Botanist	Special Status Species
Gary Diridoni	Wildlife Biology	Wildlife & Riparian Resources
Sam Fitton	Biologist	Special Status Species
Robert LaFleur	CCMA Coordinator	Recreation & Trails
Timothy Moore	Physical Scientist	Air, Soils, Water
Sky Murphy	Environmental Planning Specialist	NEPA/Public Involvement
Lesly Smith	Outdoor Recreation Planner	Recreation & Public Affairs
Eric Wergeland	GIS Specialist	Maps/Figures
Brian White	CCMA Coordinator	Recreation & Implementation
Erik Zaborsky	Archaeologist	Cultural Resources, Native American Consultation
California State Office		
Eliseo Ilano	Planning and Environmental Coordinator	NEPA/Coordination & Consultation
Jim Keeler	OHV Coordinator	OHV Recreation
Edward Lorentzen	Endangered Species Specialist	ESA Compliance
John Mills	Environmental Coordinator	NEPA
Jim Weigand	Ecologist	Special Status Species
John Willoughby	Botanist	Special Status Species
BLM National Science & Technology Center		
Scott Archer	Senior Air Resources Specialist	Air Quality

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APPENDIX A ROUTE DESIGNATION

HOLLISTER FIELD OFFICE CLEAR CREEK MANAGEMENT AREA ROUTE DESIGNATION WORKSHEET

1. Route Number:
2. Route Characteristics
 - a. Length
 - b. Continuity
 - c. Description
 - d. Trail Maintenance Objective
3. Topographic Map(s):

EVALUATION CRITERIA				
Level	Criteria Name	Criteria Value1	Determination Date	Mitigation
Tier 1	Private/state lands/mines			
Tier 1	Sensitive species and Cultural			
Tier 1	RNA/WSA			
Tier 1	Barrens Interface			
Tier 1	Riparian Areas			
Tier 2	Erosion, Soil Loss Standard			
Tier 3	OHV use/use spectrum			
Tier 4	Transportation/manageability			
Tier 4	Admin Use/ROW's			
Tier 4	Route Proliferation/redundancy			
Tier 4	Route Continuity			

4. ROUTE DESIGNATION:
(If Limited, Describe Limitation)
5. ROUTE DESIGNATION DATE:
6. Other Proposed Actions
7. Route Specific Rationale:
8. Decision Record:
This decision is in conformance with the Hollister Resource Management Plan, 1984; Clear Creek Management Plan and Record of Decision, 1986; Clear Creek Management Plan Amendment and Record of Decision 1999; and the Proposed Action.

Decision Criteria: Includes all criteria identified in 43 CFR 8342.1 parts (a) through (d) and the Proposed Action.

**HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE EVALUATION CRITERIA and DATA ELEMENT DICTIONARY**

Introduction: The following criteria represent the data on which decisions about the authorized recreation use of routes is based. The data element dictionary describes the allowed responses for each criterion. The information on each route will be entered into an electronic database for analysis and query.

Route Designation Criteria

The criteria have been combined into four tiers, roughly corresponding to the criteria's likelihood of requiring route closure. Where possible, mitigation measures are discussed that could be used to reduce the expected motorized OHV impacts under each criterion. Mitigation, as used in the process, refers to management actions that BLM could undertake to alleviate the effects of OHV use with respect to the designation criteria.

Tier One

These factors can individually result in a closure decisions for a given route. Nevertheless, some of the detrimental characteristics identified by these criteria can be successfully mitigated, given sufficient funding, staffing, and recreation interest.

Private Land, State Lands and Mines

Private and state lands occur throughout the CCMA. To date, managed routes have been maintained to reduce erosion by the Bureau without regard to ownership unless the Bureau has specifically been asked to assist in preventing OHV and other uses. Where routes desirable for recreation traverse private land, the Bureau would seek clarification from landowners about whether or not they wish to allow for OHV use. Should a landowner request it, the Bureau would close routes that traverse non-Bureau lands by closing the route back to the nearest intersections. The Bureau would seek reciprocal rights-of-way with private landowners as appropriate to provide access on primary route connectors. Reroutes to avoid non-Bureau lands would be evaluated under a separate Environmental Analysis, given sufficient recreation interest, adequate staff and sufficient funds. Mines would be avoided by closing routes leading to or through mined areas to avoid subjecting recreation users to increased levels of hazardous materials.

Mitigation. The Bureau would seek reciprocal rights-of-way with private landowners as appropriate to provide access on primary route connectors. Possible mitigation for mined lands would be to sufficiently prevent off route travel. Complete fencing of a route, to prevent public access to hazardous mine areas could be considered mitigation. Route closure due to private/state lands could possibly be avoided by building a new portion of route. New route construction is not analyzed under this DEIS.

Sensitive Species and Cultural Resources

Federal laws and BLM policy require protection of sensitive resources, such as threatened and endangered species and their habitat and cultural resources. Areas that OHV recreation may adversely impact are best protected from such use by avoidance. These types of resources are best protected by not having routes bisect occupied or moderate- to high-potential habitat. Sensitive species and their habitat are also best protected by distance and adequate natural barriers. Cultural resources are similarly sensitive to OHV use impacts and can be managed in a manner analogous to sensitive plants and animals.

Mitigation. While avoidance is the preferred method to manage OHV use impacts, several strategies have also been documented to be successful in protecting sensitive resources. A combination of well-designed erosion control structures and corridor fencing has greatly reduced OHV use impacts to San Benito evening-primrose along the Clear Creek Canyon Road. It is not currently practical to eliminate the county road from the trail system. It is a well established route and OHV use impacts can generally be ameliorated by corridor fencing. Elsewhere, routes should be selected that do not bisect sensitive species habitat or cultural resources.

SBMRNA/ACEC/WSA

The management of the expanded San Benito Mountain Research Natural Area (approximately 4082 acres), including the Wilderness Study Area (WSA) CA-040-309 (1500ac), requires more restrictive use of OHV's. Pursuant to 43 CFR 8342.1(d) routes shall be located in Research Natural Areas only if the authorized officer determines that off-road vehicle use in such locations would not adversely affect the natural, esthetic, scenic, or other values for which the area was established. All affected routes were evaluated following the criteria presented for the SBMRNA/ACEC designation and are consistent with the SBMRNA/ACEC expansion criteria.

Mitigation. The primary objective of WSA management is to return the WSA's natural character essentially unaltered by humans during the time it is being managed as a WSA. The existing WSA designation allows vehicle use only on the county route (R011) and the "Ridge Route," now called R010, R012 and R013. No other routes would be considered within this 1500 acre area. For the existing RNA and proposed expanded RNA, designated routes may need to be fenced or otherwise limited to reduce potential impacts of OHV use off the designated route. No mitigation for considering additional routes is possible for the WSA, since only the current routes are authorized.

Interface with Closed and Proposed Closed Barrens

A number of barrens have been closed along riparian corridors and within the WSA. Routes through barren areas are particularly susceptible to route proliferation and off route vehicle use. Routes through closed barrens would be avoided where possible.

Mitigation. Construction of fence or other barriers that control off-route use could be considered as mitigation for this criterion. Reroutes to avoid a particular barren or to change the location of the route to minimize impacts could also be considered, however they are generally outside the scope of this DEIS.

Riparian Areas

Riparian areas provide specialized habitat for several sensitive species and can act to filter sediments. Therefore, riparian areas are to be avoided and impacts from OHV use minimized to the extent practicable. Historically, a number of trails used streams as the primary route of travel and resulted in impacts to sensitive resources. This past practice is too destructive to be continued. Routes crossing streams can also be resource impairing, therefore the number of such crossings should be minimized. Sediment modeling conducted by PTI Environmental Services identified a number of sub-watersheds within the Clear Creek watershed that are projected to contribute particularly high levels of sediment into Clear Creek. It is especially important that these sub-watersheds be evaluated for opportunities to reduce sediment delivery into an active drainage.

Mitigation. Impacts to riparian zones can be minimized by reducing the number of stream crossings, changing their location and/or orientation of the crossing to the stream, or by changing the actual crossing by appropriate hardening or utilizing bridges. In using these mitigation measures, it is important to design stream crossings that maintain an adequate flow rate so as to discourage yellow-legged frogs from attaching egg masses at these high use areas.

Tier Two

Criteria within this tier could also result in closure of a route. However, given sufficient recreation interest and available funds, actions can be taken to ameliorate most potential negative effects.

Erosion and Soil Loss Standards

Routes can cause erosion within the route tread, and through concentrated runoff, to off-tread locations. The data for this criterion is gathered following guidance found in the California State Soil Loss Standards. Besides requirements for signing, route design, and soil sustainability, the standards also require corrective actions within specified timeframes.

Mitigation. Many of the implementation strategies are designed to reduce route use impacts, direct and indirect. Most maintenance and corrective actions are relatively inexpensive and can be accomplished in a timely manner with existing staff. Some corrective actions would need to be carefully justified by comparing costs with benefits. Other problem areas could be avoided by constructing reroutes.

Tier Three

The criteria within this tier describe the level of recreation interest of a given route, and whether it contributes to the recreation opportunity and diversity of recreation experience within the entire CCMA.

OHV Use/Recreation Spectrum

Route selection would consider linking visitor desires with recreation opportunities. Nearly all routes have some recreation value. Nevertheless, it is important that the open route network contributes to achieving the CCMA plan's resource condition objectives. Routes should be selected that provide a wide spectrum of recreation use throughout the CCMA and provide a variety of difficulty levels.

Consideration would be given to the level of recreation interest, providing a diversity of trail types and experiences, and allowing for a variety of recreation activities.

Tier Four

This tier describes criteria focused on basic issues of route management, including maintenance, conflicting uses, official and administrative use, existing rights-of-way, and contribution to the overall route network. Consideration may be given, weighing of the costs of managing routes versus the recreation benefits of those routes.

Route Management Objective (RMO)

While the trail maintenance objective would not trigger a decision on whether to open or close a route, the objective does impact the cost (personnel and equipment) of keeping a route open. Similarly, the manageability of a route does not necessarily affect the resource impacts of its use, assuming the route is adequately managed. However, routes that are difficult to manage/maintain would be costly and given current budget constraints may need to be closed for this reason alone. Changing a route's management objective may sufficiently reduce the cost of its maintenance to allow for OHV use.

Mitigation. The primary way to mitigate the effect of this criteria on route closure are to reduce costs of maintenance, through either improved efficiency or use of volunteers, or by reducing the level of required maintenance by changing the route management objective.

Administrative Use/Rights of Way

This criterion considers non-recreation uses of a route such as access to a communication site, access to state or private lands, authorized uses, and valid existing rights-of-way. Recreation may not always be appropriate for these maintained routes. When this is the case, the route would be Limited to Administrative Use. Administrative use designations would not be available for casual recreation use. Use would be restricted to permittees, licensees, rights-of-way holders, Federal government and its' authorized representatives. These routes differ from closed routes in that they would be regularly maintained and would not be considered for reclamation.

Mitigation. Designation as administrative use with appropriate restrictions may reduce potential OHV impacts.

Proliferation and Redundancy

Route proliferation is clearly prohibited by the 1999 ROD. To the extent practicable, route designations should be used to reduce route proliferation. As it applies to this criterion, route proliferation pertains to whether the individual route may contribute to unauthorized use and the creation of new routes, or whether unauthorized use itself created the route. Determining whether or not a route is redundant requires considering several factors, including, RMO/trail type, proximity to sensitive resources, resource and user conflicts, proliferation, and contribution to route network.

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Mitigation. Route proliferation could be reduced in some situations by barrier construction. Beyond the scope of this Final EIS is the possibility of rerouting a portion of a route to take advantage of existing natural or human-made barriers.

Route Continuity

Recreation use of OHV's is the dominant form of recreation in the CCMA. However, a variety of recreation uses need to be accommodated through the route designation process. On a given trail, these various uses may be in conflict, possibly creating safety concerns in addition to visitor frustration. Some routes are dead ends which are advantageous for some uses, such as hunting or camping, but may result in route proliferation at the dead end by OHV use. Logically connecting routes are emphasized when considering recreational OHV use. Certain dead end routes and spur routes may be desirable with appropriate limitations on the use or types of vehicles.

Mitigation. Rather than arbitrarily close all dead end routes, BLM may install signs letting users know the route is a dead end, closed ahead, or designating certain limitations on OHV use.

DATA ELEMENT DICTIONARY

Tier 1

1. Private/state lands/mines

Code	Definition
11000	All BLM.
11010	Some private, use o.k.
11020	Some state, use o.k.
11030	Some mine, use o.k.
11040	Some private and state, use o.k.
11050	Some private and mine, use o.k.
11060	Some state and mine, use o.k.
11070	Some private, state and mine, use o.k.
11119	Some private, use NOT o.k.
11129	Some state, use NOT o.k.
11139	Some mine, use NOT o.k.
11149	Some private and state, use NOT o.k.
11159	Some private and mine, use NOT o.k.
11169	Some state and mine, use NOT o.k.
11179	Some private, state and mine, use NOT o.k.
11111	Some private, use UNKNOWN.
11121	Some state, use UNKNOWN.
11131	Some mine, use UNKNOWN.
11141	Some private and state, use UNKNOWN.
11151	Some private and mine, use UNKNOWN.
11161	Some state and mine, use UNKNOWN.
11171	Some private, state and mine, use UNKNOWN.
11212	Some private, POTENTIAL MITIGATION
11222	Some state, POTENTIAL MITIGATION.
11232	Some mine, POTENTIAL MITIGATION.
11242	Some private and state, POTENTIAL MITIGATION.
11252	Some private and mine, POTENTIAL MITIGATION.

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11262	Some state and mine, POTENTIAL MITIGATION.
11272	Some private, state and mine, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

2. Sensitive species and Cultural

Code	Definition
12000	No known conflicts.
12010	Plants nearby, use o.k.
12020	Animals nearby, use o.k.
12030	Cultural nearby, use o.k.
12040	Plants and animals nearby, use o.k.
12050	Plants and cultural nearby, use o.k.
12060	Animals and cultural nearby, use o.k.
12070	Plants, animals and cultural nearby, use o.k.
12119	Plants nearby, use NOT o.k.
12129	Animals nearby, use NOT o.k.
12139	Cultural nearby, use NOT o.k.
12149	Plants and animals nearby, use NOT o.k.
12159	Plants and cultural nearby, use NOT o.k.
12169	Animals and cultural nearby, use NOT o.k.
12179	Plants, animals and cultural nearby, use NOT o.k.
12212	Plants nearby, POTENTIAL MITIGATION.
12222	Animals nearby, POTENTIAL MITIGATION.
12232	Cultural nearby, POTENTIAL MITIGATION.
12242	Plants and animals nearby, POTENTIAL MITIGATION.
12252	Plants and cultural nearby, POTENTIAL MITIGATION.
12262	Animals and cultural nearby, POTENTIAL MITIGATION.
12272	Plants, animals and cultural nearby, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

3. RNA/WSA

Code	Definition
13000	No known conflicts.
13010	RNA nearby, use o.k.
13020	WSA nearby, use o.k.
13030	RNA and WSA nearby, use o.k.
13119	RNA nearby, use NOT o.k.
13129	WSA nearby, use NOT o.k.
13139	RNA and WSA nearby, use NOT o.k.
13212	RNA nearby, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

4. Barrens Interface

Code	Definition
14000	No known conflicts.
14010	Barren nearby, use o.k.
14119	Barren nearby, use NOT o.k.

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14212	Barren nearby, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

5. Riparian Areas

Code	Definition
15000	No known conflicts.
15010	Riparian nearby, use o.k.
15119	Riparian nearby, use NOT o.k.
15212	Riparian nearby, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Tier 2**6. Erosion, Soil Loss Standard**

Code	Definition
16000	No known conflicts (Green)
16010	Yellow, use o.k.
16020	Red, use o.k.
16119	Red, use NOT o.k.
16212	Red, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Tier 3**7. OHV use/use spectrum**

Code	Definition
17000	No known conflicts – contributes to use spectrum.
17119	Does NOT contribute to use spectrum.
17010	Recreation Conflicts – Limited Use o.k.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Tier 4**8. Route Management Objective (RMO)**

Code	Definition
18000	No known conflicts – manageable given current RMO and funding/staffing levels.
18119	Not manageable due to physical conditions, use NOT o.k.
18212	Not manageable due to physical conditions, POTENTIAL MITIGATION (reroute)
18222	Not manageable due to RMO, POTENTIAL MITIGATION.
18232	Not manageable due to funding/staffing, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

9. Admin Use/ROW's

Code	Definition
19000	No known conflicts
19119	Traverses private, no public access, use NOT o.k.
19129	Unprotected facility, use NOT o.k.
19212	Private route, POTENTIAL MITIGATION.

CCMA Proposed Plan Amendment and Final EIS

19222	Unprotected facility, POTENTIAL MITIGATION.
19139	Other Conflicts (specify below), use NOT o.k.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

10. Route Proliferation/redundancy

Code	Definition
110000	No known conflicts
110119	Presently excessive route proliferation, use NOT o.k.
110129	Route is redundant, use NOT o.k.
110212	Route proliferation, POTENTIAL MITIGATION.
110222	Route redundant, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

11. Route Continuity

Code	Definition
111000	No known conflicts, promotes OHV continuity/connectivity.
111010	Dead end route, all use o.k.
111020	Dead end route, Limited Use o.k.
111119	Dead end route, OHV use NOT o.k.
111212	Dead end route, POTENTIAL MITIGATION.
9999	NO DATA AVAILABLE
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length Miles	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
R001	9.4	IMP	County	11010	12212	13010	14212	15010	16010	17000	18000	19000	110000	111000
R002	6.9	4WD	OPEN	11050	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
R003	0.3	4WD	OPEN	11000	12212	13000	14212	15000	16010	17000	18000	19000	110000	111000
R004	1.0	4WD	OPEN	11010	12000	13000	14212	15000	16000	17000	18000	19000	110000	111000
R005	5.8	4WD	OPEN	11020	12000	13000	14212	15212	16000	17000	18000	19000	110000	111000
R006	1.0	4WD	OPEN	11000	12000	13000	14010	15212	16212	17000	18000	19000	110000	111000
R007A	2.25	JEEP	OPEN	11000	12000	13000	14212	15010	16212	17000	18000	19000	110000	111010
R008A	1.5	4WD	OPEN	11000	12212	13000	14212	15212	16212	17000	18000	19000	110000	111000
R010A	1.6	JEEP	OPEN	11020	12212	13212	14212	15000	16010	17000	18000	19000	110222	111000
R010B	0.9	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
R011	14.1	IMPR	County	11010	12212	13212	14212	15212	16010	17000	18000	19000	110000	111000
R013	1.1	4WD	OPEN	11000	12000	13010	14000	15000	16010	17000	18000	19000	110000	111000
R014	1.3	JEEP	OPEN	11030	12000	13000	14212	15000	16010	17000	18232	19000	110000	111000
R015A	2.7	IMPR	County	11010	12000	13000	14212	15000	16010	17000	18232	19000	110000	111000
R015B	2.1	IMPR	County	11010	12212	13000	14212	15212	16000	17000	18000	19000	110000	111000
R016	2.5	JEEP	OPEN	11070	9999	13000	14000	15000	16010	17000	18000	19000	110000	111010

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length Miles	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
R017	1.8	JEEP	LIMITED	11020	12232	13000	14000	15212	16212	17010	18000	19000	110000	111000
R018	2.8	JEEP	LIMITED	11020	12010	13000	14000	15000	16010	17010	18000	19000	110000	111020
R019C	0.15	IMPR	OPEN	11010	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
R019F	0.4	IMPR	ADMIN	11010	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T101	1.5	STT	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T103	1.4	JEEP	OPEN	11000	12212	13000	14000	15000	16010	17000	18000	19000	110000	111000
T104	4.5	JEEP	OPEN	11000	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T105	1.0	JEEP	OPEN	11000	12212	13000	14000	15000	16010	17000	18000	19000	110000	111000
T106	0.9	ATV	OPEN	11000	12212	13000	14000	15212	16010	17000	18000	19000	110000	111000
T107	1.55	JEEP	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T108	1.0	ATV	OPEN	11000	12000	13000	14000	15212	16010	17000	18000	19000	110000	111000
T109	0.7	STT	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T111	0.9	JEEP	OPEN	11000	12000	13000	14010	15000	16010	17000	18000	19000	110000	111000
T112	0.5	ATV	OPEN	11000	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T113	1.5	ATV	OPEN	11010	12212	13000	14212	15010	16212	17000	18000	19000	110222	111000
T114	1.2	STT	OPEN	11000	12010	13000	14212	15000	16010	17000	18000	19000	110000	111000
T115	2.1	JEEP	OPEN	11010	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T116	2.6	STT	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T117	1.3	STT	OPEN	11010	12000	13000	14212	15212	16212	17000	18000	19000	110000	111000
T119	1.2	ATV	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T120	1.7	JEEP	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T121	0.4	ATV	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T122	0.5	STT	OPEN	11000	12000	13000	14000	15212	16000	17000	18000	19000	110000	111000
T123	0.3	STT	OPEN	11000	12212	13000	14000	15212	16000	17000	18000	19000	110000	111000
T124A	1.5	STT	OPEN	11000	12000	13000	14212	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T124B	1.3	STT	OPEN	11000	12000	13212	14212	15000	16000	17000	18000	19000	110000	111000
T125	4.9	ATV	OPEN	11050	12212	13000	14212	15212	16010	17000	18000	19000	110000	111000
T126	1.2	STT	OPEN	11050	12212	13000	14212	15212	16010	17000	18000	19000	110000	111000
T127	0.4	STT	OPEN	11010	12212	13000	14212	15000	16010	17000	18000	19000	110000	111000
T128	1.9	ATV	OPEN	11010	12212	13000	14000	15000	16010	17000	18000	19000	110000	111000
T129	0.8	STT	OPEN	11000	12000	13000	14212	15000	16212	17000	18000	19000	110000	111000
T132	1.2	JEEP	OPEN	11010	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T133	0.3	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T134	1.1	JEEP	OPEN	11000	12212	13000	14212	15212	16010	17000	18000	19000	110000	111000
T135	1.1	STT	OPEN	11000	12212	13000	14212	15212	16010	17000	18000	19000	110000	111000
T137	2.7	STT	OPEN	11010	12000	13000	14212	15212	16010	17000	18000	19000	110000	111000
T138	0.7	STT	OPEN	11000	12000	13000	14212	15000	16010	17000	18000	19000	110000	111000
T139	0.8	JEEP	OPEN	11000	12212	13000	14000	15000	16010	17000	18000	19000	110000	111000
T140	0.8	JEEP	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T141	1.0	JEEP	OPEN	11030	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T142	0.7	STT	OPEN	11000	12000	13000	14212	15000	16010	17000	18000	19000	110000	111000
T143	1.3	JEEP	OPEN	11000	12000	13000	14212	15000	16010	17000	18000	19000	110000	111000
T147	1.0	JEEP	OPEN	11000	12212	13000	14212	15000	16010	17000	18000	19000	110000	111000
T148	1.5	JEEP	OPEN	11020	12000	13000	14212	15000	16000	17000	18000	19000	110000	111000
T149A	0.3	JEEP	OPEN	11020	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T150	1.2	JEEP	OPEN	11020	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T151A	5.1	4WD	OPEN	11142	12212	13000	14212	15212	16010	17000	18000	19000	110000	111000
T153	3.0	JEEP	OPEN	11252	12212	13212	14212	15000	16010	17000	18000	19000	110000	111000
T158 A	1.4	4WD	County	11010	12212	13212	14212	15212	16212	17010	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T158B	1.0	4WD	County	11000	12212	13212	14212	15212	16212	17010	18000	19000	110000	111000
T159	3.5	JEEP	OPEN	11000	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T162	0.6	STT	OPEN	11000	12000	13212	14000	15212	16010	17000	18000	19000	110000	111000
T163	1.5	STT	OPEN	11000	12000	13000	14212	15000	16212	17000	18000	19000	110000	111000
T164	1.6	STT	OPEN	11000	12000	13000	14000	15212	16010	17000	18000	19000	110000	111000
T165	1.0	STT	OPEN	11000	12000	13000	14212	15000	16010	17000	18000	19000	110000	111000
T166	5.0	STT	OPEN	11010	12000	13000	14000	15212	16010	17000	18000	19000	110000	111000
T167	0.8	STT	OPEN	11000	12000	13000	14212	15000	16212	17000	18000	19000	110000	111000
T168	1.1	JEEP	OPEN	11010	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T169	1.2	ATV	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T170	0.4	Paved	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T171A	2.3	ATV	LIMITED	11000	12030	13000	14000	15000	16010	17000	18000	19000	110000	111000
T171B	2.2	JEEP	LIMITED	11000	12030	13000	14000	15000	16010	17000	18000	19000	110000	111000
T175	0.9	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T176	1.1	ATV	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T178	2.0	ATV	LIMITED	11000	12010	13000	14212	15212	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T179	0.1	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T181	3.2	STT	OPEN	11000	12010	13000	14000	15212	16212	17000	18000	19000	110212	111000
T182	0.7	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T183	1.3	STT	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T184	6.0	STT	OPEN	11000	12212	13000	14212	15212	16212	17000	18000	19000	110000	111000
T185	0.6	STT	OPEN	11000	12212	13000	14000	15000	16010	17000	18000	19000	110000	111000
T189A	0.9	JEEP	OPEN	11000	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T189B	0.6	JEEP	OPEN	11000	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T189C	3.2	ATV	OPEN	11000	12212	13000	14212	15000	16212	17000	18000	19000	110000	111000
T191	2.1	STT	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T192	0.3	STT	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T193	2.8	STT	OPEN	11000	12000	13212	14212	15000	16000	17000	18000	19000	110000	111000
T194	2.3	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T195	.8	STT	OPEN	11010	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T196	0.3	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T197	0.5	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T198	2.4	STT	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T199	0.6	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T200	0.6	STT	OPEN	11000	12000	13000	14000	15212	16212	17000	18000	19000	110000	111000
T201	0.5	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T202	0.6	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T203	1.5	STT	OPEN	11010	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T204	0.8	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T205	0.8	STT	OPEN	11010	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T206	1.4	STT	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T206	1.3	JEEP	OPEN	11232	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T207	0.4	STT	OPEN	11020	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T208	2.3	STT	OPEN	11010	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T209	2.0	ATV	OPEN	11000	12000	13000	14000	15000	16010	17000	18000	19000	110000	111000
T210	1.6	STT	OPEN	11000	12000	13000	14000	15212	16000	17000	18000	19000	110000	111000
T211	1.2	STT	OPEN	11000	12000	13000	14000	15212	16212	17000	18000	19000	110000	111000
T213	1.5	ATV	OPEN	11000	12000	13000	14000	15212	16000	17000	18000	19000	110000	111000
T214	0.4	STT	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T215	1.1	ATV	OPEN	11000	12000	13000	14000	15212	16000	17000	18000	19000	110000	111000
T216	2.3	ATV	OPEN	11000	12000	13000	14000	15212	16000	17000	18000	19000	110000	111000
T216	3.8	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T218	1.5	STT	OPEN	11000	12212	13000	14000	15212	16010	17000	18000	19000	110000	111000
T219	1.1	ATV	LIMITED	11000	12000	13000	14000	15212	16010	17000	18000	19000	110000	111000
T220	3.6	JEEP	LIMITED	11000	12000	13000	14000	15212	16010	17000	18000	19222	110000	111000
T221	.7	JEEP	LIMITED	11000	12000	13000	14000	15212	16010	17000	18000	19222	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T222	0.8	STT	OPEN	11020	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T223	0.70	STT	OPEN	11020	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T224	1.7	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T225	1.1	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T226	1.6	STT	OPEN	11000	12212	13000	14000	15000	16000	17000	18000	19000	110000	111000
T227	0.4	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T228	0.4	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T229	0.7	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T230	0.1	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T231	0.2	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T232	0.3	IMPR	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T233	0.1	4WD	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T234	0.7	ATV	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T235	1.5	STT	OPEN	11000	12000	13000	14000	15000	16212	17000	18000	19000	110000	111000
T236	1.0	STT	OPEN	11000	12000	13000	14000	15212	16000	17000	18000	19000	110000	111000
T237	1.8	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T238	0.4	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T239	0.4	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T241	0.6	STT	OPEN	11010	12212	13000	14000	15000	16000	17000	18000	19000	110000	111000
T243	1.2	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T244	0.5	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T245	0.7	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T246	0.2	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T247	0.3	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T248	0.2	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T249	0.23	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T250	0.4	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T251	0.3	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T252	0.2	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T253	0.2	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T254	0.4	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T255	0.38	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T256	0.43	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T257	0.25	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T258	0.36	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T259	0.39	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T260	0.3	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T261	0.87	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
T262	0.11	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T263	0.61	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T264	0.66	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T265	0.24	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T255	0.38	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T256	0.43	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T257	0.25	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T258	0.36	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T259	0.39	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T260	0.3	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T261	0.87	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T262	0.11	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T263	0.61	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T264	0.66	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
T265	0.24	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR001	0.9	STT	CLOSED	11010					16010	17119				
OR002	0.3	STT	CLOSED							17119				
OR003	0.4	STT	CLOSED	11159										
OR004	0.2	ATV	CLOSED							17119				
OR005	0.3	STT	CLOSED		12119				16119					
OR006	0.1	STT	CLOSED		12119				16010					
OR007	.05	STT	CLOSED							17119				
OR008	0.1	STT	CLOSED						16015	17119				
OR010	0.4	STT	CLOSED	11119					16010					
OR011	0.4	STT	CLOSED	11119										
OR013	0.3	STT	CLOSED							17119				
OR014	0.8	STT	CLOSED	11119	12119				16119					
OR015	0.2	STT	CLOSED		12119					17119				
OR016	0.6	STT	CLOSED						16010	17119				
OR017	0.1	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR019	0.1	STT	CLOSED							17119			110119	
OR020	0.8	STT	CLOSED	11119	12119				16119					
OR021	0.08	STT	CLOSED	11000	12000	13000	14000	15000	16119	17119	18000	19000	110000	111000
OR022	0.2	STT	CLOSED						16119	17119				
OR024	0.02	STT	CLOSED		12119					17119				
OR025	0.1	JEEP	CLOSED	11119	12119									111119
OR029	0.1	JEEP	CLOSED											111119
OR031	0.1	ATV	CLOSED										110129	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR032	0.1	ATV	CLOSED										110129	
OR033	0.3	ATV	CLOSED											111119
OR035	0.1	STT	CLOSED										110129	
OR036	0.08	STT	CLOSED	11000	12000	13000	14000	15000	16000	17000	18000	19000	110129	111119
OR040	0.3	STT	CLOSED	11119										
OR041	0.1	STT	CLOSED											111119
OR042	0.31	STT	CLOSED							17119	18000	19000	110129	111000
OR044	0.04	ATV	CLOSED							17119				111119
OR045	1.09	STT	CLOSED											111119
OR046	1.6	STT	CLOSED						16119					
OR047	0.5	STT	CLOSED	11169										
OR048	0.7	STT	CLOSED	11169										
OR049	0.3	STT	CLOSED	11119									110129	
OR050	0.7	STT	CLOSED	11119									110129	
OR051	0.1	STT	CLOSED											111119
OR052	0.2	STT	CLOSED											111119
OR053	0.2	ATV	CLOSED	11119	12119								110129	
OR056	1.0	STT	CLOSED	11169					16119					111119
OR057	2.7	JEEP	CLOSED	11119					16119				110129	
OR058	3.2	JEEP	CLOSED	11119	12119			15119		17119				
OR059	0.6	JEEP	CLOSED	11159										111119
OR062	0.1	STT	CLOSED	11119										111119
OR063	0.04	ATV	CLOSED											
OR065	0.16	STT	CLOSED	11159						17119			110129	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR069	0.28	STT	CLOSED		12119								110129	
OR070	0.21	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR071	0.06	STT	CLOSED						16010	17119			110129	
OR073	0.84	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR075	0.25	STT	CLOSED	11119										111119
OR076	0.4	STT	CLOSED							17119			110129	
OR077	0.27	STT	CLOSED							17119			110129	
OR080	0.11	STT	CLOSED						16119	17119			110129	
OR081	0.48	STT	CLOSED	11159					16119					
OR082	0.46	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR084	0.4	STT	CLOSED	11119	12119				16119					
OR086	0.36	STT	CLOSED	11139	12119					17119			110129	
OR087	0.23	STT	CLOSED											111119
OR088	0.23	STT	CLOSED	11139										
OR089	0.2	STT	CLOSED										110129	
OR090	0.27	STT	CLOSED										110129	
OR091	0.19	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR093	0.06	STT	CLOSED							17119			110129	
OR094	0.09	STT	CLOSED							17119			110129	
OR096	0.07	STT	CLOSED							17119			110129	
OR097	0.09	STT	CLOSED	11139						17119			110129	
OR098	0.73	STT	CLOSED	11139										
OR099	0.35	STT	CLOSED	11139										

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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CLEAR CREEK MANAGEMENT AREA
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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR100	0.57	STT	CLOSED	11139	12119				16010					
OR101	0.32	STT	CLOSED	11139	12119									
OR102	0.06	ATV	CLOSED										110129	
OR103	0.29	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18119	19000	110000	111000
OR104	0.77	STT	CLOSED						16119					
OR105	0.34	STT	CLOSED											111119
OR107	0.08	JEEP	CLOSED						16101				110129	
OR108	0.1	STT	CLOSED										110129	
OR109	0.19	STT	CLOSED										110129	
OR110	0.07	STT	CLOSED										110129	
OR111	0..32	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR113	0.3	STT	CLOSED						16010	17119				
OR114	0.01	ATV	CLOSED						16000	17119				
OR115	0.1	STT	CLOSED						16000	17119				
OR116	0.2	STT	CLOSED						16000	17119				
OR117	0.1	STT	CLOSED						16000	17119				111119
OR118	0.1	STT	CLOSED						16000	17119				111119
OR119	0.2	STT	CLOSED	11139	12119				16000	17119				
OR121	0.04	STT	CLOSED	11139	12119				16000	17119				
OR122	0.3	ATV	CLOSED		12119				16000	17119				
OR123	0.1	STT	CLOSED						16119	17119				
OR124	0.1	STT	CLOSED						16119	17119				
OR126	1.4	STT	CLOSED	11139					16119	17119				

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR127	0.1	STT	CLOSED						16000	17119				
OR128	0.3	STT	CLOSED	11010					16000	17119			110129	
OR129	0.04	STT	CLOSED						16000					111119
OR130	0.04	STT	CLOSED						16000					111119
OR133	1.2	STT	CLOSED	11119					16000	17119			110129	
OR134	0.1	JEEP	CLOSED						16000					111119
OR135	0.5	ATV	CLOSED	11119	12119				16119					111119
OR136	0.1	ATV	CLOSED						16000					111119
OR137	0.1	STT	CLOSED						16119	17119				
OR138	0.1	STT	CLOSED						16000					111119
OR139	0.2	STT	CLOSED						16000	17119				
OR140	0.1	STT	CLOSED						16000	17119				
OR142	0.3	STT	CLOSED						16000	17119				
OR143	0.2	STT	CLOSED						16000	17119				
OR144	0.1	STT	CLOSED						16000	17119				
OR145	0.3	STT	CLOSED						16000	17119				
OR146	0.1	STT	CLOSED						16000	17119				
OR147	0.2	STT	CLOSED						16000	17119				
OR148	0.1	STT	CLOSED						16000	17119				
OR149	0.2	STT	CLOSED						16000	17119				
OR150	0.2	STT	CLOSED						16119					
OR151	0.1	STT	CLOSED						16000	17119				

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR152	0.4	ATV	CLOSED	11119		13119			16119	17119				
OR152	0.2	STT	CLOSED	11119		13119			16119	17119				
OR153	0.4	ATV	CLOSED	11119		13119			16119	17119				
OR154	0.1	ATV	CLOSED			13119			16000					111119
OR155	0.1	ATV	CLOSED			13119			16000					111119
OR156	0.3	STT	CLOSED			13119			16000	17119				
OR157	0.1	STT	CLOSED			13119			16000					111119
OR159	1.3	STT	CLOSED			13119			16000					
OR160	0.5	STT	CLOSED			13119			16119					
OR162	0.04	STT	CLOSED						16000	17119				
OR166	0.04	STT	CLOSED						16000					111119
OR167	0.05	STT	CLOSED						16000					111119
OR168	0.1	STT	CLOSED						16000					111119
OR169	0.2	ATV	CLOSED						16000	17119				
OR179	0.5	STT	CLOSED	11119					16000	17119				
OR180	0.3	STT	CLOSED						16000	17119				
OR181	0.2	STT	CLOSED	11119					16000					
OR182	0.04	STT	CLOSED	11119					16000	17119				
OR183	0.6	STT	CLOSED	11119					16000	17119				
OR184	0.1	STT	CLOSED						16000	17119				111119
OR185	0.1	STT	CLOSED						16000	17119				

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR194	0.1	STT	CLOSED						16000					111119
OR199	0.1	STT	CLOSED						16000					111119
OR200	0.29	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR208	0.84	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR210	0.03	STT	CLOSED						16000					111119
OR212	0.23	STT	CLOSED	11000	12000	13000	14000	15119	16000	17119	18000	19000	110000	111000
OR213	0.2	STT	CLOSED	11119					16000	17119				111119
OR214	0.5	ATV	CLOSED	11119					16119					
OR216	1.6	STT	CLOSED	11119					16119	17119				
OR219	0.24	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR222	0.3	STT	CLOSED						16000	17119				111119
OR224	0.2	STT	CLOSED						16000	17119				111119
OR225	0.31	STT	CLOSED	11000	12000	13000	14000	15119	16000	17000	18000	19000	110000	111000
OR231	0.1	STT	CLOSED						16000					111119
OR232	0.1	STT	CLOSED						16000					111119
OR233	0.2	STT	CLOSED						16000					111119
OR234	0.1	STT	CLOSED						16000					111119
OR238	0.1	STT	CLOSED						16000					111119
OR241	0.29	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR242	0.6	ATV	CLOSED	11159		13119			16000	17119				
OR243	0.5	ATV	CLOSED			13119			16000	17119				
OR245	0.08	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR250	0.1	STT	CLOSED						16000	17119				

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR251	0.2	STT	CLOSED						16000	17119				
OR252	0.1	STT	CLOSED						16000	17119				
OR253	0.1	STT	CLOSED						16000	17119				
OR254	0.1	STT	CLOSED						16000	17119				
OR255	0.2	STT	CLOSED						16000	17119				
OR256	0.2	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR257	0.1	STT	CLOSED						16000	17119				
OR260	0.1	STT	CLOSED						16000	17119				
OR261	0.04	STT	CLOSED						16000	17119				
OR262	0.2	STT	CLOSED						16000	17119				
OR263	0.1	STT	CLOSED						16000	17119				
OR264	0.3	STT	CLOSED						16000	17119				
OR269	0.6	STT	CLOSED		12119				16000	17119				
OR270	0.5	STT	CLOSED		12119				16000	17119				
OR274	0.3	STT	CLOSED		12119				16000	17119				
OR276	0.1	STT	CLOSED		12119				16119	17119				
OR279	0.2	STT	CLOSED		12119				16000	17119				
OR281	0.19	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR282	0.2	STT	CLOSED	11020					16000	17119			110119	
OR283	0.13	STT	CLOSED	11010	12000	13000	14000	15119	16000	17000	18000	19000	110000	111000
OR284	0.1	STT	CLOSED	11010					16000	17119			110119	
OR285	0.3	STT	CLOSED	11010					16000	17119			110119	
OR286	0.3	STT	CLOSED						16000	17119				111119
OR288	2.7	STT	CLOSED						16000	17119				111119

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR289	0.32	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR290	2.05	STT	CLOSED	11000	12000	13000	14000	15000	16000	17119	18000	19000	110000	111000
OR292	0.1	STT	CLOSED						16000	17119				111119
OR293	0.03	STT	CLOSED						16000	17119				
OR295	0.3	STT	CLOSED		12129				16000					
OR296	0.3	STT	CLOSED		12129				16000					
OR301	0.2	STT	CLOSED	11010	12129				16000				110129	
OR302	0.2	STT	CLOSED	11010	12129				16000	17119				
OR303	0.04	STT	CLOSED	11010					16000					111119
OR304	0.5	STT	CLOSED	11010	12129				16000	17119			110129	
OR306	0.3	STT	CLOSED	11010	12129				16000	17119				
OR307	0.1	STT	CLOSED	11010	12129				16000	17119				
OR308	0.3	STT	CLOSED	11010	12129				16000	17119				
OR310	0.3	STT	CLOSED						16000	17119				
OR311	0.2	STT	CLOSED	11020	12129				16000					
OR312	0.1	STT	CLOSED	11010	12129				16000					
OR313	0.1	STT	CLOSED	11010	12129				16000					
OR314	0.2	STT	CLOSED	11020					16000					111119
OR317	0.2	STT	CLOSED	11020	12129				16000					
OR318	0.02	STT	CLOSED	11020	12129				16000					
OR319	0.5	STT	CLOSED	11020	12129				16000					111119
OR320	0.5	STT	CLOSED	11020	12129				16000					
OR321	0.2	STT	CLOSED	11010	12129				16000					111119
OR323	0.1	STT	CLOSED	11010					16000				110129	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR326	0.25	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR327	0..31	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR385	0.08	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR387	0.1	ATV	CLOSED						16000				110129	
OR388	0.4	STT	CLOSED		12129				16000					111119
OR390	0.2	STT	CLOSED						16000	17119			110129	
OR391	0.1	STT	CLOSED						16000	17119			110119	
OR393	0.6	STT	CLOSED						16000	17119			110129	
OR394	0.3	STT	CLOSED	11139	12129				16000	17119			110129	
OR396	0.14	STT	OPEN						16000	17110			110000	
OR398	0.09	STT	CLOSED	11000	12000	13000	14000	15000	16000	17009	18000	19000	110129	111000
OR399	0.1	STT	CLOSED						16000				110129	
OR402	0.12	STT	CLOSED	11000	12000	13000	14000	15119	16000	17000	18000	19000	110000	111000
OR403	0.1	STT	CLOSED						16000	17119				111119
OR404	0.1	STT	CLOSED						16000	17119				
OR405	0.1	STT	CLOSED						16000	17119				111119
OR406	0.2	STT	CLOSED	11010					16000					111119
OR408	0.04	STT	CLOSED						16000	17119			110129	
OR434	0.1	STT	CLOSED						16000	17119			110129	
OR435	0.1	ATV	CLOSED						16000	17119				
OR436	0.03	STT	CLOSED						16000	17119				111119
OR437	0.2	STT	CLOSED						16000	17119				111119
OR438	0.1	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR439	0.1	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR440	0.3	STT	CLOSED						16000	17119				111119
OR442	0.2	STT	CLOSED						16000	17119				
OR443	0.2	STT	CLOSED						16000	17119				
OR444	0.1	STT	CLOSED						16000	17119				
OR446	0.1	STT	CLOSED						16119	17119			110129	
OR448	0.2	STT	CLOSED						16000	17119				
OR449	0.2	STT	CLOSED						16000	17119				
OR450	0.03	STT	CLOSED						16000	17119				
OR451	0.02	STT	CLOSED						16000	17119				111119
OR453	0.2	STT	CLOSED						16000	17119				
OR459	0.2	ATV	CLOSED		12129				16000				110119	
OR460	0.02	ATV	CLOSED		12129				16000	17119				111119
OR461	0.1	STT	CLOSED						16000	17119			110129	
OR462	0.2	JEEP	CLOSED						16000	17119				
OR463	0.4	STT	CLOSED						16000	17119				111119
OR464	0.2	STT	CLOSED						16000	17119				
OR465	0.04	STT	CLOSED						16000	17119				111119
OR466	0.2	STT	CLOSED						16000	17119				
OR467	0.1	STT	CLOSED						16000	17119				111119
OR468	0.3	STT	CLOSED						16000	17119				
OR470	0.6	ATV	CLOSED		12129				16000	17119				
OR472	0.2	STT	CLOSED						16000	17119				111119
OR478	0.8	ATV	CLOSED						16000	17119				111119
OR479	0.1	STT	CLOSED						16000	17119				111119
OR480	0.4	STT	CLOSED						16000	17119			110129	
OR480	0.1	JEEP	CLOSED						16000	17119			110129	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR481	0.1	ATV	CLOSED						16000	17119				111119
OR485	0.19	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR488	0.38	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR489	0.02	ATV	CLOSED						16000	17119				111119
OR492	0.4	STT	CLOSED						16000	17119				
OR493	2.1	STT	CLOSED	11159										
OR495	0.1	STT	CLOSED						16000	17119			110129	
OR496	0.3	STT	CLOSED		12119				16000	17119			110129	
OR497	0.6	STT	CLOSED		12119				16119	17119				
OR500	0.1	JEEP	CLOSED						16119	17119			110119	
OR514	0.6	STT	CLOSED	11119	12119				16000					
OR515	0.2	STT	CLOSED						16000					111119
OR516	0.22	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR518	0.1	ATV	CLOSED						16000	17119				
OR519	0.2	STT	CLOSED						16000					111119
OR520	0.1	STT	CLOSED						16000					111119
OR521	0.3	ATV	CLOSED		12119				16000	17119				
OR523	0.03	STT	CLOSED		12119				16000	17119			110129	
OR524	0.1	STT	CLOSED		12119				16000	17119			110129	
OR525	0.02	STT	CLOSED		12119				16000	17119			110129	
OR526	0.3	STT	CLOSED		12119				16000	17119			110129	
OR527	0.1	ATV	CLOSED		12119				16000	17119			110129	
OR528	0.2	STT	CLOSED		12119				16000	17119			110129	
OR529	0.3	STT	CLOSED		12119				16119					
OR530	1.7	STT	CLOSED		12119				16119					
OR531	0.1	STT	CLOSED		12119				16119					

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR532	0.2	STT	CLOSED		12119				16010					
OR534	0.03	STT	CLOSED		12119				16000					
OR535	0.02	STT	CLOSED		12119				16000					
OR536	0.1	STT	CLOSED		12119				16000					
OR537	0.1	STT	CLOSED		12119				16000					
OR538	0.1	STT	CLOSED		12119				16000					
OR539	0.02	STT	CLOSED		12119				16000					
OR540	0.03	STT	CLOSED		12119				16000					
OR541	0.05	STT	CLOSED		12119				16000					
OR542	0.02	STT	CLOSED		12119				16000					
OR543	0.02	STT	CLOSED		12119				16000	17119			110119	
OR546	0.1	STT	CLOSED		12119				16119	17119				
OR547	0.03	STT	CLOSED	11139					16000	17119				111119
OR548	0.1	ATV	CLOSED	11139					16000	17119				111119
OR549	0.02	ATV	CLOSED	11119					16119	17119				
OR550	0.5	JEEP	CLOSED	11119					16119	17119				
OR551	1.5	JEEP	CLOSED	11119					16119	17119				
OR552	0.3	JEEP	CLOSED	11119					16119	17119				
OR553	0.6	ATV	CLOSED	11119					16119	17119				
OR554	0.2	ATV	CLOSED	11119					16119	17119				
OR555	0.2	ATV	CLOSED	11119					16119	17119				
OR556	0.3	ATV	CLOSED	11119					16119	17119				
OR557	0.3	ATV	CLOSED	11119					16119	17119				
OR557	0.1	JEEP	CLOSED	11119					16119	17119				
OR558	0.4	JEEP	CLOSED	11119					16119	17119				
OR559	0.02	JEEP	CLOSED	11119					16119	17119				

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR560	0.8	ATV	CLOSED	11119					16119	17119				
OR561	0.5	ATV	CLOSED	11119					16119	17119				
OR562	0.6	ATV	CLOSED	11119					16119	17119				
OR565	0.2	STT	OPEN						16000	17110			110110	
OR567	0.04	STT	CLOSED	11139					16000	17119			110129	
OR568	0.1	STT	CLOSED	11139					16000	17119			110129	
OR569	0.1	STT	CLOSED	11139					16000	17119			110129	
OR573	0.4	STT	CLOSED	11139					16000	17119			110129	
OR574	0.2	STT	CLOSED	111139					16000	17119			110129	
OR575	0.3	STT	CLOSED		12119				16000	17119				
OR576	0.2	STT	CLOSED		12119				16000	17119				
OR577	0.1	STT	CLOSED		12119				16000	17119				
OR578	0.3	STT	CLOSED		12119				16000	17119				
OR579	0.1	STT	CLOSED		12119				16000	17119				
OR580	0.02	STT	CLOSED		12119				16000	17119				
OR582	0.2	ATV	CLOSED		12119				16119	17119			110129	
OR586	2.9	STT	CLOSED		12119	13119			16119					
OR587	0.4	JEEP	CLOSED						16000	17119			110129	
OR588	0.3	STT	CLOSED	11119					16000	17119				
OR590	0.4	4WD	CLOSED		12119			15119	16000					
OR591	0.3	4WD	CLOSED		12119			15119	16000					

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR592	0.9	STT	CLOSED		12119			15119	16000					
OR593	0.1	STT	CLOSED		12119			15119	16000					
OR594	0.2	STT	CLOSED		12119			15119	16000					
OR595	0.3	STT	CLOSED		12119			15119	16000					
OR596	0.2	STT	CLOSED		12119			15119	16000					
OR597	1.1	STT	CLOSED		12119	15119	16000							
OR 598	0.14	ATV	CLOSED						16119		18119			
OR 599	0.08	ATV	CLOSED						16010	17119	18119		110129	
OR 600	0.09	ATV	CLOSED							17119	18119		110129	
OR 601	0.17	STT	CLOSED										110129	
OR 602	0.26	STT	CLOSED										110129	
OR 603	0.13	STT	CLOSED						16119				110129	
OR 604	0.21	ATV	CLOSED					15119					110129	
OR 605	0.58	STT	CLOSED						16119				110129	
OR 606	0.03	STT	CLOSED										110129	
OR 607	0.09	STT	CLOSED		12119				16010				110129	
OR 608	0.03	STT	CLOSED										110129	
OR 618	0.20	ATV	CLOSED										110129	
OR 619	0.07	IMPR	OPEN											

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length Miles	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR 620	0.04	ATV	CLOSED		12119								110119	
OR 621	0.40	ATV	CLOSED						16119					
OR 622	0.06	ATV	CLOSED											111119
OR 623	0.16	ATV	CLOSED						12119					
OR 624	0.13	ATV	CLOSED										110129	
OR 625	0.11	ATV	CLOSED										110129	
OR 626	0.11	ATV	CLOSED										110129	
OR 627	0.06	ATV	CLOSED										110129	
OR 628	0.06	ATV	CLOSED						16010				110129	
OR 629	0.28	ATV	CLOSED						06010				110129	
OR 630	0.10	ATV	CLOSED						06010				110129	
OR 632	0.16	ATV	CLOSED										110129	
OR 633	0.19	ATV	CLOSED						16119				110119	
OR 634	0.32	STT	CLOSED						16119				110119	111119
OR 635	0.27	JEEP	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 636	0.27	STT	CLOSED						16119					
OR 637	0.22	STT	CLOSED						16119					
OR 638	0.13	STT	CLOSED						16010				110119	
OR 639	0.05	JEEP	CLOSED						16119				110119	
OR 640	0.07	JEEP	CLOSED										110119	
OR 641	0.16	STT	CLOSED						16010				110119	
OR 642	0.39	STT	OPEN	11000	12212	13000	14000	15000	16010	17000	18000	19000	110000	111000
OR 643	0.10	STT	CLOSED										110119	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length Miles	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR 644	0.19	STT	CLOSED						16119					
OR 645	0.24	STT	CLOSED						16119					
OR 646	0.04	STT	CLOSED						16010				110119	
OR 647	0.09	STT	CLOSED						16010				110129	
OR 648	0.22	STT	CLOSED						16010				110119	
OR 649	0.02	JEEP	CLOSED						16010				110119	
OR 650	0.04	JEEP	CLOSED						16010				110119	
OR 651	0.03	JEEP	CLOSED										110119	
OR 652	0.03	STT	CLOSED						16010				110119	
OR 653	0.04	STT	CLOSED						16010				110119	
OR 654	0.03	STT	CLOSED						16010				110119	
OR 656	0.06	STT	CLOSED						16010				110119	
OR 657	0.03	STT	CLOSED						16010				110119	
OR 660	0.002	STT	CLOSED										110119	
OR 661	0.02	STT	CLOSED										110119	
OR 662	0.10	JEEP	CLOSED						16010				110119	
OR 663	0.003	STT	CLOSED										110119	
OR 664	0.05	STT	CLOSED						16010				110119	
OR 665	0.02	JEEP	CLOSED										110119	
OR 666	0.02	JEEP	CLOSED										110119	
OR 667	0.03	STT	CLOSED						16010				110119	
OR 668	0.01	STT	CLOSED						16010				110119	
OR 669	0.03	STT	CLOSED										110119	
OR 670	0.01	STT	CLOSED										110119	
OR 671	0.04	STT	CLOSED						16010				110119	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

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Route Number	Route Length Miles	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR 672	0.02	JEEP	CLOSED										110119	
OR 673	0.02	STT	CLOSED						16119				110119	
OR 674	0.01	STT	CLOSED						16119				110119	
OR 675	0.03	STT	CLOSED						16119				110119	
OR 676	0.08	STT	CLOSED										110119	
OR 677	0.02	STT	CLOSED						16119				110119	
OR 678	0.01	STT	CLOSED										110119	
OR 679	0.01	STT	CLOSED						16010				110119	
OR 680	0.02	STT	CLOSED						16010				110119	
OR 681	0.17	STT	CLOSED		12119				16119					
OR 682	0.10	STT	CLOSED		12119				16010					
OR 683	0.01	STT	CLOSED										110119	
OR 684	0.01	STT	CLOSED										110119	
OR 685	0.03	STT	CLOSED						16010				110119	
OR 686	0.02	STT	CLOSED						16010				110119	
OR 687	0.07	STT	CLOSED						16010				110119	
OR 688	0.02	STT	CLOSED										110119	
OR 690	0.07	STT	CLOSED						16010				110119	
OR 691	0.02	STT	CLOSED										110119	
OR 692	0.02	STT	CLOSED						16010				110119	
OR 693	0.05	STT	CLOSED						16010				110119	
OR 694	0.01	STT	CLOSED										110119	

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR 695	0.01	STT	CLOSED						16010				110119	
OR 696	0.05	STT	CLOSED		12119				16119				110119	
OR 697	0.03	STT	CLOSED		12119				16010				110119	
OR 698	0.03	STT	CLOSED		12119				16119				110119	
OR 699	0.01	STT	CLOSED										110119	
OR 700	0.04	JEEP	CLOSED		12119								110119	
OR 701	0.03	STT	CLOSED										110119	
OR 702	0.01	STT	CLOSED						16010				110119	
OR 703	0.02	STT	CLOSED		12119				16119				110119	
OR 704	0.02	JEEP	CLOSED		12119								110119	
OR 707	0.14	STT	CLOSED	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 714	0.65	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 715	0.33	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 716	0.10	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR722	0.18	STT	CLOSED	11000	12000	13000	14000	15119	16000	17000	18000	19000	110000	111000
OR743	0.18	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 744	0.40	STT	CLOSED		12149			15119	16119					
OR 745	0.14	STT	CLOSED										110119	
OR 746	2.67	ATV	CLOSED	11139										
OR 748	0.07	STT	CLOSED						12119					
OR 749	0.81	STT	CLOSED	11119										
OR 751	0.06	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 752	0.12	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 755	0.24	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11,Route Continuity.

HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
ROUTE DESIGNATION RECORD

Route Number	Route Length	Route RMO	Route Designation	Route Evaluation Criteria 1,2										
				Tier 1					2	3	Tier 4			
				1	2	3	4	5	6	7	8	9	10	11
OR 784	0.97	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 794	0.20	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 795	0.40	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 810	0.32	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 825	0.22	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 826	0.18	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 827	0.44	STT	OPEN	11000	12000	13000	14000	15000	16002	17000	18000	19000	110000	111000
OR 830	0.14	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 831	0.59	STT	OPEN	11000	12000	13000	14000	15000	16002	17000	18000	19000	110000	111000
OR 836	0.14	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 839	0.06	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 844	0.17	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000
OR 865	0.15	STT	OPEN	11000	12000	13000	14000	15000	16000	17000	18000	19000	110000	111000

Route Evaluation Criteria: 1, Private/state lands/mines; 2, Sensitive Species and Cultural; 3, RNA/WSA; 4, Barrens Interface; 5, Riparian Areas; 6, Erosion, Soil Loss Standard; 7, OHV use/use spectrum; 8, RMO; 9, Admin Use/ROW's; 10, Route Proliferation/redundancy; 11, Route Continuity.

APPENDIX B BARREN DESIGNATION

HOLLISTER FIELD OFFICE CLEAR CREEK MANAGEMENT AREA BARREN DESIGNATION WORKSHEET

1. Barren Number:
2. Barren Characteristics
Acres

Criteria Name	Criteria Value1	Determination Date	Mitigation
Offsite Sedimentation			
Soils			
User Demand			
Uniqueness of Vegetation			
Potential for Limiting Use			
Potential for Impact to T&E			
Pristine			
RNA/WSA/SMA			

4. BARREN DESIGNATION:
(If Limited, Describe Limitation)

5. BARREN DESIGNATION DATE:

6. Other Proposed Actions

7. Barren Specific Rationale:

8. Decision Record:

This decision is in conformance with the Hollister Field Office Resource Management Plan, 1984; Clear Creek Management Plan and Record of Decision, 1986; Clear Creek Management Plan Amendment and Record of Decision 1999; and the proposed action.

9. Decision Criteria: Includes all criteria identified in 43 CFR 8342.1 parts (a) through (d) and the proposed action.

**HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
BARREN AREA EVALUATION CRITERIA and DATA ELEMENT DICTIONARY**

Introduction: The following criteria represent the data on which decisions about authorized vehicular recreation use of barren areas is based. The data element dictionary describes the allowed responses for each criterion.

Barren Area Designation Criteria

These criteria were developed through public involvement, staff meetings, and interviews with professionals working in other areas with OHV use. Where possible, mitigation measures are discussed that could be used to reduce the expected motorized OHV impacts under each criterion. The Geomorphic Field Evaluation of Serpentine Soil Barrens, CCMA (Dynamac Corp., 1998), contains useful data to be considered in the designation process. The objectives of this field evaluation were: 1) to determine the degree of soil erosion and sedimentation taking place within the barrens; 2) to evaluate natural and human influences on sedimentation and erosion within the barrens; and 3) to develop a barren inventory and ranking system. Key information from this study used in this designation process includes; stream orders present, hydrographic position, vegetation cover, vegetation boundary/buffer, amount of gullying, slope, armoring present, sediment trapping features, and contribution of sediment to sub-watersheds with high erosion rates. For the purposes of this document “barrens” are defined as a general term applied to openings in serpentine hillslopes larger than 10 acres which support almost no herbaceous or woody vegetation.

Soils

The serpentine watersheds in the CCMA contain soils formed from highly sheared, and readily eroded, serpentine rock containing abundant chrysotile asbestos. Soils of barren areas are critical for supporting existing plant species and communities, and as potential habitat. Eroded soil is transported down-slope by various erosion processes and contributes to off-site transport of sediments. Vehicle use on these barren slopes disrupts the natural soil crust and surface gravel layer, resulting in increased erosion. The lack of vegetation on these soils and the particular soil characteristics, are part of the reason these areas are desired by many OHV recreation users.

Erosion and Sedimentation

Concentrated OHV use in any particular area within the CCMA is likely to produce some off-site sedimentation. Resource condition objectives constrain activities leading to erosion and off-site delivery of the eroded material. Methods to reduce off-site sediment transport are avoiding or reducing erosion, assuring that sediment producing activities are adequately separated from active stream channels, and installing structures designed to capture sediments before delivery into active streams. Factors to be considered in evaluating a barren include; the potential for off-site sedimentation, sediment yields to sub-watersheds with high erosion rates, and the feasibility

of capturing sediments naturally or with installation of sediment traps. Dynamac's (1998) data for each barren was used in evaluating this criterion.

Soil Characteristics

While all barrens have some soil characteristics in common, each needs to be evaluated individually. The barren's slope, aspect and position hydrographically, all contribute to the area's suitability and sustainability for concentrated OHV use. Additionally, it is important to review soil depth, and amount of rock mixed in the soil, and whether an organic layer exists. The degree of armoring is a factor indicating low levels of use and the ability of the barren to sustain itself over time.

Recreation

OHV recreation users have been riding on the barrens with increasingly frequency over the past 40 years. Besides increases in the number of people taking part in OHV related activities, advances in motorcycle performance have contributed to this trend. The barrens within the CCMA provide a wide spectrum of terrain from broad rolling ridgelines to steep hill-climbs. Some of the barren areas are therefore available for even the beginner, while some hill-climbs give professional motorcyclists a challenge.

User Demand

Not every barren can provide characteristics of interest to each OHV recreation user. The designation process should keep in mind the desirability of a wide variety of riding experiences and levels of expertise of the OHV user. It is also important to take into account proximity to staging areas. Dispersed opportunities away from the Clear Creek Canyon may also be considered. An additional factor is the ability to provide recreation opportunities on a sustained basis and whether use of the barren would result in a reduction in the quality of the recreation experience compared to the current condition. These factors would be addressed in the written rationale portion of the Designation Record.

Vegetation

The barrens support sparse but diverse communities of vegetation which grows on them. These areas are characterized by a general lack of shrub or tree cover, a sparse but distinctive cover of native annual plants, and a high percentage of exposed bare ground and /or gravel lag. Several of the designation criteria characterize the barren's existing condition, and potential for on and off-site disturbance relative to vegetation.

Uniqueness of Vegetation and Potential for Damage

All but the most heavily used portions of some barrens have unique assemblages of vegetation. This uniqueness results from the plant's need for special adaptations, to thrive on the especially challenging serpentine soils. Few plants have been able to survive and compete in the presence

of the rigors presented by high nickel and low calcium concentrations coupled with harsh climate and intense sunlight. Some barrens are known to provide habitat for special status plants. While special status plant species would be avoided and protected, there may be barrens that can be designated open, when sufficient natural or human-made barriers fully protect special status plant populations. Protection of the plant communities unique to the barren areas are an important consideration.

Potential for Limiting Use to Designated Areas

Some barrens in the CCMA are adjacent to or provide access to areas that are sensitive (riparian areas, sensitive plant habitat, unique forest communities). Vegetation boundaries are important for confining use to open barrens and providing a buffer from sensitive areas. Protection of sensitive areas adjacent to a barren and limiting route proliferation are important factors in evaluating designation of the barren.

Potential for Impact to Threatened, Endangered and Special Status Species

Threatened, endangered and special status species shall be protected from the impacts of OHV use. OHV use on adjacent barrens could impact special status species habitat by off-site sediment delivery, riders going outside of the designated open area onto sensitive habitat. Factors considered under this parameter include the presence of sensitive species habitat nearby, the proximity of OHV use to sensitive species and their habitat, and the potential contribution to the degradation of that habitat.

Pristine/Natural Condition

This category seeks to protect the currently least impacted barrens and the San Benito Mountain Research Natural Area and ACEC (including the Wilderness Study Area). In protecting these areas, the Bureau is fulfilling a Resource Condition Objective stated in the Record of Decision (1999) of maintaining intact portions of the ecosystem for proper function and comparison monitoring, and maintaining an aesthetic and wilderness character of some areas of the CCMA.

Pristine

A small number of barrens in the CCMA have had little or no OHV use. They tend to be characterized by having intact gravel lag, few gullies or rills, and often have reddish or brown soil away from rock outcroppings in contrast to the white soils typical of high OHV use areas. The few remaining intact barrens are critical to maintain for studying contrasts to the effects of concentrated OHV use. Pristine barrens would not be selected for concentrated OHV use. OHV use of non-pristine barrens adjacent to, or near, pristine barrens must be carefully evaluated for the potential to impact pristine barrens.

SBMRNA/ACEC/WSA

The San Benito Mountain Research Natural Area and ACEC completely encompass the San Benito Mountain Wilderness Study Area, managed under the Interim Management Guidelines

for Wilderness Study Areas. OHV use of barrens within either the WSA or the SBMRNA is incompatible with the values for which these areas were established. It is also important to avoid impacting either of these areas in ways inconsistent with their intended purposes. Barrens that are contiguous to the existing RNA and/or encompassed within the area of the expanded RNA boundary, would not be considered for OHV use in the designation process. An additional factor is whether the barren is within an existing riparian closure or special management area.

Data Element Dictionary

Soil

Off-site sedimentation (Dynamac data plus staff observation)

Code	Definition
11010	Off-site transport but sufficiently trapped, few impacts, use o.k.
11119	Off-site delivery, impacts active channel, use NOT O.K.
11129	Off-site delivery, impacts sensitive habitat, use NOT O.K.
11139	Off-site delivery, impacts cultural, use NOT O.K.
11149	High subwatershed erosion rate, NOT O.K.
11212	Impacts to active channel, POTENTIAL MITIGATION
11222	Impacts to sensitive habitat, POTENTIAL MITIGATION
11232	Impacts to cultural, POTENTIAL MITIGATION
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Soils (Dynamac data plus staff observation)

Code	Definition
12010	High hydrographic position, use o.k.
12119	Armoring, use NOT O.K.
12129	Low hydrographic position, use NOT O.K.
12139	Steep slope, use NOT O.K.
12212	Armoring, POTENTIAL MITIGATION
12222	Low hydrographic position, POTENTIAL MITIGATION
12232	Steep slope, POTENTIAL MITIGATION
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Recreation

User demand

Code	Definition
13010	Recreation opportunity, use o.k.
13119	No recreation opportunity, use NOT O.K.
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Vegetation

Uniqueness of vegetation and potential for damage

Code	Definition
14010	Vegetation cover, use o.k.
14119	Unique/sensitive species, use NOT O.K.
14129	Poor vegetation cover for reducing erosion, use NOT O.K.
14212	Vegetation cover, POTENTIAL MITIGATION
14222	Unique, POTENTIAL MITIGATION
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

Potential for Limiting Use to Designated Area (Vegetation Boundary)

Code	Definition
15010	Vegetation boundary, use o.k.
15212	Poor vegetation boundary, POTENTIAL MITIGATION
15119	Poor vegetation boundary, use NOT O.K.
TEXT	TEXT DESCRIPTION OF MITIGATION POTENTIAL

Potential for impacts to Sensitive Species

Code	Definition
16000	No conflicts with sensitive species, use o.k.
16010	Sensitive species nearby, use o.k.
16119	Sensitive species nearby, use NOT o.k.
16212	Sensitive species nearby, POTENTIAL MITIGATION
TEXT	TEXT DESCRIPTION OF MITIGATION POTENTIAL

Pristine/Natural Condition**Pristine**

Code	Definition
17010	does not threaten to impact a nearby pristine area, use o.k.
17119	Pristine condition, use NOT O.K.
17129	Likely to threaten pristine area, use NOT O.K.
17212	Mine area adjacent to barren, POTENTIAL MITIGATION
17139	Adjacent area of concern, use NOT O.K.
17222	Adjacent area of concern, POTENTIAL MITIGATION
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

San Benito Mountain Research Natural Area/WSA/ACEC

Code	Definition
18010	Area not in or potentially threatening to SBMRNA/ACEC, use o.k.
18119	Area within SBMRNA/ACEC, use NOT O.K.
18129	Area adjacent to or threatens SBMRNA, use NOT O.K.
18139	Special management area/existing closure, use NOT O.K.
18212	Area adjacent to or threatens SBMRNA, POTENTIAL MITIGATION
TEXT	TEXT DESCRIPTION OF MITIGATION PROPOSAL

**HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
BARREN DESIGNATION RECORD**

Barren No	Barren Acres	Barren Designation	Barren Evaluation Criteria							
			1	2	3	4	5	6	7	8
1	67.5	CLOSED	11119							18139
2x	294.62	CLOSED	11119	12129	13010	14119	15119	16119	17129	18010
			11129	12139		14129				
2a	58.27	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
2b	13.37	OPEN	11010	12010	13010	14010	15010	16000	17212	18010
3	23.27	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
4	17.96	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
5	36.02	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
6x	377.56	CLOSED	11119	12129	13010	14129	15119	16000	17010	18010
			11149							
6a	5.41	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
6b	66.36	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
6c	39.28	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
6d	75.67	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
									17212	
6e	65.7	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
7x	30.89	CLOSED	11119	12139	13010	14010	15010	16000	17010	18010
			11129							
7a	42.08	OPEN	11010	12010	13010	14010	15010	16000	17010	18010
8	252.56	CLOSED	11119	12129	13010	14119	15119	16119	17010	18139
			11129							
			11149							

**HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
BARREN DESIGNATION RECORD**

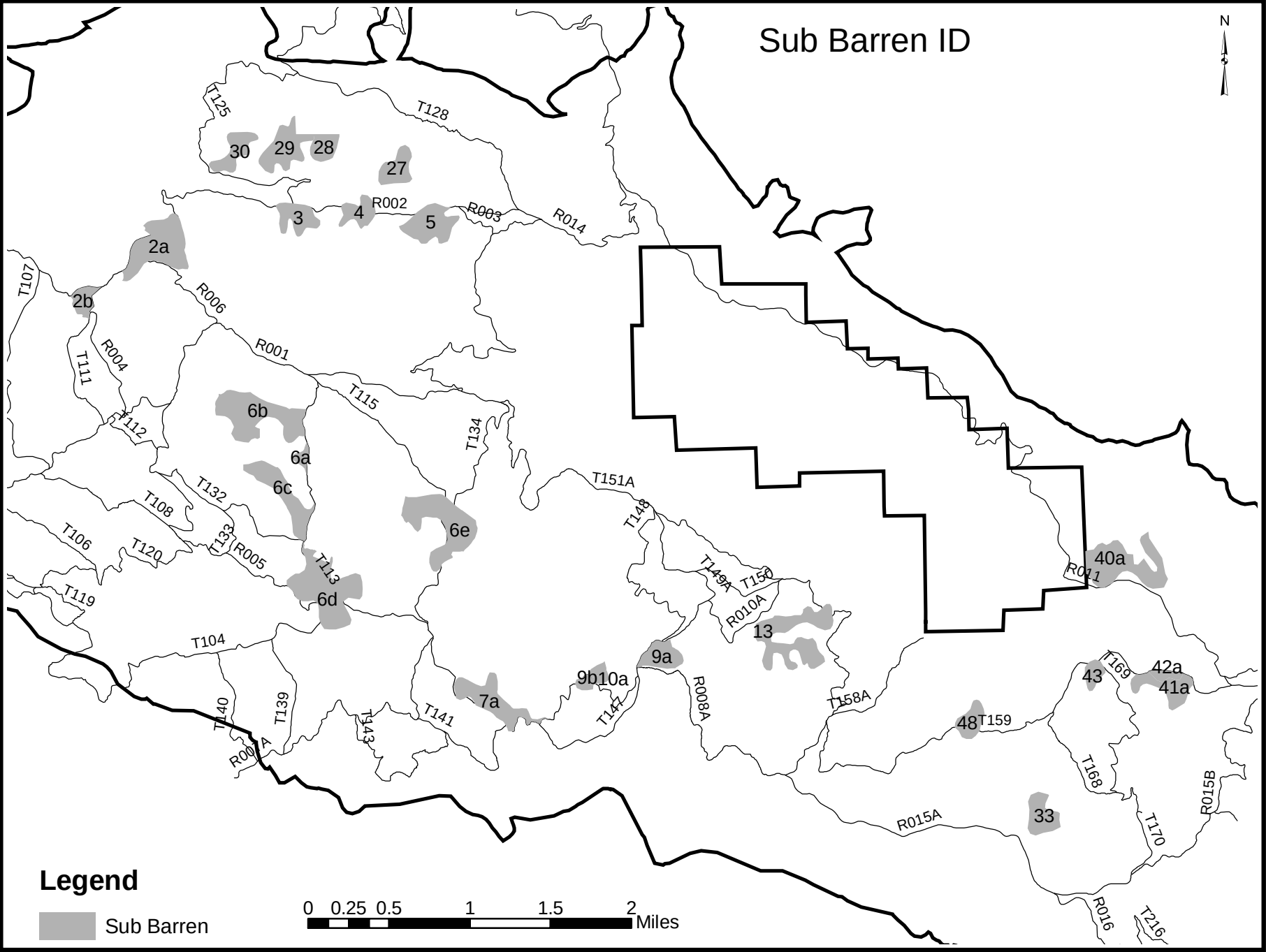
Barren No	Barren Acres	Barren Designation	Barren Evaluation Criteria							
			1	2	3	4	5	6	7	8
9x	181.33	CLOSED	11119	12129	13010	14129	15119	16119	17139	18139
			11129	12139						
			11149							
9a	22.09	OPEN	11010	12010	13010	14010	15010	16212	17010	18010
9b	8.72	OPEN	11010	12010	13010	14010	15000	16000	17010	18010
10a	4.01	OPEN	11010	12010	13010	14010	15000	16000	17010	18010
10x	55.17	CLOSED	11119	12129	13010	14010	15119	16119	17010	18010
11	17.88	CLOSED								18139
12	105.31	CLOSED								18139
13	62.17	CLOSED								18139
14	99.87	CLOSED		12119						18129
15	141.19	CLOSED								18119
16	36.58	CLOSED								18119
17	176.26	CLOSED								18119
18	46.78	CLOSED								18119
19	12.9	CLOSED								18119
20	14.99	CLOSED								18119
21	39.27	CLOSED								18119
22	187.19	CLOSED							17139	18139
23	49.48	CLOSED							17139	18139
24	51.26	CLOSED							17139	18129
25	97.39	CLOSED								18119

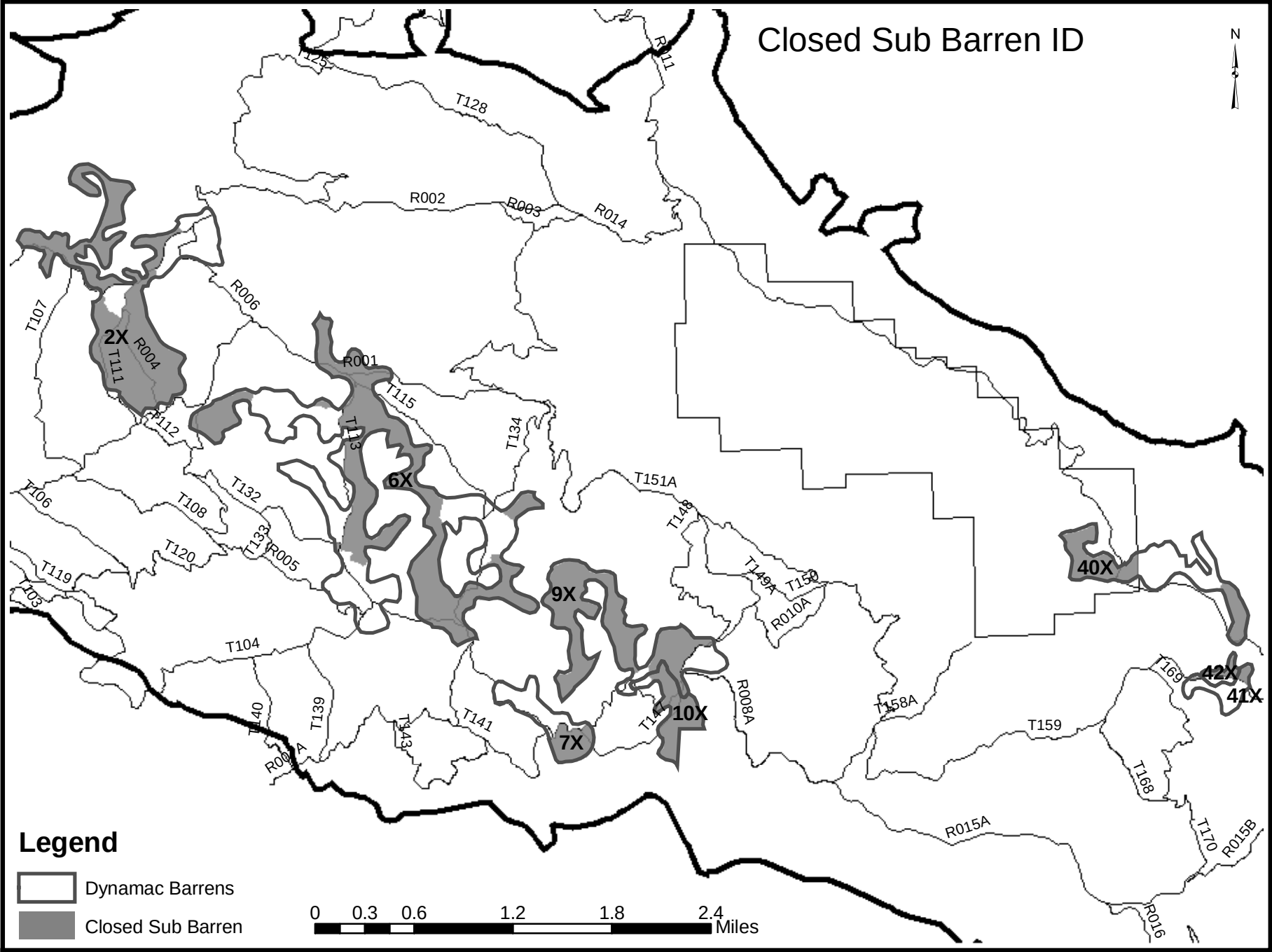
**HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
BARREN DESIGNATION RECORD**

Barren No	Barren Acres	Barren Designation	Barren Evaluation Criteria							
			1	2	3	4	5	6	7	8
26	91.18	CLOSED								18119
27	21.32	CLOSED	11129	12129				16119		18139
				12139						
28	15.82	CLOSED	11129	12129				16119		18139
29	35.58	CLOSED	11129	12129				16119		18139
30	22.29	CLOSED	11129	12129				16119		18139
31	40.95	CLOSED	11119	12129						18139
32	24.58	CLOSED	11010	12010	13010	14119	15010	16119	17119	18010
33	24.08	CLOSED								18139
34	26.3	CLOSED	11119	12232	13010	14010	15119	16000	17010	18010
35	52.82	CLOSED	11119	12139		14129	15119		17139	18139
36	314.38	CLOSED								18139
37	17.72	CLOSED	11119							18139
38	22.33	CLOSED		12119					17119	
39	20.01	CLOSED		12119					17119	
40x	74.79	CLOSED								18139
40a	62.33	CLOSED				14119				18119
41x	5.49	CLOSED				14119		16119	17139	

**HOLLISTER FIELD OFFICE
CLEAR CREEK MANAGEMENT AREA
BARREN DESIGNATION RECORD**

Barren No	Barren Acres	Barren Designation	Barren Evaluation Criteria							
			1	2	3	4	5	6	7	8
41a	25.84	CLOSED	11010	12010	13010	14010	15010	16212	17139	18010
42x	7.04	CLOSED		12119		14119		16119		
42a	6.46	CLOSED							17139	18139
43	10.45	CLOSED	11010	12010	13010	14010	15010	16000	17139	18010
44	17.01	CLOSED	11010	12129	13010	14010	15010	16000	17129	18010
				12119						
45	42.86	CLOSED								18119
46	10.29	CLOSED								18119
47	75.05	CLOSED								18119
48	17.14	CLOSED							17139	18139





APPENDIX C

IMPLEMENTATION PLAN

Implementation of the proposed route designations will be phased in over five years. The schedule below identifies when implementation will first occur. Tasks such as monitoring, maintenance, patrol, and research would continue beyond the five-year period. Funding will come from BLM funds, grants, and partnerships. Volunteers will be used whenever possible. Rehabilitation and maintenance efforts will remain in accordance with Best Management Practices.

Immediate Actions (Target 0-2 Years):

1. Using GPS, identify and sign all open and limited route designations and create a database of sign locations and types. Signs will be placed at intersections of open and limited routes. Closed routes may be signed on a priority basis if there are problems with compliance. All routes not signed are closed to OHV use.
2. Corridor fence all remaining routes through any closed mine areas. Fence routes through closed barren areas as determined by BLM and FWS.
3. Fence, barricade, and sign closed routes which provide access to CABA habitat and other areas of concern (i.e. sensitive species, riparian areas, closed areas, and special management areas), prioritizing areas along the following routes: OR642, T104, T105, T107, T115, T135, T218, R008, T165, T241, and T261. Protective measures enlarging *Camissonia* exclosures will be implemented as determined by BLM and FWS to encompass the entire habitat polygon. This measure is intended to ensure protection of *Camissonia* and its habitat by accommodating movement of the footprint of occupied habitat over time, and may require minor modifications of the route network
4. Continue implementing inventory and assessment of all designated routes in accordance with State soil loss protocols. Implement protocol for monitoring soils, vegetation, and species of concern.
5. Continue to perform annual recurring and corrective route maintenance and implement Best Management Practices (BMP's) according to Route Maintenance Objectives (RMO) for specific trail types based on the results of the soil loss assessment. A plan will be developed to implement Best Management Practices on stream crossings on the designated route system.
6. Prepare Research Natural Area Management Plan for the SBMRNA (Appendix E) and prevent trespass and impairment of values for which established.
7. Develop barren restoration plan to reclaim closed barrens and minimize erosion and sediment delivery.
8. Complete inventory of all routes not in the current database. Evaluate routes through the established screening criteria. Providing routes meet the criteria and contribute to the route network they may be added to the route system within the thresholds identified in this plan amendment.
9. Identify closed routes and implement restoration plan for reclamation to return to a natural state and trend towards background erosion rates.
10. Monitor soil erosion and sediment yield to streams through Clear Creek gauging station. Implement soil erosion control measures, silt fences, and sediment trapping features.
11. Create and implement new Sign Plan. Place large portal signs at entry points informing visitors of vehicle use restrictions, asbestos public health hazards, and compliance with protective measures for sensitive species habitat.
12. Post maps of designated route and barren network on kiosks within the project area.

13. Have copies of maps with the revised route and area designations available for review and distribution at the Hollister Field Office.
14. Monitor closed routes for violations and rehabilitation needs according to BMP's. Monitor effectiveness of protection measures and law enforcement techniques.
15. Rehabilitate new illegal routes as they are discovered.
16. Ensure laws regarding sound levels of OHV use and ambient noise are enforced by sampling levels at selected sites during both peak and off-peak seasons.
17. Purchase, rotate, and monitor traffic counters. Log time of use, and monitor use patterns to include remote portions of the project area.
18. Continue existing, and explore new outreach approaches to contact visitors with brochures, maps, and information. Continue to emphasize the 'Leave No Trace' and the 'Tread Lightly' programs.
19. Conduct Fee Collection Study to determine effectiveness in implementing new fee collection in project area to help fund project activities. In the interim institute a program to register all vehicles and OHV's entering the area.
20. Construct and maintain kiosks at main access points to the project area.
21. Implement Park Host Program.
22. Acquire funds to construct new Decontamination Area near entrance to Clear Creek Management Area for BLM (and possible public) use.
23. Construct new entrance booth for information and collection of fees.
24. Develop and implement plan to sign routes of travel by levels of technical difficulty to better meet the needs of the public's range of skill and enjoyment and to promote safety.

Midterm Actions (Target 3-4 Years):

25. Continue to fence, barricade, and/or sign closed routes with continued OHV activity.
26. Continue to implement restoration plan for reclamation of routes to return to a natural state and trend towards background erosion rates.
27. Monitor the success of rehabilitation efforts.
28. Produce/revise local area brochures with a map of designated routes including the route's level of technical difficulty.
29. Research and implement techniques to control dust levels on routes traveled within the project area with respect to asbestos and within the guidelines of the BMP's.
30. Research and construct new 'alternative use' trails for non-motorized activities such as hiking, biking, and equestrian.
31. Maintain protocol for monitoring soils, vegetation, and species of concern.
32. Sample air quality (PM10 standards) for ambient quality and determine the effects of off-highway vehicles both within and outside of the Asbestos Hazard Area.
- 33.

Long-term Actions (Target 5+ Years):

34. Monitor soil loss, compliance, protection measures, and restoration data on routes of travel in the project area.
35. Continue to fence, barricade, and/or sign closed routes with continued OHV activity.
36. Continue to implement restoration plan for reclamation of routes to return to a natural state and trend towards background erosion rates.
37. Explore new methods of distributing route maps (e.g., CD ROMs, internet, etc.).

Budgets/Funding

Funding will remain at a level consistent with previous years. We do not anticipate increased appropriated funds in Fiscal Year 05 or in future years. Appropriated funding for recreation, recreation facilities, threatened and endangered species, and cultural resources programs will be utilized benefiting the proposed actions. Funding will also be sought from other sources such as California Off-Highway Vehicle Commission Grants. Maintenance, monitoring, inventory, route assessment, updating surface land status maps, developing brochures, and installing and replacing kiosks are tasks that are needed under the proposed action. Sign replacement and changing route numbers are tasks that would be accomplished by normal route maintenance. Whenever possible, volunteers, military training missions, donation of labor and equipment, and other sources of free labor will be utilized to stretch existing funds. Charging for maps, entrance fees, and brochures is a possible funding source. The implementation period would be extended if funding shortfalls would occur for equipment, materials, or labor.

Patrol

Patrol is a high priority task to minimize damage to cultural and sensitive plant and wildlife species. Patrols are critical to obtaining compliance with route designations. Patrols are also used to aid the Sheriff's Office in search and rescue operations and to provide first aid assistance to visitors. Scheduled patrols will be conducted by park rangers and law enforcement rangers. In addition, all BLM staff will be responsible for day to day monitoring of recreational activities. Law enforcement rangers will enforce violations of route designations and resource damage.

Route Maintenance

The two main objectives of route maintenance are implementation of Sign Plan and Route Maintenance Objectives.

Sign maintenance includes:

1. Installing emergency safety and resource closure signs as needed.
2. Replace faded and damaged signs with stickers for both carsonite and metal signs.
3. Replace damaged or faded carsonite and metal signs.
4. Remove and replace damaged sign posts.
5. Install new signs where violations occur, rehabilitation is needed, and as safety needs are identified.
6. Removal of closed signs where routes have successfully been rehabilitated.

Route Maintenance Objectives include:

1. Improved/Maintained Roads [Width > or = to 14 ft., Vertical Clearance > or = to 14 ft.]

Discussion: FIMMS level 4 road- this level is assigned to roads where management objectives require the road to be open all year (except may be closed or have limited access due to snow conditions) and to connect major administrative features (recreation sites, local road systems, administrative sites, etc.) to County, State, or Federal roads. Typically, these roads are single or double lane, aggregate, or

bituminous surface, with higher volume of commercial and recreational traffic than administrative traffic.

The entire roadway is maintained at least annually, although a preventive maintenance program may be established. Problems are repaired as discovered. These routes will be maintained for access year-round for all vehicles. Route designation will be open to all vehicles unless designated for administrative use only.

- General access to the CCMA

2. 4WD Recommended [Width > or = to 10 ft. Vertical Clearance > or = to 14 ft.]

Discussion: FIMMS level 3 road- this level is assigned to roads where management objectives require the road to be opened seasonally or year-round for commercial, recreation, or high volume administrative access. Typically, these roads are natural or aggregate surfaced, but may include low use bituminous surfaced roads. These roads have defined crossings section with drainage structures (e.g., rolling dips, culverts, or ditches). User comfort and convenience are not considered a high priority.

Drainage structures are to be inspected at least annually and maintained as needed. Grading is conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing is conducted as needed to improve sight distance. Slides adversely affecting drainage would receive high priority for removal; otherwise they will be removed on a scheduled basis. Route designation will be open to all vehicles unless designated for administrative use only.

- Primary use trail/admin trail

3. Technical 4X4 Route/Jeep Trail [Width > or = to 6 ft., Vertical Clearance > or = to 6 ft.]

Discussion: FIMMS level 2 roads- this level is assigned to roads where the management objectives require the road to be opened for limited administrative traffic. Typically, these roads are passable by high-clearance vehicles.

Drainage structures are to be inspected within a 3-year period and maintained as needed. Grading is conducted as necessary to correct drainage problems. Brushing is conducted as needed to allow administrative access. Slides may be left in place provided they do not adversely affect drainage. Route designation will be open to all vehicles.

- Primary use trail/no admin/occasional emergency fire/LE etc.

4. Multiple Use Trail (ATV/MC) – [Width > or = to 3 ft., Vertical Clearance > or = to 6 ft.]

Moderate use trail with visitor use on a seasonal/and or peak use period with frequent contact between parties. Trail management is conducted with occasional visitor use patrols. Visitors are not likely to encounter obstructions.

(Maintenance standards for level 3 trail)- The trail shall require a minimum of one condition survey 1 to 2 times per season. Major repairs shall be completed annually. Maintenance shall be scheduled two to three times per season, if required, to repair the trail for environmental damage and to maintain access. Route designation will be limited to ATVs or motorcycles.

- Primary use recreation access

5. Single Track Trail [Width > or = to 18 in., Vertical Clearance > or = to 6 ft.]

FIMMS level 2 trail- Low use trails with little or no contact between parties. Little or no visitor use management. Visitors may encounter obstructions like brush and deadfall.

Trail would require condition surveys once every year. Repairs will be done at the beginning of the season to prevent environmental damage and maintain access. Emphasis is given to maintaining drainage and mitigating hazards. Major repair may not be done for several seasons. Route designations will be limited to motorcycles only.

Infrequent storms may require extensive repair work. At times the repair work becomes a reconstruction project. Estimates for major repairs are not included due to their infrequency and cost variance.

- Primary use recreation access

Sign Implementation Plan

Implementation of a sign plan will be a key factor in the success of gaining and maintaining visitor compliance. The Bureau uses signs to provide various types of information to visitors. For example, even though the visitor is responsible for knowing and complying with existing rules and regulations, the Bureau still uses signs and other methods to provide regulatory information. Typical uses of signs for managing off-highway vehicle use include:

1. Provide information about the area.
2. Describe regulations for an area.
3. Quickly inform visitors of changes in route designations (e.g., emergency safety closures) until new maps and brochures can be prepared and printed.
4. Advise visitors of where and how to obtain help in an emergency.
5. Interpret an area's history, geology, wildlife, botany, etc., for visitors.
6. Numbered route signs:
 - 6.1. Help to identify location and aid in accurately locating visitors in search and rescue operations.
 - 6.2. Help visitors plan, with maps, to meet friends at specific location or to take off-highway vehicles touring trips.
 - 6.3. Help visitors to precisely identify sections of routes they like or dislike. For example, where maintenance is needed.
 - 6.4. Reduce the probability of volunteers becoming disoriented and making a mistake while traveling routes.
 - 6.5. Allow visitors to accurately report the location of safety hazards (e.g., shooting across routes of travel, drunk drivers, fires, open mine shafts, etc.).
7. Identification of route designations, open play areas, and Research Natural Area boundaries.
8. Identification of Open and Limited routes of travel within the CCMA.
9. Identify problem Closed routes and barrens.
10. Aid in minimizing conflict between different recreational users.

Area designation signs and route signs relate directly to implementing route designations proposed by this Plan Amendment. The route signing plan will work in compliance with 43 CFR 8342.1 which establishes criteria for designating routes and areas and informing the public of where OHV use is authorized. The presence, or absence, of signs does not change route designations. Signs identify authorized use of current route designations and prohibit use of non-designated or ‘closed’ routes.

Protocol for Monitoring Soils, Vegetation, and Species of Concern

Monitoring protocol meets or exceeds the requirements mandated by the California Department of Parks and Recreation, OHMVR Division. This protocol can be viewed at the BLM Hollister Field Office. The protocol requires monitoring all designated OHV trails on BLM lands in California that benefit from Green Sticker Funds granted to the BLM by the OHMVR Commissioners.

Objectives for monitoring soils, vegetation and species of concern include:

1. Reduce environmental degradation stemming from OHV activity.
2. Protect federal and State of California threatened, endangered, and special status plant and animal species.

Yearly monitoring of designated routes will be conducted in accordance with this protocol. Using GPS technology, the OHV Trail Monitoring Team will survey routes and input data concerning designated OHV trails into an Access database.

Seasonal Closures

There are two types of seasonal closures are applicable to the CCMA; wet season and dry season. In both cases, roads would remain open for administrative use. The dry season closure would reduce air emissions, thus protecting the public from these airborne emissions. The wet season closure would reduce rutting of roads and trails, reducing sediment transfer into the various watersheds.

The wet season closure procedures could be implemented after the annual total precipitation exceeds 8 inches. Once 8 inches of precipitation has been exceeded, the following would apply. Additional rainfall exceeding ½ inch within a 24 hour period or 1 inch within a 72 hour period would result in a three day closure. Once the area has been closed a field inspection will be completed prior to reopening, and daily thereafter to determine suitability of road conditions.

Best Management Practices and Protection Measures

The BLM would implement Best Management Practices (BMP) to reduce impacts to watershed resources, and would continue to evaluate and update these measures as needed to minimize impacts to water quality, control erosion and sediment production. These measures include drainage improvements, construction of rolling dips, water bars, rock armored/hardened stream crossings, hardened sills, and half-pipe bridges, and are contained in Appendix D. These site treatments are incorporated into BLM’s annual corrective route maintenance plan. BLM will also institute protection measure to protect riparian areas and sensitive species habitat. Closed routes will be restored and obscured with natural barriers or barricades. The following table lists unit costs for these management practices.

Cost in \$		Unit Qty	Cost in \$		Unit Qty
Trail Repairs			Rehabilitation		
Rolling Dip	105	each	Trails <48" Wide		
Outslope	10.5	feet	Stabilization	3,400	<i>mile</i>
Grading	1,050	mile	Obliteration	17,000	<i>mile</i>
Brushcutting	2,000	acre	Trails <96" Wide		
Remove Berm	10.5	feet	Stabilization	6,800	<i>mile</i>
Berm Drain	65	each	Obliteration	27,000	<i>mile</i>
Fill Ditch	1,050	mile	Trails <144" Wide		
Re-Route	4,000	mile	Stabilization	13,600	<i>mile</i>
Waterbar	55	each	Obliteration	55,000	<i>mile</i>
Energy Dissipater	650	each	Trails >144" Wide		
Stream and Drainage Crossings			Stabilization	21,250	<i>mile</i>
Correct Drainage	210	each	Obliteration	85,000	<i>mile</i>
Clean Inlet (Culvert)	85	each	Revegetation	25	<i>square yard</i>
Clean Outlet (Culvert)	170	each	Facilities		
Flume	250	each	Visitor Contact Sta.	40,000	<i>each</i>
Reset Flume	125	each	Vault Latrines	18,000	<i>each</i>
Drop Inlet	150	each	Campground/1 site	4,000	<i>each</i>
Excavate Crossing	350	each	Info Kiosk 3- panel/roof	2,500	<i>each</i>
Ford Crossing	3,500	each	Info Kiosk 2- panel/roof	2,000	<i>each</i>
Install Culvert	2,000	each	Info Kiosk 1- panel/roof	1,000	<i>each</i>
Retaining Wall	125	sq ft	Info Board	450	<i>each</i>
Habitat Protection			Gate, Type 1	3,000	<i>each</i>
Sign	50	each	Gate, Type 2	2,000	<i>each</i>
Fence	4	feet	Gate, Type 3	1,000	<i>each</i>
Repair Fence	100	each			
Pipe Barrier	25	<i>feet</i>			

APPENDIX D BEST MANAGEMENT PRACTICES

The following management practices were compiled from various sources listed in the reference section. These practices are listed as methods for correcting problems related to the watershed concerns influenced by a variety of agency programs and actions. Many of these management practices are specific measures which will need additional study to determine how or if they effectively apply to the specific conditions in the Clear Creek Management Area. All of these management practices will need to be monitored and evaluated to determine their effectiveness. These management practices have been grouped into the following, broad categories: general, mining and related activities, roads, and recreation facilities, and barrens. Many of these management practices have been implemented over the years. BLM does not propose to have funds available to implement all referenced management practices. The continuing priority in the short term is to provide for protection of unstable areas, minimize sediment production, protect water quality by minimizing soil erosion, and ensure that constructed erosion control structures are stabilized and working. Of primary concern are management practices to reduce impacts from erosion related to roads, which have been identified as a significant contributor of sediment yield above background erosion rates. Minimizing erosion on OHV routes/trails, involving control of drainage, road slope stabilization, slope design, stream crossings, stream course protection, and restriction of road use during the wet season are critical components to improving watershed conditions.

Watershed Management Goals Related to Soil Loss:

- Limit sediment production from roads, trails, and disturbed areas (hill climbs, mining areas).
- Limit vegetation and stream channel disturbance and associated sediment production.
- Minimize direct mass movement of soil into stream channels (from steep slopes and mining areas).

Watershed Management Actions:

Special management practices will be developed for the ACEC, in order to protect and prevent irreparable damage to important resource values and to protect life and property from natural hazards.

Develop barren area restoration plan within one year.

Erosion control structures will be used to decrease erosion resulting from public recreation activities.

Install additional vehicle barriers to control access to riparian corridors and sensitive watershed areas.

Stabilize/rehabilitate severely eroding trails, hill climbs and naturally barren areas in Clear Creek Canyon. Stabilization methods include rock walls, rock armoring of stream crossings, contour trenching, gully plugs, and water diversions.

Continue a regular planned maintenance program for major routes and trails in the Clear Creek Management area (e.g., waterbar construction and outcropping).

The following is a list of practices that have been implemented and will continue to be implemented, practices that will be further developed, and management practices that will need further evaluation and planning prior to implementation. Continued implementation of management actions related to

controlling erosion and sediment yield to minimize impacts to watershed resources are generally within the capability and budget constraints of the BLM. In all cases, BMPs will be identified that best address resource condition objectives and will be phased in over a period of time.

On-going Management Actions – High Priority

MP – 6:	Watershed Restoration
MP – 17:	Erosion Control on ORV Trails
MP – 1:	Protection of Unstable Areas
MP – 12:	Road Stream crossings
MP – 7:	Erosion Control Structure Maintenance
MP – 16:	Control of Road Drainage
MP – 11:	Stream course Protection
MP – 19:	Maintenance of Roads
MP – 13:	Road Slope Design
MP – 18:	Minimization of Side-cast Material
MP – 10:	Environmental Health and Safety Hazard Awareness
MP – 3:	Restrict Development within the Floodplain
MP – 14:	Road Slope Stabilization

Management Practices Needing Further Development –(0-2 years)

MP – 5:	Re-vegetation of Surface Disturbed Areas
MP – 20:	Control of Road Use During Wet Periods
MP – 2:	Streamside Management Zone Designation
MP – 24:	Silt Fences
MP – 25:	Erosion Control Blankets
MP – 26:	Rock Backfilling of Gullies
MP – 15:	Dispersion of Subsurface Drainage from Cut and Fill Slopes
MP – 30:	Rock Filter
MP – 31:	Gabion Mattresses
MP – 21:	Surface erosion Control at Facility Sites
MP – 9:	Restoration of Borrow Pits, Quarries, and Mining Operations (ongoing)

Lower Priority MPs

MP – 22:	Control of Sanitation Facilities (completed)
MP – 23:	Control of Refuse Disposal (completed)
MP – 8:	Regulation of Streamside Gravel Borrow Areas (not currently applicable)
MP – 27:	Check Dams (significant planning and study required)
MP – 28:	Interceptor Dyke and Swale (significant planning and study required)
MP – 29:	Sediment Basin (significant planning and study required)
MP – 4:	Specifying Riprap Composition

GENERAL

MP –1:	Protection of Unstable Areas

Objective: To provide for protection of unstable areas and thereby avoid triggering mass movements of the soil mantle and resultant erosion and sedimentation.

Explanation: This management practice will help protect unstable areas by reducing or stabilizing their high erosion rates. Unstable slopes will be protected by use of fences and barriers to eliminate or channel ORV use away from these areas, and by gully plugs, water diversions, etc. as needed.

MP- 2: Streamside Management Zone Designation

Objective: To designate a zone along streams where prescriptions are made that will minimize the adverse effects of nearby land disturbance activities including roads, by: (1) acting as an effective filter for sediment generated by erosion from road fills and dust drift; (2) maintaining shade riparian habitat (aquatic and terrestrial), and channel stabilizing effects; (3) keeping the floodplain surface in a resistant, undisturbed condition to limit erosion by flood flows.

Explanation: Activities near streams need to be carefully designed and managed. At designated roads and stream crossings, fill and side cast material must be kept at a distance from nearby streams to minimize their impact on the critical riparian zone and on the stream itself. Factors such as stream class channel aspect, channel stability, side-slope steepness, and slope stability are considered in determining the constraints of activities and width of stream side management zones. It is vital to stabilize till slopes before the stream side management zone is saturated with sediment. The streamside management zone is not a zone of exclusion, but a zone of closely managed activity. It is a zone which acts as an effective filter and absorptive zone for sediment, maintains shade, protects aquatic and terrestrial riparian habitats, protects channel and stream banks, and promotes flood plain stability.

MP – 3: Restrict Development within the Floodplain

Objective: To avoid, where possible, the long and short-term adverse impacts to water quality associated with the occupancy and modification of floodplains.

Explanation: A floodplain analysis and evaluation will be made when sites within floodplains are being considered for structures or developments. Environmental quality, ecological effects, and individual safety and health are considered. Flood frequencies, watershed conditions, climatic and environmental factors associated with past flood events, flood flow quantities and specific flood boundaries are all evaluated.

MP – 4 Specifying Riprap Composition

Objective: To minimize sediment production associated with the installation and utilization of riprap materials.

Explanation: Riprap is commonly used to armor stream banks, stream crossings, and drainage ways from the erosive forces of flowing water. Riprap must be sized and installed in such a way that it effectively resists erosive water velocities. Stone used for riprap should be free from weakly structured rock, organic material and materials of insufficient size, all of which are not resistant to stream flow and would only serve as sediment sources. Outlets of drainage facilities in erodible soils commonly require riprap for energy dissipation. The Corps of Engineers and Federal Highway Administration procedures are commonly used for designing riprap structures.

MP – 5 Re-vegetation of Surface Disturbed Areas

Objective: To protect water quality by minimizing soil erosion through the stabilizing influence of vegetation.

Explanation: This is a corrective practice to stabilize the soil surface of a disturbed area. The vegetation selected will be a mix of species best suited to meet the management objectives of the area, be it wildlife, recreation, watershed, or fuels management. Endemic species (grass or browse shrubs) may be used between recently planted trees where appropriate for aesthetics, erosion prevention or wildlife needs. The factors evaluated are soil fertility, slope, aspect, soil water holding capacity, climatic variables, and suitable species selection. Re-vegetation of some disturbed areas in serpentine soils may not be feasible.

MP – 6: Watershed Restoration

Objective: To improve water quality and soil stability.

Explanation: Watershed restoration is a corrective measure to: (1) repair degraded watershed conditions and restore the hydrologic balance with a vegetative cover that will maintain or improve soil stability, reduce surface runoff, increase infiltration, and reduce flood occurrence and flood damages; (2) conserve the basic soil resource; (3) maintain and improve water availability; and (4) enhance economic, social, and scenic benefits of the watershed. Factors considered are: predicted change in water quality, downstream values, on-site productivity, threat to life and property, direct and indirect economic returns, and social and scenic benefits. Examples of watershed restoration measures are gabion structures, back filling gullies with rock, and constructing water diversions.

MP – 7: Erosion Control Structure Maintenance

Objective: To ensure that constructed erosion control structures are stabilized and working.

Explanation: Erosion control structures are only effective when they are in good repair and stable condition. Once the erosion control structures are constructed and seeded where practicable, there is a possibility that they may not become adequately vegetated or stabilized or they may become damaged from subsequent activities. It is necessary to provide follow-up inspections and structural maintenance in order to avoid these problems and insure adequate erosion control.

MINING AND RELATED ACTIVITIES

MP – 8: Regulation of Streamside Gravel Borrow Areas

Objective: To limit channel disturbances and sediment production associated with gravel source development.

Explanation: Materials deposited along channel sections during storm runoff often provide an inexpensive source of gravel. Because of easy access this gravel is often in demand; with adequate planning, it can often be removed with minimal impact on water resources. Under some circumstances, gravel removal may alter stream flow characteristics and consequently affect stream channel stability and create a new sediment source. Borrowing should be limited to gravel bars above the water line which is normal for the period of excavation. If the borrow area is subject to periodic flooding, some leveling, shaping, or other special drainage features should be provided. Excavation should not take place below the water table unless sediment basins are built to contain or catch the resulting sediment. Sediment basins should not be subject to washouts. If excess sediment accumulates in basins, excavators should be required to clean the basin and deposit removed sediment in approved sites. Serpentine areas should not be used as a gravel source for use outside of the serpentine area.

MP – 9: Restoration of Borrow Pits, Quarries, and Mining Operations

Objectives: To minimize sediment production from borrow pits, quarry sites and mining operations.

Explanation: Borrow pits, quarries, and mining operations are often susceptible to erosion due to steep side slopes, lack of vegetation, and/or their proximity to water courses. When ever necessary, prior excavation of the site, top soil should be removed and stockpiled for surface dressing in the post operation rehabilitation period. Once excavation has been completed on all or part of the area, the sides will be sloped and graded and the general pit area smoothed and stabilized. Oversize material, if left in the pit or quarry, should be evenly distributed. Finer materials should be spread over the bottom of the pit prior to spreading stockpiled or imported top soil. Seeding and mulching may be required and sediment basins should also be considered. Access roads to the site should be ripped, drained, blocked to traffic, and seeded unless other treatment is required by the design.

MP – 10: Environmental Health and Safety Hazard Awareness

Objective: Improve the level of visitor awareness of environment health and safety hazards, e.g., asbestos hazard in dust and water.

Explanation: The public will be encouraged through signs, pamphlets, media exposure and public contact to conduct their activities in ways that will not unnecessarily expose themselves to environmental hazards.

ROADS

MP – 11: Stream course Protection

Objective: (1) To protect the natural flow of streams, (2) to provide unobstructed passage of storm flows, (3) to reduce sediment and other pollutants from entering streams, and

(4) to restore the natural course of any stream as soon as practicable if the stream is diverted as a result of management activities.

Explanation: The following points are fundamental to protecting streams and stream courses:

- a. Vehicles should not operate within stream side management zones except where trails and roads cross the stream channel.
- b. Water bars and other erosion control structures will be located so as to prevent water and sediment from being channeled into stream courses and to dissipate concentrated flows.
- c. Material resulting from temporary road and ORV trail stream course crossing should be removed and stream banks restored and protected to the extent practicable.

MP – 12: Road Stream crossings

Objective: To ensure that roads do not unduly damage streams or disturb channels.

Explanation: Culverts or other means are necessary on roads (temporary, semi-permanent, or permanent) at all locations where it is necessary to cross designated streams. Alternate means of crossing stream courses may include: rock fills, hardened fords (using such features as rock approaches) and low water crossings. Most (if not all) crossings of perennial streams should be approved by an inter-disciplinary team. Such facilities should be designed to provide for unobstructed flows and to minimize damages to stream courses. The number of crossings should be kept to the minimum needs for access. Channel crossings should be as perpendicular to stream courses as possible. Stream bank excavation should be kept to the minimum needed for use of the crossings, and entry and exit ramps may need to be rocked. Fords and turnpike crossings hardened with washed rock or landing mats are sometimes an acceptable alternative depending upon hydrological considerations.

MP – 13: Road Slope Design

Objective: To reduce sedimentation by: (1) minimizing erosion from road slopes, and (2) minimizing the chances for slope failures along roads.

Explanation: No stabilization project can entirely prevent erosion from cut and fill slopes, but no road construction should be planned without considering stabilization needs. The first planning requirement is for an adequate soil and geologic investigation, to provide data necessary for proper cut and fill design consideration such as:

- (1) The proper cut and fill slopes for the material;
- (2) The handling of surface and subsurface drainage;
- (3) Necessary compaction standards and surfacing needs.

A prerequisite for stabilization is to provide basic mechanical stability of the soils, using data from soils and geologic investigations to develop requirements for proper slope angles, compaction, and adequate drainage.

MP – 14: Road Slope Stabilization

Objective: To improve road cut and fill slope stabilization by applying mechanical and vegetative measures.

Explanation: Few slopes are sufficiently rocky to be naturally stable without needing additional measures. In most cases mechanical, and/or vegetative measures are required. Mechanical measures include but are not limited to: erosion nets, terraces, wattling, side drains, sub-surface dewater devices, blankets, fute mats, riprap, mulch, tackifier pavement, soil seals, and gunnite. Vegetative measures include the seeding of endemic herbaceous species (grass, legumes, or browse species) or the planting of endemic brush or trees. Vegetative measures may include: fertilization, mulching (or even watering) to insure success. A combination of endemic vegetative species often produces a better result than a more simplistic treatment, e.g., grass seeding alone. (See also MP – 5).

MP – 15: Dispersion of Subsurface Drainage from Cut and Fill Slopes.

Objective: To minimize the possibilities of cut or fill slope failure and the subsequent production of sediment.

Explanation: Roadways may drastically change the surface drainage characteristics of a slope. Since the angle and height of cut and fill slopes increase the risk of instability, it is often necessary to provide subsurface drainage to avoid moisture saturation necessary because of slopes, soil, aspect, and precipitation. Methods that should be used:

- (1) Pipe under drains
- (2) Horizontal drains
- (3) Stabilization trenches

Dispersion of collected water should be accomplished in an area capable of withstanding increased flows. On erosive soils, energy dissipaters need to be placed below pipe carrying large volumes of runoff water.

MP – 16 Control of Road Drainage

Objective: (1) To minimize the erosive effects of water concentrated by road drainage features; (2) to disperse runoff from disturbances within the road clearing limits; (3) to lessen the sediment load from road areas; (4) to minimize erosion of the road prism by runoff from road surfaces and from uphill areas.

Explanation: A number of measures can be used (alone or in combination) to control the detrimental effects of road drainage. Methods used to reduce erosion may include such things as properly spaced cross drains or water bars, dips, drop basins, energy dissipaters, aprons, downspouts, gabions, debris racks, and armoring of ditches and drain inlets and outlets. Disposal of runoff can be accomplished by such means as rolling the grade; out sloping; installation of water spreading ditches; contour trenching; or adequate sized over side drains, etc. Disposal of runoff also reduces peak down stream flows and associated high water erosion and sediment transport. Sediment loads can be reduced by installing such things as sediment filters, settling ponds, and contour trenches. Soil stabilization can help reduce sedimentation by

lessening erosion on borrow and waste areas, on cut and fill slopes and on road shoulders.

MP – 17: Erosion Control on ORV Trails and Temporary Roads.

Objective: To protect water quality by minimizing erosion and sedimentation derived from ORV trails and roads.

Explanation: Installation of erosion control measures may be required on OHV trails and temporary roads. This work may involve cross ditches and water spreading ditches. Other methods such as back-blading may be used in lieu of cross drains. Volunteer groups may also be used for constructing erosion control structure projects.

MP – 18: Minimization of Sidecast Material.

Objective: To minimize sediment production originating from material sidecast during road construction or maintenance.

Explanation: Unconsolidated side-cast material is very difficult to stabilize and often such material is susceptible to erosion and / or mass instability. Sidecasting of un-compacted material should be permitted only at locations designated through interdisciplinary input, and shown in the plans. In some areas especially those slopes over 60 percent, end hauling may be the only acceptable alternative to sidecasting even though the costs are high and end-haul equipment may need certain minimum widths in which to work. Waste areas should be located where excess materials can be deposited and stabilized. During road maintenance operations, care should be taken to eliminate the deposition of sidecast material onto stabilized slopes. Disposal of slide debris should be done only at designated water areas. Personnel performing road maintenance should confine excavated or embankment material within the roadway limits and the roadway should be constructed in reasonably close conformity with the lines, grades, and dimensions designated on the ground. They should also remove materials deposited outside the roadway. All materials should be incorporated in the planned work. Disposal of excess excavation which develops due to miscalculation or a specific design change should be disposed of in a specified manner and at a specified location.

MP – 19: Maintenance of Roads

Objective: To maintain roads in a manner which provides for water quality protection by minimizing rutting, failures, sidecasting, and blockage of drainage facilities – all of which can cause sedimentation and erosion.

Explanation: Roads normally deteriorate because of use and weather impacts. This deterioration can be minimized through adequate maintenance and /or restriction of use. All system roads should be maintained to provide the basic custodial care required to protect the road investment and to see that damage to adjacent land and resources is held to a minimum. This level of maintenance often requires an annual inspection to determine what work, if any is needed to keep drainage functional and the road stable. This level is the normal prescription for roads that are closed or seasonally closed to traffic. As a minimum measure, maintenance must protect drainage

facilities and runoff patterns. Higher levels of maintenance may be chosen to reflect greater use or resource administrative needs. Additional maintenance measures could include resurfacing, out sloping, clearing debris from dips and cross drains, armoring of ditches and spot rocking.

MP – 20: Control of Road Use During Wet Periods

Objective: (1) To reduce road surface disturbance and rutting of roads; and (2) to lessen sediment washing from disturbed road surfaces.

Explanation: The unrestricted and official use of many unimproved and semi-improved roads during wet weather often results in rutting and churning of the road surfaces. Run off from such disturbed road surfaces often carries a high sediment load. The damage/maintenance cycle for roads that are frequently used in winter can create a disturbed road surface that is a continuing sediment source. Roads that are used during wet periods should have a stable surface and/or sufficient drainage to allow such use with a minimum of resource impact. Rocking, oil, paving, and armoring are measures that may be necessary to protect the road surface and reduce material loss. Drainage should be maintained to prevent water from standing on the road surface or running down the road creating rills and gullies in the road surface.

RECREATION FACILITIES

MP – 21: Surface erosion Control at Facility Sites

Objective: Limit the amount of surface erosion taking place on developed sites and the amount of soil entering streams.

Explanation: On lands developed for campgrounds, parking areas or waste disposal sites much ground is cleared of vegetation. Erosion control methods need to be implemented to keep as much of the soils in place as possible and to reduce the amount of soil entering streams. Some examples of erosion control methods that could be applied at a site for keeping the soil in place would be applying endemic species seed, jute matting, tackifiers, hydro mulch, paving or rocking of roads, water bars, cross drains, or retaining walls. To control the amount of soil entering streams, the natural drainage pattern of the area should not be changed. Sediment basins and sediment filters should be established to filter surface runoff. Diversion ditches and berms should be built to divert surface runoff around bare areas. Construction activities should be scheduled to avoid periods of the year when heavy runoff will occur.

MP – 22: Control of Sanitation Facilities.

Objective: To protect surface and subsurface water quality from bacteria, nutrients, and chemical pollutants resulting from collection, transmission, and disposal of sewage from Bureau of Land Management facilities.

Explanation: Toilet facilities are provided at semi-developed and developed recreation sites. Sanitation facilities will be planned, located, designed, constructed, operated,

inspected and maintained to minimize the possibility of water contamination. Toilet facilities should be located outside of the flood plain.

MP – 23 Control of Refuse Disposal

Objective: To protect water quality from nutrients, bacteria, and chemicals associated with solid waste disposal.

Explanation: Users of public land recreation facilities are encouraged cooperate in the proper disposal of garbage and trash. Receptacles are provided at most semi-developed sites. Garbage and trash must be packed out by those who use dispersed areas. The final disposal of collected garbage will be at a proper designated and operated sanitary landfill. The land fill site will be located where groundwater and surface waters are at safe distances as prescribed by State or local Health Board regulations.

BARRENS

The purpose of this section is to present sediment and erosion control BMPs that are potentially applicable for active OHV play areas. Due to the unique conditions at the Clear Creek Management Area (i.e., topography, climate, soil types, vegetation, and recreational OHV use), the effectiveness of the proposed BMPs is difficult to predict. There is very limited practical experience with BMPs for conditions similar to those found at Clear Creek.

In order to directly evaluate the efficiency of the proposed BMPs at Clear Creek, it is recommended that a BMP pilot program be implemented. Under the pilot program, the BMPs considered by BLM to be most feasible based on the available budget will be implemented on a limited scale. Each selected BMP is implemented at one or two sites that meet its applicability criteria and using different designs where possible. The effectiveness of each BMP is then evaluated over the course of one year. At the end of the evaluation, BLM will identify the most effective BMPs and designs and will expand their use at other sites with similar features within the Clear Creek Management Area.

MP – 24 Silt Fences

Objective: A silt fence consists of a geotextile fabric attached to supporting poles, which is used to intercept, reduce velocity, and filter surface runoff.

Explanation: Silt fences are effective in areas where sheet flow occurs for example, at lower end of active play areas, particularly at the interface between a play area and a vegetation buffer; base of slopes; and along streams. Silt fences provide retention of runoff sediments, decrease runoff flow velocity and energy, protect downslope vegetation from sedimentation and wash-out, and provide visual indication of play area lower boundary. Installation does not require construction equipment or skilled labor and is low cost.

MP – 25 Erosion Control Blankets

Objective: Erosion control blankets are mats made of synthetic or natural material, or a combination of the two, which are stapled to the soil on steep slopes to control erosion and promote the establishment of vegetation.

Explanation: The use of erosion control blankets is limited to narrow strips adjacent to the lateral boundaries of vegetated areas located downgradient of active OHV use areas. In order for the blankets to be effective, the soil over which they are installed should be of sufficient quality to support vegetation growth. The soil surface must be relatively smooth, without rock, deep depressions, or debris. The blankets may be seeded to improve the vegetation establishment process. This BMP may be combined with the use of silt fences, which are described earlier in this section. A silt fence may be installed upgradient of a vegetated area and extended laterally to protect the erosion protection blanket strips. Benefits and advantages of erosion control blankets include: effective protection of soils on highly erodable slopes; they absorb and hold moisture near the soil surface; promote vegetation establishment; may be installed on steep slopes; and they do not require construction equipment or skilled labor.

MP – 26 **Rock Backfilling of Gullies**

Objective: Filling gullies with loose angular rock prevents further deterioration from water erosion.

Explanation: This practice is used primarily in naturally incised drainage channels that concentrate flow and significantly contribute to sediment generation and transport. This method may be combined with the check dam application where lower, more accessible sections of a gully may be backfilled with rock and the check dams would be constructed at higher sections of the gully. Benefits of rock backfilling include: a decrease in runoff flow velocity and energy; retention of runoff sediment which, over time, may clog the void spaces and “heal” the gully; and maintenance can be minimal with proper construction.

MP – 27 **Check Dams**

Objective: Check dams decrease runoff flow velocity and energy and provide retention and settling of runoff sediments.

Explanation: Check dams are small structures made of logs, stone, or silt fence that are constructed across a gully or ephemeral stream in order to lower the speed, retain sediments, and diminish the erosion potential of concentrated flows. Installation does not require construction equipment or skilled labor and is low cost.

MP – 28 **Interceptor Dyke and Swale**

Objective: Interceptor dykes and swales are used to decrease runoff flow energy, protect downslope vegetation from sedimentation and wash-out, and provide visual indication of play area lower boundary.

Explanation: Dykes are ridges of compacted soil and swales are excavated depressions. A dyke is constructed adjacent and downslope of the swale from materials excavated for the construction of the swale. In most cases the swale is stabilized with riprap. Dyke and

swale systems intercept overland flow and convert it into concentrated flow with lower, non-erosive velocity. The diverted flow is discharged to a suitable outlet. Dykes differ from silt fences in that it intercepts and diverts all runoff from upland areas, whereas, silt fences allow runoff to filter through the fence and reach lower areas.

MP – 29 Sediment Basin

Objective: Sediment basins provide retention of runoff sediments up to 60 to 70%, decrease runoff flow velocity and energy, and protect downslope vegetation from sedimentation and wash-out.

Explanation: A sediment basin is a pond created by constructing a dam across a drainage way, and is designed to detain runoff in order to allow suspended sediments to settle. The pond is provided with a riser connected to a discharge pipe, which ends downgradient of the dam. The pipe is placed perpendicular to and at the base of the water flow. In the pond, water accumulated until its level exceeds the height of the riser and the excess water discharges through the pipe to the downgradient outlet. The basin volume below the top of the riser is the sediment storage zone. The dam should be constructed of materials less permeable than gravel and clean sand. Local materials such as silty sand, clayey sand, and silt, are acceptable if they are free of debris. The storage volume may be increased by evacuation the area in front of the dam, and excavated materials may be used for the construction of the dam. The structure is provided with an emergency spillway to prevent water from flowing over the dam in flood conditions. The ratio between the basin length and width should be between 2:1 and 9:1.

MP – 30 Rock Filter

Objective: Rock filters provide retention of runoff sediments, decrease runoff flow velocity and energy, and create physical boundaries for OHV's.

Explanation: A rock filter consists of a berm of crushed rock (size 1.5 to 3 inches), wrapped in poultry wire (one inch diameter hexagonal mesh, galvanized 20 gauge), and placed parallel to topographic contour lines on a horizontal surface at the toe of a slope. The purpose of the rock filter is to intercept sediment laden runoff from disturbed areas of the site, reduce flow velocity, promote sedimentation, and release the water as sheet flow. Rock filters are low cost and require low maintenance.

MP – 31 Gabion Mattresses

Objective: To provide retention of runoff sediments, decrease runoff flow velocity and energy, and create a physical boundary for OHV's.

Explanation: A gabion mattress is a wire-mesh box filled with crushed rock. Typical mattress dimensions are: Height – six to nine inches; length – nine to twelve feet; and width – six feet. The purpose of gabion mattresses similar to that of the filter rock in which sediment laden runoff is intercepted from disturbed areas of the site, flow velocity is reduced sedimentation is promoted, and water is released as sheet flow. The main differences between mattresses and filter rock are: gabion mattresses may be placed

on the slope before and after the slope break at the toe; gabion mattresses are more resilient; and mattresses are wider, resulting in better sediment trapping efficiency.

WATER QUALITY & WATERSHED POLICY AND **PLANNING GUIDANCE**

Management Summary & Reference Chronology

- 1984 & 1986 Watershed Protection Measures (also called best management practices or BMP's) were adopted in 1984 Hollister Resource Management Plan & subsequent 1986 Clear Creek Activity Plan.
- 1990, EPA conducted a regional report, "Characterization of Disturbances Related to Mining and Exploration in the New Idria Study Area". This report documented erosion & sediment sources and remedial measures to reduce off-site sediment transport in the area.
- 1992, BLM, publishes in the Federal Register, Planning Criteria for the Clear Creek Environmental Impact Statement. The planning criteria included references to the Clean Water Act, and State of California OHV Grant Soil Loss guidance and standards.
- 1993, BLM's consultant completed a report on the 10,000 acre Clear Creek Watershed, which field mapped and computer modeled the erosion and sediment transport due to natural and anthropogenic causes.
- 1995, BLM's consultant (Pacific Watershed Associates, PWA), completed a 110 mile road related erosion and sediment watershed assessment.
- 1996, BLM installed with the USGS, a water quality monitoring station in Clear Creek. This station monitors water quality (heavy metals, asbestos, total sediment), and is real-time data available both published annually and on the internet.
- 1998, BLM's consultant completed two reports, water quality monitoring of abandoned mined areas, and a geomorphic evaluation of the "OHV play areas".
- 1999, California OHV Green Sticker Grant for Clear Creek requires a soil loss monitoring plan.
- 2000, BLM completes 5 abandoned mercury mine restoration projects.
- 2003, BLM develops dust mitigation plan for the Monterey Bay Unified Air Pollution Control Board, for road related erosion stabilization projects
- 2003, draft mercury sediment TMDL for Clear Creek proposed by Central Coast Regional Water Quality Control Board.

Appendix E

SAN BENITO MOUNTAIN RESEARCH NATURAL AREA INTERIM MANAGEMENT PLAN AND MANAGEMENT GUIDANCE

In 1999 (Clear Creek Management Area Plan Amendment and Final FEIS Record Of Decision, 1999), the BLM designated the San Benito Mountain Natural Area as a Research Natural Area (SBMRNA) to encourage research and provide protection of the unique conifer forest and vegetation communities on and around San Benito Mountain. The 1999 ROD also expanded the boundaries of the existing SBMRNA as identified in this Plan Amendment. A Research Natural Area Management Plan (Activity Level Plan) will be completed within one year. This interim plan will guide management of the SBMRNA and identify management goals and objectives that the subsequent RNA management plan will address in greater detail. Management objectives and prescriptions will be developed that permit natural processes to continue without interference.

1.1 INTRODUCTION

The Bureau of Land Management establishes and maintains Research Natural Areas (RNAs) for the primary purpose of research and education. RNAs have one or more of the following characteristics (43 CFR 8223 – Research Natural Areas):

- A typical representation of a common plant or animal association;
- An unusual representation of a common plant or animal association;
- A threatened or endangered plant or animal species;
- A typical representation of common geologic, soil, or water features;
- Outstanding or unusual geologic, soil, or water features.

J.R.Griffin (1970) stated in his original recommendation to establish the San Benito Mountain Natural Area that "...it would in no way duplicate any North Coast Range serpentine natural area and would be a highly desirable contrast with them." The SBMRNA and proposed expansion possess a combination of soils, climate, elevation, and location that has resulted in an assemblage of serpentine vegetation without duplication elsewhere (Griffin 1970). The San Benito Mountain Forest is the only forest in the world that supports Jeffrey, Coulter, and gray pines, and incense cedar, and Jeffrey x Coulter pine hybrids. The federally threatened San Benito evening-primrose (*Camissonia benitensis*) also occurs here. While not common, serpentine ecosystems range widely in California. Great diversity in California topography, geologic history, and climate makes a representative "typical" serpentine area in California impossible. By including the SBMRNA, BLM completes a full representation of protected serpentine ecosystems of California. The relatively intact soils toxic to most plant species, the isolated high-elevation ecological processes, and the unusual plant and animal species composition qualify the area as having outstanding and unusual ecologic, soil and water features. Parallel to the biological diversity and endemism of the Clear Creek Management Area, the natural mineralogical diversity contributes to the global uniqueness of Clear Creek.

These distinctions represent the function of CCMA forests to conserve the biodiversity represented by the unusual genetic and species assemblages of this Research Natural Area.

The following planning criteria will guide development of the San Benito Mountain Research Natural Area Management Plan:

1.2 PLANNING

1.2.1 Management Goals

The following management goals will contribute to preserving the values for which the RNA was established:

- 1) To protect the globally unique San Benito Mountain serpentine forest ecosystem, special status species, and the adjacent ecotones in their natural state for science research and educational purposes.

The San Benito Mountain serpentine forest ecosystem brings together conifer tree species in the San Benito Forest, a forest type that occurs nowhere else in the world (Griffin 1974; Sawyer and Keeler-Wolf 1995). This forest also has endemic shrub and herbaceous serpentine species that include the federally threatened San Benito evening-primrose (*Camissonia benitensis*). The complex geological history of this area has produced exceptionally toxic soils that have influenced the composition of forest vegetation.

This goal furthers resource management under the Resource Management Plan for the lands administered by the BLM Hollister Field Office (1984, Vegetation and Soil, Air, and Water components) and under the Clear Creek Management Area Proposed Resource Management Plan Amendment and Final Environmental Impact Statement (1995) including the Modified Preferred Alternative 3 (1997).

- 2) To define and create a environment for research designed (1) to investigate and better understand the geology, biology, ecology, and archaeology; (2) to address asbestos related public health issues; and (3) to build an information base for guiding management of this and other serpentine ecosystems on BLM lands.

This goal furthers the public interest under the Environmental Protection Agency regulations regarding asbestos in natural environments. In addition, this goal establishes a natural laboratory for gathering information about this unique ecosystem for improved management and conservation.

- 3) To allow uses inside the RNA compatible with the primary purpose of the Research Natural Area for scientific research and education.

As a natural laboratory, the RNA will have limited public access to reduce impacts and influences of people on the terrain and vegetation. However, BLM will encourage visits guided by BLM personnel and researchers on site for the public. BLM will also specialize in interpretive services for the public so that people may learn about the RNA and enjoy visits to the RNA.

1.2.2 Management Objectives

Management objectives result in actions that BLM and the public evaluate as measures of success in attaining the management goals. Because new information will become a part of adaptive management of the RNA and nearby ecosystems, the management objectives may evolve over time to meet legal requirements and public expectations.

The following list includes management objectives that will contribute to permitting natural processes to continue within the RNA:

- 1) Include and maintain for conservation, within management constraints, the entire San Benito Forest and a buffer with the transitional chaparral / woodland habitats that border the Forest.
- 2) Establish RNA boundaries on the basis of watershed or other natural features. The BLM policy for its Research Natural Areas is to “Permit natural processes to continue without interference.” and to “Determine the boundaries for all vegetation series representatives. In order to preserve the greatest diversity possible, the boundaries will include a variety of slope exposures and elevational features, and should follow natural boundaries.”
- 3) Protect the sites of known occurrences as well as potential habitats of the San Benito evening-primrose and provide conditions within the RNA in support of the recovery plan that conforms to the Biological Opinion for the San Benito evening-primrose issued by the U.S. Fish and Wildlife Service, September 16, 1996.
- 4) Protect existing occurrences and habitat of all other known BLM sensitive species that occur within the RNA boundaries. [Refer to Tables 1 and 2, Appendix F for the list of the BLM sensitive species.]
- 5) Protect all cultural resources and encourage public partnerships for research and educational use of the RNA.
- 6) Consult with Native Americans from local tribes for management consistent with traditional Native American culture and for full tribal participation in planning, research and environmental education.
- 7) Facilitate quality research with an established steering committee selected from: universities and colleges; other private research institutions; the Native American community; federal and State of California government research and regulatory agencies; and public interest groups and advisory committees. The steering committee will identify research needs and guide proposed research. Establishment and function of the steering committee shall meet the provisions established by the Federal Advisory Committee Act (FACA).
- 8) Foster other uses of the RNA that are compatible with its primary purpose. Provide for continued authorized uses such as rights-of-way and easements that are compatible with management values for the RNA.
- 9) Implement the Hollister Resource Management Plan, the Clear Creek Management Area (CCMA) Plan Amendment and accompanying Environmental Impact Statement, and Record of Decision as they specifically apply to the San Benito Mountain Research Natural Area for the protection and improvement of soil, air, biological, and water resources.

- 10) Provide for public safety.
- 11) Develop a Fire Management Plan for the SBMRNA with a pre-fire season trip with the Hollister Field Office Fire Management Officer (FMO) so that the FMO is aware of the sensitive species habitat locations and vehicle access routes.
- 12) Develop a barren area restoration plan to reduce erosion, sediment transport, and restore vegetation buffers.
- 13) Develop a science agenda to determine characteristics of the unique ecosystem that are important and what the management response will be to changes in these characteristics.

1.2.3 Science Agenda

Science supports the sustainable resource management of the Clear Creek Management Area and provides the objective information upon which BLM managers make choices for the benefit of the public. The BLM does not presume to have sufficient funding for all elements in the Science Agenda for the San Benito Mountain Research Natural Area. People interested in the Science Agenda would come from diverse disciplines and interest groups and from diverse government agencies, research institutions, universities in California and other states, and in several instances, internationally.

Development of the Science Agenda would include the following components:

- 1) Natural resource inventories;
- 2) Historic research of sociological and ecological events;
- 3) Vegetation and habitat classification by soil, topography, surficial geology, and climate regime;
- 4) Monitoring for ecosystem processes, species, and recreation;
- 5) Ecological research;
- 6) Ecosystem modeling; and
- 7) Partnerships for accomplishing the science agenda.

1.2.3.1 Natural Resource Inventories

Ultramafic Rock Outcrops and Barrens

Remote sensing techniques and follow-up ground-truthing can delineate more accurately areas of exposed chrysolite-bearing ultramafic outcrops and barrens. The BLM is contracting for digital aerial imagery of the entire CCMA in 2004, correlating spectral reflectance data to vegetation and soil types.

A preliminary database of ultramafic rock outcrops and barrens (Dynamac, 1998) will furnish a set of reference sites where BLM can inventory fungi, plants, and animals found on outcrops and barrens; monitor natural asbestos in the air, water, and soil; and detect and monitor eventual changes stemming from historical OHV recreation play on barrens within the RNA.

Lichen Species

Both saxicolous (on stone) and epiphytic (on trees and shrubs) lichens are present in the SBMRNA. Information about lichens in ecosystems with ultramafic soils and rock is very limited. Saxicolous lichen species on ultramafic rock respond to an atypical geochemical environment as well as extreme ranges of humidity/aridity, temperature, and solarization. The inventory of lichen species will provide a baseline from which researchers can monitor eventual changes in distribution and frequency

within the SBM RNA. Identification of lichens may uncover previously unknown range extensions of rare species and complete the inventory of lichens.

Because lichens are useful for detecting heavy metal concentrations and air-born pollutants, they may serve as indicators of environmental changes relevant to human health and ecosystem function. The unique ultramafic soils in the SBMRNA frequently contain high amounts of mercury, chromium, and other heavy metals as well as unusual assemblages of vascular plant species. Unusual mixes of lichen species may occur as well. The physiological and chemical interactions between lichens and their rock substrates may help researchers to better understand ways to mitigate environments contaminated with heavy metals and asbestos found in the SBMRNA.

Non-Vascular and Vascular Plant Species and Habitats

The diversity of rare vascular plants is one of the most remarkable features of the CCMA. Inventory of all plant species in the SBMRNA is currently underway with the help of BLM natural resource specialists, and local botanists working under the MOU between the BLM and the California Native Plant Society. This Inventory serves as a baseline for GIS analyses describing the ranges of habitat characteristics in which rare plants currently exist, existed in the past, or might exist under BLM management. The inventory will also serve as a baseline for tracking and mapping non-native invasive plants of concern to the BLM and to the California Department of Agriculture.

Existing information sources from herbarium holdings, expert knowledge, and inventory results will describe:

- historically known sites
- historically known sites outside the CCMA but useful to define critical habitat features inside the CCMA
- delineation of first approximations of suitable habitat for each rare species
- plant searches for suitable and occupied habitats
- refinement of delineation of suitable and occupied habitats
- a risk-management strategy, identification of habitat locations that have a high probability to sustain populations without directed BLM management or with species-specific directed management.

The plant species of most immediate concern for mapping and for habitat delineation are found in Appendix F.

Arthropod Species

Little information about the diversity or uniqueness of arthropod species from the Clear Creek Management Area is available. However, endemism of arthropod species in ultramafic ecosystems of the CCMA is likely. Studies of the checkerspot butterflies at Jasper Ridge in Santa Clara County (Dobkin et al. 1987), for example, have documented that rare or endemic arthropods are likely in ultramafic ecosystems of California. The isolation and uniqueness of the SBM RNA forest ecosystem provides an island-like condition for endemic evolution: a forest island within an ultramafic soil island. Many rare ultramafic plants have associated arthropod species that are rare and that have unique physiology, such as accumulation of heavy metals (Schwarz and Wall 2001).

Bat Species

Presently, no data are available about bats resident in the SBMRNA or in the rest of the Clear Creek Management Area. BLM lands elsewhere in California with a history of mining have frequently become important habitats for bats. Abandoned mines host bats, mostly as single-species colonies, and perhaps only seasonally as maternity dens, migration rest stops, hibernation sites, and colonial

roosts during the day. Many bats species are BLM California species of management concern. In view of the absence of information about bat populations in the SBM RNA and the CCMA, wildlife biologists want to know whether abandoned mines there are suitable habitat for bats, and in particular rare bats.

Forest Inventory Analysis of SBMRNA

Currently, the USDA Forest Service, Pacific Northwest Research Station Forest Inventory and Analysis (FI&A) Program has permanent plots, systematically selected throughout the Pacific Coast States. To understand the changes in the SBM RNA forests, the BLM can review the data collected from the Forest Service over several decades. In addition, the BLM would “intensify” the number of long-term monitoring plots by random selection of additional plots.

Small isolated populations of conifer tree species in the Central California Coast Region are important globally for genetic resources. The genetic resources from Jeffrey pine, Coulter pine, and incense cedar from San Benito Mountain resemble island-like distributions analogous to that of Monterey pine in the Central Coast Region. The genetic resources of these conifer species may be atypical in comparison with populations of these species in the core areas of their ranges. Ledig (2000) has found that the unique hybrids between Coulter pine and Jeffrey pine from San Benito Mountain, first described by Zobel (1951a,b), may have altered the genetic structure of Coulter pines through introgression.

1.2.3.2 Historical Research

The research agenda here refers to factors and forces that have shaped the RNA into its present form today and provide a point of departure for management into the future. BLM will encourage other government and university researchers as well as interested members of the public to pursue these topics.

Climate History of the SBMRNA

Understanding the development of soils and vegetation types in the SBM RNA for the future requires identification of the processes that have created the current forest in the RNA. Of particular importance to the BLM is to know whether the ecological conditions in the past that created the current forest are similar to diverse modeled scenarios of future climate.

Fire History of the SBMRNA

Coupled with climate history, fire frequency is likely to have had and will continue to have a profound effect on the vegetation cover of ultramafic soils of the SBM RNA. Knowing the fire history through tree core analysis and soil sampling and correlating that history with information on historical climate will provide BLM resource managers with information to model likely outcomes of future fires in the RNA.

In shrubland parts of the RNA, the chaparral biomass loads may fuel natural fires in ways different from adjacent forest lands. Analysis of fire history in chaparral ecosystems such as those by Keeley (2002) in the Sierra Nevada foothills and Moritz (2003) in the nearby Los Padres National Forest may help BLM managers guide future fire occurrence and protect chaparral vegetation for key vertebrate species that rely on extensive chaparral habitats.

Inundation History of the SBMRNA and Effects on Surficial Geology

Several plant species of management concern, most notably the San Benito evening-primrose, inhabit alluvial terraces of the RNA. Rare floodwater events may be critical to the amount of

potential habitat for the evening-primrose and affect sub-populations of the species with local extinctions and with new habitats after flood events. The history of flood events would provide a range of natural conditions under which the species has survived. If flooding frequencies and intensities begin to occur significantly outside the past statistical distribution of occurrences, BLM managers will be able to respond with conservation measures to meet new conditions.

Human History and Land Use of the CCMA

The BLM archaeologist at the Hollister Field Office has begun compiling current knowledge about the history of the CCMA before European settlement. Additional interpretive information about the history of settlements and land use is invaluable to the public to understanding the types and variety of ecological impacts and economic benefits generated in the CCMA. Values such as recreation opportunity, biological diversity, and ecosystem sustainability are part of the mix of values that people seek from the CCMA.

1.2.3.3 Vegetation and Habitat Classification

The BLM Hollister Field Office contracted a soil survey for the Clear Creek Management Area that met the 1989 Order 3 Soil Survey standards established by the USDA Natural Resource Conservation Service (NRCS). Data from the Survey are now part of the Field Office geographic information system. In the time since completion of the Clear Creek soils survey, the NRCS has expanded its portfolio of services to include delineation of ecological sites, that is, sites with uniform patterns of vegetation types and plant and animal species composition linked to soils, topography, and climate. Classification of vegetation according to correlations with soil types provides important information to resource managers. Information from the ecological site descriptions and delineations help BLM resource managers predict more accurately outcomes of management actions on the soils, plants, and animals of the diverse ecosystems that comprise the Management Area. Ecological site delineation and derived analyses will assist managers in making decisions about restoration projects, habitat suitability and management for targeted wildlife species, and protection measures for plant species composition.

1.2.3.4 Monitoring for Ecosystem Processes and Recreation Use

Rates of Ultramafic Soil Formation and Erosion

One major concern of BLM managers is the stability of ultramafic soils under differing kinds of disturbance. Results from monitoring can combine over time to provide a watershed-scale model of net amounts of sediment flows and changes to stream channel morphology. Both sediment flows and stream morphology are critical factors for shaping and transforming land areas in ways that affect populations of rare plants such as the San Benito evening-primrose.

One easy way to measure soil erosion is to establish silt fences at key sites of overland erosion (Robichaud and Brown 2002). These fences can measure changes to sites, especially near habitats for the San Benito evening-primrose, and provide verification for needed restoration throughout the RNA. Soil Loss Monitoring protocol done in connection with the California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division, BLM would determine locations to establish silt fences in tandem with restoration projects to document the effectiveness of intended improvements.

Water Erosion and Sediment Deposition

Maps of surface geology can help BLM managers organize management actions to improve recreation and to conserve species habitats. Understanding the susceptibility of soils (sediment) to

erosion helps managers to balance management appropriate to the soil and terrain with the capacity for site stability.

Implementing standardized hydrological monitoring for sediment flows and for water quality will provide objective and comparable measures of the success of ecosystem management in the RNA to minimize sediment flows and erosion. Monitoring erosion may be critical for controlling and improving water flows, water quality, and habitat creation and conservation for rare plant species. Soil Loss Monitoring determines routes requiring tread repair, drainage structures, and signing. Soil Loss Monitoring of this sort will continue with modifications as recommended by the federal and state agencies and following the OHMVR Division standards.

Special Status Plant Species

Inventories described in this document will likely contribute information about species that scientists and managers have little information. The uniqueness and comparative ecological isolation of the CCMA, and especially of the SBMRNA, may have created evolutionary conditions for endemism in non-vascular plants, lichens, fungi, and arthropods parallel to the species endemism for vascular plants.

Strategies for Monitoring Species and Species Group

Many tasks for monitoring species and species groups in the CCMA are in place with grant support from the California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division. Monitoring for amphibians, rare plants, raptor birds, and breeding bird censuses are part of the current CCMA monitoring. New elements for species monitoring are: lichens in the SBM RNA, coast horned lizard throughout the CCMA, bat species, and chaparral bird species.

Monitoring for rare plants focuses on ultramafic-endemic vascular plants. BLM has two types of monitoring and associated research for rare plants. BLM monitors all rare plants listed as threatened or endangered by the US Fish and Wildlife Service and all plants designated by the BLM California State Office as Species of Management Concern. The first priority is for establishing field studies for the San Benito evening-primrose (*Camissonia benitensis*). Complete details of monitoring and field studies for the evening-primrose are part of the Recovery Plan for the San Benito Evening-Primrose.

The second set of vascular plants comprises a monitoring watch list of those species categorized by the California Native Plant Society as Class 4 species. These species are sufficiently rare and thought to be adversely susceptible to disturbances stemming from human activities including vehicle travel, mining, and grazing. BLM staff will track selected populations that natural resource specialists see as particularly susceptible to human-caused disturbances.

Special Status Animal Species

Foothill Yellow-legged Frog

The foothill yellow-legged frog is considered a BLM sensitive species and is a federal species of concern. Although this frog species is declining over its entire range, the populations in the Clear Creek ultramafic streams and riparian habitat appear to be self-sustaining. The foothill yellow-legged frog depends on aquatic and terrestrial habitat; however, it is rarely encountered far from permanent water. Ely (1992) conducted herpetological surveys at CCMA in 1992 (Ely, 1992), and BLM staff developed a monitoring protocol for the foothill yellow-legged frogs in 2001. Additional transects were added to monitoring efforts in 2003, and BLM will conduct the next surveys in May-June, 2004.

South Coast Horned Lizard

In the most southern coastal counties of California, the South Coast horned lizard populations are declining rapidly as urbanization (Fisher et al. 2002) and the non-native Argentine ant (Suarez et al. 2000, 2002) spreads over the range of the lizard.

The herpetological surveys conducted in 1992 recorded sitings of this terrestrial species, however, a formal monitoring plan has not been developed to date. BLM Hollister Field Office will work closely with the BLM El Centro Field Office and the US Geological Survey in developing a monitoring plan. A review of monitoring methods is needed to adapt other horned lizard monitoring protocols from desert and chaparral ecosystems for the forest-chaparral mosaic characteristic of the CCMA. The BLM Hollister Field Office will develop the baseline inventory and monitoring protocol for the coast horned lizard in 2004. Monitoring will start in 2004 and cover the species throughout the CCMA.

Populations of Birds of Special Management Concern

Populations of passerine birds in chaparral and chaparral-forest birds are of particular concern because these habitats are increasingly rare and fragmented. Johnson and Cicero (1985) also note that the high-elevation San Benito Mixed Conifer Forests provide habitat islands for several bird species found nowhere else in the Central Coast Range. Changes in the populations of unusual nesting bird species may be initial indicators that the habitat the conifer forest habitat in the SBM RNA is changing.

At the highest elevations in and around the SBM RNA, BLM will coordinate long-term monitoring for breeding populations of the following species: mountain quail (*Oreortyx pictus*), olive-sided flycatcher (*Contopus cooperi*), gray flycatcher (*Empidonax wrightii*), Hammond's flycatcher (*E. hammondii*), California thrasher (*Toxostoma redivivum*), rufous-crowned sparrow (*Aimophila ruficeps*), Bell's sage sparrow (*Amphispiza belli* spp. *belli*), and black-chinned sparrow (*Spizella atrogularis*). In addition, BLM will continue long-standing monitoring for raptor species and the breeding bird survey in the CCMA.

Rare Bat Species

If researchers find that rare bat species are present in the CCMA based on inventory results, bat biologists will assist BLM in the design of species-appropriate to abandoned mines on BLM lands and monitor seasonally the movements of bat species of management concern around important bat habitats for roosting in abandoned mines and for foraging.

Recreation

BLM rangers have been monitoring trail conditions systematically since 2001 according to the Soil Loss Monitoring Standards established by the Off-Highway Motor Vehicle Recreation Division of the California Department of Parks and Recreation. These standards are currently under review by the Division and the partner federal agencies. As data requirements for OHV trail conditions change, BLM will support changes to conform to regulations.

1.2.3.5 Research and Field Studies

The following types of studies may be undertaken within the RNA and would be addressed in the subsequent RNA management plan:

- Distributions of Heavy Metals and Asbestos and Their Cycling Patterns in the Clear Creek Management Area

- Effects of Chrysotile Asbestos on the Health of BLM Employees and Recreation Visitors to the CCMA
- Tree Seed Collection and Ex Situ Tree Breeding
- Demography of Populations of Conifers / Analysis of Aerial Photographs
- Identification of Invertebrates that Impact Tree Growth
- Reforestation Practices to Restore Logged and Burned Forests on Ultramafic Soils
- Rates of Natural Regeneration of Chaparral Shrub Species on High-Elevation Sites with Ultramafic Soils
- Plant Adaptations to Heavy Metals: Cobalt (Co), Chromium (Cr), Copper (Cu), Mercury (Hg), Nickel (Ni), and Selenium (Se)
- Invasions by Non-Native Plants and Animals: Ecosystem Resistance and Management Response for Control on Ultramafic and Non-Ultramafic Soils

1.2.3.6 Ecosystem Modeling

One of the most important elements of land management is ecosystem modeling. Computer-based models are important to management because they incorporate knowledge and data to approximate future outcomes, within intervals of error and defined risks. As new information from inventories, monitoring, and research become available, BLM resource managers adapt models of the Clear Creek Management Area to reflect these new findings. In this way, modeling becomes a catalyst for changes to improve land management.

Depending on the environmental and social concerns of people, the store of predictive models for the Clear Creek Area can be quite large. Based on the topics covered thus far, the following four models are a few of key models that researchers and managers could develop or adapt for simulating future conditions in the CCMA resulting from a program of management actions:

Model 1.	Modeling Natural and Human-Initiated Risks to Long-Term Viability for Species of Management Concern, with special reference to the San Benito evening-primrose;
Model 2.	Modeling Air Quality Impacts in the CCMA under Alternate Management Scenarios, with special reference to the transport of air-borne asbestos, mercury, nitrogen- and sulfur-based gases, and ozone;
Model 3.	Modeling Soil Movement in the CCMA under Alternate Management Scenarios, with reference to the frequency and severity of naturally occurring and human-facilitated erosion; and
Model 4.	Modeling the Development of Forest Vegetation on San Benito Mountain and Changes in the Animal Species Populations, under different interacting scenarios of global (climate change) to local (recreation) impacts.

1.2.3.7 Partnerships

Funding for science at BLM to improve land management has not been a fiscal priority in the recent past. BLM cannot depend on internal funding to initiate or support many of the elements of the Science Agenda. Without investment, tasks for inventories, monitoring protocols, and field research in the San Benito Mountain Research Natural Area may proceed slowly.

The BLM Hollister Field Office staff, and especially its natural resource and recreation specialists, can contribute their time and other in-kind services to scientists and researchers who wish to conduct research. The Field Office staff can continue to foster a setting of engaged inquiry with scientists and researchers at the many government agencies and universities located in the counties that surround the Clear Creek Management Area.

One important step to facilitating environmental studies in the CCMA has been assistance agreements and memoranda of understanding between the BLM California State Office and the University of California and California State University systems, established in 2003. At present, the BLM works with the California state natural resource agencies and other federal agencies to collaborate on joint watershed planning. Such efforts improve lines of communications between BLM employees and interested scientists from regulatory and research agencies and universities.

In the course of researching and preparing the Science Agenda for the SBMRNA, the BLM Hollister Field Office staff found the institutions listed below active in research that is occurring directly in the CCMA or bearing directly on the management issues of the CCMA. The BLM commits itself to working to promote the research work of these institutions in the CCMA and to expanding the roster of institutions involved. By promoting science in the CCMA, BLM promotes improvement of its own management to remain responsive to social and environmental needs for sustainable and robust ecosystems.

Educational Institutions

University of California: Berkeley, Davis, Santa Cruz
California State University System: San Francisco, San Jose, Stanislaus
Stanford University
University of Utah

California State Agencies

Department of Fish and Game
Department of Forestry and Fire Prevention
Department of Parks and Recreation, Off-Highway Vehicle Recreation Division
Department of Water Resources (Water Resources Board)

US Federal Agencies

Environmental Protection Agency
National Science Foundation
US Department of Agriculture, Forest Service, Pacific Northwest Research Station,
Forestry Inventory and Analysis Program
US Department of Agriculture, Forest Service, Pacific Southwest Research Station,
Institute of Forest Genetics
US Department of Agriculture, Natural Resource Conservation Service
US Department of Energy
US Department of the Interior, Geological Survey, Western Ecological Studies Center

Governmental Organizations Outside the United States

Canadian Geological Survey

Non-Governmental Non-Profit Agencies

California Native Plant Society
Southern California Gem Society
Peninsula Gem Society

Point Reyes Bird Observatory

1.2.4 Fire Management

Fire objectives will closely approximate the historical and natural fire regime. Any fire that occurs in the RNA will be followed by monitoring until the area once again approximates its former condition.

Characteristics

This Fire Management Unit (FMU) consists of an area with bald hills which are naturally barren because of serpentine derived soils. The elevations of this FMU range from 2000 feet to over 5000 feet. The highest peak in the FMU is San Benito Mountain, a part of the Diablo Mountain Range, at 5,241 feet. Steep, barren slopes with extremely erosive soils are surrounded by brush-covered slopes, with occasional rock outcrops. The vegetation is unique and valuable for its contributions to science and for its natural beauty. Conifer forests within the FMU also comprise a unique vegetation community.

This FMU supports several sensitive plant species (serpentine endemics), most notably the San Benito evening primrose (*Camissonia benitensis*) and rayless layia (*Layia discoidea*). Both plants are annual and appear only in years of favorable precipitation. The evening primrose has been found in only a few locations – one in the San Benito Mountain Natural Area. It has been listed federally endangered. The rayless layia has a somewhat more widespread distribution. Talus fritillary (*Fritillaria falcata*), also a sensitive plant, occurs in one location on San Benito Mountain. *Pentachaeta exilis aeolica* may also occur in this FMU; this plant is exceedingly rare and its habitat is mainly grasslands off the serpentine area.

Fire History

Fire history for the SBM RNA may be characterized as one of minimal to infrequent fires, as a result of low fuel loads on the serpentine soils and barren landscape. Fire starts are predominantly lightning caused, but the potential for human caused fires exists. Brush fields on north slopes could pose a potential for extreme fire behavior. Fire use and prescribed fire have been used in the past to maintain and promote uneven-aged brush fields to natural conditions.

Fire Management Objectives

- Manage the habitat for threatened and endangered species of plants and animals to maintain viable populations in their natural ecosystems.
- Maintain air quality to meet or exceed applicable federal and state standards and regulations.
- Promote natural conditions within plant communities of the RNA.
- Restore and maintain the structures, species composition, and processes of native ecological communities and existing ecosystems
- Use fire to restore and/or sustain ecosystem health base on sound scientific principles and information, balanced with other societal goals, including public health and safety, and air quality.

Management Emphasis – T&E Plants and Sensitive Plants:

- 1) Protect potential habitat for special status plant species and the Southern Ultramfic Jeffery pine forest.
- 2) Provide mosaic of seral stages.
- 3) Improve native plant community diversity and structure.
- 4) Provide habitat for a number of natives.

Suppression Objectives:

- 1) The use of retardant drops and heavy equipment (dozers) is acceptable in the initial attack to keep the fire small as possible. A resource advisor from the Hollister Field Office must be notified before any retardant drops from aircraft.
- 2) Fire will be managed for the protection of sensitive resource values. Protect the conifer forest and serpentine chaparral – this seems to repeat management emphasis #1 above.
- 3) Keep the maximum individual fire size to ten acres.
- 4) Use existing roads and natural barriers as the preferred method for containment and control of wildfire in the FMU.
- 5) The Monterey Air Board must be notified when any earth disturbance activities occur to conform to the Air Toxic Control Measures (ATCM).
- 6) The potential for the BLM to inherit the wildfire after the first 24 hours of suppression may be possible if objectives are not being met in accordance with the RMP and FMP.

Fire Use and Prescribed Fire Objectives:

- 1) Burn 10 to 100 acres a year on a rotational basis (on a 10-year rotation). Specific seasonal timing, patch size, yearly total and rotational time for chaparral type fuel is to be coordinated with resource personnel.
- 2) Fuels treatment may be considered as needed by a site-specific plan. Allow the use of prescribed fire to promote natural conditions.
- 3) Use prescribed fire, wildland fires, and mechanical and chemical treatments to protect and maintain rare, threatened, and endangered (RTE) plants and habitat, chaparral components important to wildlife, and the spread of invasive plants.
- 4) Construct hand line and natural fuel breaks as for control lines and firing.
- 5) Protect and enhance the conifer forest within the RNA. What does this mean?
- 6) All local and state air quality objectives will be met prior to ignition of prescribed fires.

Post Fire Rehabilitation and/or Restoration Objectives:

- 1) Initiate post-fire rehabilitation and restoration to re-establish quickly the RTE plants and chaparral and annual grasses important to wildlife.
- 2) Prevent soil erosion and flooding by outfitting fireline and fuel breaks with water bars.
- 3) Monitoring and evaluate ecological effects from fire. (For example, the unwanted introduction and spread of invasive plants and weeds).
- 4) Reseed with stock from local native plants in appropriate sites for species or use straw bales to trap seed and hold water at seed germination sites.

Restoration and rehabilitation will emphasize the reestablishment and perpetuation of RTE species, habitat diversity for a number of natives and improve the native plant community diversity and structure.

Fire Management Strategies:

- Use of Appropriate Management Response (AMR) to manage all fires for management objectives and based on current conditions and fire location.
- Prevent wildland fires from spreading to private land and the repeater tower site on San Benito Mountain.
- The use of aerial application of fire retardant and the use of natural barriers is the choice for containment.
- Restore and Rehabilitate fire suppression lines created during fire suppression efforts in a timely manner to prevent erosion. Straw may be used on areas with soil disturbance to learn more about the effects from fire suppression efforts.

Implement the full range of wildland fire fuels management practices, including prescribed fire, chemical, biological, and cultural treatments that will move all affected landscapes toward desired future condition as described in the RMP. AMR strategies would respond appropriately to address areas where plant communities are at high risk due to current conditions or other ecological constraints. AMR strategies would address critical habitat for wildlife, T&E species, areas of soil instability, and preservation of cultural resources. Use AMR to prevent wildland fires from spreading to private and other agency lands. All fires occurring at Fire Intensity Levels (FIL) 1 through 3 will be suppressed at <100 acres 90% of the time. All fires occurring at FIL 4-6 will be suppressed at <10 acres 75% of the time. Once the decadal burn target has been reached of 300 acres, from either planned or unplanned ignitions, a review of objectives and strategies will lead to new suppression criteria on all wildland fires. Predominate fire cause would more likely be caused by humans and/or possible lightning with size class A through D.

The appropriate management response is to prevent wildland fires from spreading to private land and to the repeater tower location on San Benito Mountain. Suppression is coordinated between BLM and CDF. The FMU is within Local Responsibility Area where the State provides direct protection under contract with the agency. But because of asbestos in the FMU, CDF will not enter the SBM RNA, but rather take up a support function outside of the FMU, to prevent further spread of wildfire. If resources are needed for suppression within the FMU, local red carded firefighters with hazardous

asbestos health and safety training and other required training can enter the asbestos area. Additional resources will also need the proper training if extended fire suppression is required. Aerial application and the use of natural barriers is the choice for containment within the FMU. This FMU has very limited accessibility by land.

Wildland Fire Use

Wildland fire use for resource benefit is a fire management option within this FMU. Allow wildland fire use to promote natural conditions [which are?]. Established natural barriers may be able to hold fire within certain areas, depending on time of year, fuel loading, weather, location, and firefighting resources on hand, and if safety concerns have been addressed and mitigated.

Refer to the section on Fire Management in the San Benito Natural Area in the Hollister Fire Management Plan.

1.2.5 Recreation Access

Recreation and access will be fully addressed in the subsequent RNA management plan, using the Recreation Opportunity Spectrum (ROS) process, consistent with RNA management objectives. This process will identify recreation activities to be managed or discouraged in the RNA, including:

- OHV touring
- Competitive Events
- Commercial Activities (e.g., filming, outfitters)
- Camping
- Educational Field Trips
- Hiking
- Hunting
- Target Shooting
- Equestrian Trail Rides
- Mountain Bicycling
- Rock Hounding
- Bird/Wildlife Viewing
- Botanizing

1.3 MONITORING

The following monitoring methods will be continued and/or developed and implemented to fulfill the aforementioned goals and objectives. Additional biological and abiotic monitoring will be and assessed and implemented as a result of adaptive management.

- 1) Continue to collect data on San Benito evening-primrose (*Camissonia benitensis* (CABE)) from the known populations within the SBMRNA. The monitoring data will enable the BLM assess the recovery and habitat condition of this federally threatened plant species. Ongoing consultation with the US Fish and Wildlife Service will continue.

BLM will continue to fulfill its responsibilities for species recovery under the Federal Endangered Species Act.

Monitoring: BLM compliance with stipulations for managing the San Benito evening-primrose from the US Fish and Wildlife.

Monitoring: Public Compliance with Regulations and with BLM's Protection Measures Concerning Habitats for the San Benito evening-primrose.

Objectives:

This monitoring program documents in a systematic and repeatable way what type and intensity of disturbance occurs on potential and occupied habitats of *Camissonia benitensis* on a monthly basis during the use season (Oct-Apr) and bimonthly (May-Sep) outside of the primary use season. With this documentation, BLM can be accountable as to when inspections were made, what was found on the ground, what was done in response, and when corrective measures were taken.

First, BLM monitors public compliance at known sites for San Benito evening-primrose.

Second, BLM monitors the effectiveness of its measures to protect the species and its habitats with informational signs, fences, and pipe barriers to reduce disturbances caused by motorcycles and other vehicles in San Benito evening-primrose habitats. Inspection of protection measures shall occur on a weekly basis. The BLM and the US Fish and Wildlife Service designed a monitoring program (BLM, 1998) that conforms to the recent "no-jeopardy" biological opinion from the Service.

Third, BLM monitors the frequency of disturbances to evening-primrose habitats from landslides, flooding and other natural events.

Fourth, this monitoring also documents the Bureau's responsiveness (implementation monitoring) to these findings.

Monitoring Protocol Methods and Materials:

BLM natural resource specialists and volunteers inspect each known site in sufficient detail to determine whether change, either human-caused or natural, has occurred since the last inspection. The time needed at each potential habitat site varies by site size, its distance from a designated route, and the integrity around the perimeter of the habitat patch. Depending on the weather conditions and water level in Clear Creek, inspections take from less than five minutes to 120 minutes per site. One BLM employee working two days each month can complete compliance and effectiveness monitoring each month. Monitoring is possible in one day if BLM employees use a motorcycle or quad-runner to reduce transit time between polygons.

The protocol considers a human-caused disturbance within an area closed to the public or otherwise protected from motorized travel from a recreation visitor an instance of non-compliance, and is recorded for future management decisions. Non-compliant events vary in type, number and severity.

At each site during each visit an observer must:

- *Review tables for changes or unfinished recommendations*
- *Compare the site to the base map*
- *Check trails for use*
- *Check for new trails*
- *Check that signs are in place*
- *Check for use impacts in habitat*
- *Check for barrier damage (including tampering)*

- *Obscure tracks to establish baseline for the next inspection*
- *Identify impacts by location, type and severity*
- *Retake reference photos pre- and post-use season*
- *Check for sediment or erosion impacts to habitat*
- *Photograph impacts when warranted*

Each habitat site for *C. benitensis* is unique, and therefore, the inspection requires different strategies. If physical barriers are present at a site, BLM employees inspect the barriers to look for obvious breaks and to see whether people have moved barriers to hide the tampering. Cover-ups are the most difficult type of user non-compliance to detect quickly. However, because of the detailed notes available on track numbers and locations, BLM employees usually detect these kinds of infractions even when an attempt to obscure vehicle tracks is made.

Adaptive Management in Response to Compliance and Effectiveness Monitoring for the San Benito Evening Primrose

This monitoring tests the efficacy of recommended protective measures, detects gaps in protection, and report gaps in the protection of *C. benitensis* habitat. In areas where data collection shows that people have driven vehicles across habitat areas, BLM resource specialists respond with measures to reduce damage and reinforce public compliance.

Every two months the BLM Hollister Field Office reports on the findings from monitoring the *C. benitensis* habitats and on the management responses to prevent illegal damage to plants and their habitats. The degree of compliance with BLM regulations and with BLM management measures to protect the evening-primrose sets up structure for adaptive management of the RNA. One aspect of adaptive management for the benefit of the San Benito evening-primrose is to create habitat suitable for the species at sites where habitat does not currently exist. Creation of new habitat would be a hedge against loss of original habitat and reduce the risk of extinction of a plant subpopulation in the event of a rare event such as a flood.

Monitoring Population Counts of the San Benito Evening-primrose

Population monitoring is improving understanding of the status, distribution and habitats of this species (Taylor 1992 and 1995, BLM 1997). In addition to the plant inventory, botanists documented the descriptions of habitat and threats to potential habitats and occupied occurrences.

- number of known / historic / extant / potential habitat sites
 - pattern of distribution (patchy, ephemeral, scale, habitat shape)
 - time since last observed
 - status of populations at sites of known habitats annually (counts, biomass)
 - quality of sites: frequency, intensity, and extent of natural and human disturbances
 - portion of potential habitat as occupied: annually, short-term, long-term
 - measures of connectivity of habitat and of genetic composition
 - population trend
 - presence of pollinators / fecundity / viability of seed
- 2) Continue to monitor known locations, and increase inventory efforts, of all sensitive plant and animal species that occur within the SBMRNA (Appendix F).

These special status plants are include the rayless layia (*Layia discoidea*), talus fritillary (*Fritillaria falcata*), San Benito fritillary (*Fritillaria viridea*), twolobe spineflower (*Chorizanthe biloba* var.

immemora), slender pentachaeta (*Pentachaeta exilis* ssp. *aeolica*), and coast range false bindweed (*Calystegia collina venusta*).

Monitoring Objectives

This monitoring program for rayless layia documents in a systematic and repeatable way: the status of human and natural disturbance on known *L. discoidea* populations and its potential and occupied habitats; and the pattern of appearance of plants in known occupied habitat.

Monitoring Protocol

During 2004, the BLM Hollister Field Office and the California Native Plant Society will develop a species-specific inventory and monitoring protocol for *L. discoidea* that follows with the ongoing mapping and inventory work to describe the range and habitat for this species. Monitoring habitat will occur monthly.

Management Response Based on Monitoring

Management prescriptions for *L. discoidea* are consistent with management for *C. benitensis*. Further research regarding site characteristics for *L. discoidea* and *C. benitensis* is critical to gain an understanding of each species' ecological requirements. Based on monitoring results, adaptive management will determine actions and protection measures for all sensitive plant species within the RNA. In areas of high use or where continued non-compliance occurs, fences are constructed for added protection.

Monitoring for special status animal species will include the foothill yellow-legged frog and South Coast horned lizard. BLM staff developed a monitoring protocol for the foothill yellow-legged frogs in 2001. Additional transects were added to monitoring efforts in 2003. BLM will conduct annual surveys for this species. Herpetological surveys conducted in 1992 recorded sitings of the South Coast horned lizard. However, a formal monitoring plan has not been developed to date. BLM Hollister Field Office will work closely with the BLM El Centro Field Office in developing a monitoring plan. The El Centro Field Office has taken the lead in multi-agency monitoring across the range of the rare flat-tailed horned lizard (*P. mcallii*). A review of monitoring methods is needed to adapt other horned lizard monitoring protocols from desert and chaparral ecosystems for the forest-chaparral mosaic characteristic of the CCMA.

The BLM Hollister Field Office will develop the baseline inventory and monitoring protocol for the coast horned lizard in 2004. Monitoring will start in 2004 and cover the species throughout the CCMA.

3) Soil Loss Monitoring

BLM staff has been monitoring trail conditions systematically since 2001 according to the Soil Loss Monitoring Standards established by the Off-Highway Motor Vehicle Recreation Division of the California Department of Parks and Recreation. These standards are currently under review by the Division and the partner federal agencies. As data requirements for OHV trail conditions change, BLM will support changes to conform to regulations. Soil loss monitoring in the RNA will continue on designated routes in accordance with State soil loss guidelines. Based on this survey, routes requiring tread repair, drainage structures, and use signing are identified for further investigation and correction by resource and implementation staff.

As trail or barren conditions relate to undesired erosion rates, BLM will install silt fences to monitor for sources of erosion. BLM will close and reconfigure trails when trails are the cause of erosion.

Highest priority trails are those that are in the immediate vicinity of populations of the San Benito evening-primrose. Second priority for BLM is those trails that cross known habitats of BLM species of management concern. Third priority of concern is those OHV trails that cross potential habitats of BLM species of management concern.

- 4) Continue breeding bird and nest surveys in the SBMRNA.

The high-elevation San Benito Mixed Conifer Forests provide habitat islands for several bird species found nowhere else in the Central Coast Range. Changes in the populations of nesting bird species may be initial indicators that the habitat the conifer forest habitat in the SBMRNA is changing.

Chaparral bird species as indicators of large-scale environmental change are as follows: California thrasher (*Toxistoma redivivum*), rufous-crowned sparrow (*Aimophila ruficeps*), Bell's sage sparrow (*Amphispiza belli* spp. *belli*), and black-chinned sparrow (*Spizella atrogularis*). These four species are key indicator bird species nominated by the Point Reyes Bird Observatory for the California Partners In Flight Program for bird conservation (Lovio et al., 2003). At the highest elevations in and around the SBMRNA, BLM will coordinate long-term monitoring for breeding populations of the following species: mountain quail, olive-sided flycatcher (*Contopus cooperi*), gray flycatcher (*Empidonax wrightii*), and Hammond's flycatcher (*E. hammondii*).

In addition, BLM will continue long-standing monitoring for raptor species and the breeding bird survey in the CCMA.

- 5) Inventory and monitor the San Benito Mountain conifer forest to gain an understanding of the demography and health of the populations.
- 6) Monitor and develop protocol to eradicate and control invasive plant and animal species.
- 7) Design and implement habitat restoration plan to obscure and/or rehabilitate closed trails and to measure and control erosion.
- 8) Continue ORV compliance monitoring and increase enforcement as necessary to halt unauthorized vehicle use in the SBMRNA.

Law enforcement officers from BLM and from the Sheriff's Departments of Fresno and San Benito Counties check regularly for compliance among OHV recreation visitors to the CCMA. All BLM law enforcement and park rangers have training in monitoring OHVs for compliance with California State Standards for Noise. Monitoring for noise is ongoing and is an integral part of the workload for rangers.

Information about the spectrum of visitors to the CCMA is of poor quality. BLM needs much more information about the people who are visiting the Area because their thoughts and opinions about BLM services for the Area can guide resource and recreation management. Also, demographic information from visitors and from nearby residents can help BLM plan better for future changes in recreation management. Another aspect for monitoring is remote sensing with electronic counters to record numbers of vehicles at major entrance points and selected locations. This visitation information is important in understanding recreation use patterns and in developing strategies to address recreation use demand

- 9) Develop a monitoring plan for all fire management projects for the SBMRNA.

- 10) Develop a barren monitoring plan that will enable BLM staff to understand the biologic crust and implement management actions to control erosion rates and sediment delivery from serpentine barrens.

Monitoring rates of soil formation and erosion in areas with naturally occurring processes and in areas impacted by human use, can combine over time to provide a watershed-scale model of net amounts of sediment flows and changes to stream channel morphology. Both sediment flows and stream morphology are critical factors for shaping and transforming land areas in ways that affect populations of rare plants such as the San Benito evening-primrose.

One easy way to measure soil erosion is to establish silt fences at key sites of barren related erosion. These fences can measure changes to sites, especially near habitats for the San Benito evening-primrose, and provide verification for needed restoration throughout the RNA. When indicated by Soil Loss Monitoring protocol done in connection with the California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division, BLM may establish silt fences at barren erosion sites in tandem with restoration projects to document the effectiveness of intended improvements. Monitoring erosion throughout sub-watersheds of the RNA may be critical for minimizing sediment flows, improving water flows and water quality, and habitat creation and conservation for rare plant species.

1.4 ALLOWABLE USES

Uses inconsistent with the preservation of the values for which the RNA was designated will not be allowed. Allowable uses will be addressed in detail in the subsequent RNA management plan. Allowable uses identified in this document will guide management of the RNA in the interim.

The following uses will be allowed:

- Educational tours;
- Research – require written authorization;
- Existing rights-of-way, easements, and real estate permits;
- Motorized and mechanized vehicle use on designated open routes;
- Native American access – written authorization if beyond the scope of allowable uses;
- Prescribed fire – to preserve the desired characteristics of the RNA;
- Hiking on marked and designated trails.

The following uses will not be allowed:

- Camping
- Hunting/target shooting
- Special Recreation Permit events except on R011 (Spanish Lake Road)
- Geo-caching
- Paintball
- Hang-gliding
- Wood-fueled campfires
- Plant or animal collection
- Collection of cultural resources
- Wood collection

- Metal detectors
- Grazing
- Timber harvest

The above restrictions apply to recreational use only and may be allowable for research projects. This list is not all-inclusive and any uses not specifically authorized are restricted. Activities involving organized groups or commercial activities would need written authorization.

All uses will be in accordance with 43 CFR 8223.1

- A) No person shall use, occupy, construct, or maintain facilities in a research natural area except as permitted by law, other Federal regulations, or authorized under provisions of 43 CFR 8223.
- B) No person shall use, occupy, construct, or maintain facilities in a manner inconsistent with the purpose of the research natural area.
- C) Scientists and educators shall use the area in a manner that is non-destructive and consistent with the purpose of the research natural area.

APPENDIX F SPECIAL STATUS SPECIES

Special Status Plant Species

Special status plant species are those species that are: (1) Federally listed as Threatened or Endangered; (2) Federally proposed as Threatened or Endangered; (3) Federal candidates for listing as Threatened or Endangered; (4) State listed as Endangered, Threatened, or Rare; or (5) designated as sensitive by the BLM California State Director.

Seven different special status plant species occur within the CCMA. One of these species, the San Benito evening-primrose (*Camissonia benitensis*), is listed as federally threatened and is described in section 3.4.2. These plant species are either locally rare populations (geographic endemism) or are only known to exist on serpentine soils (edaphic endemism). The BLM considers special status species in planning any BLM-authorized activity, to ensure that the BLM does not contribute to negative impacts and declines of the species populations and their habitats.

The species described below are also listed by the California Native Plant Society as List 1B. List 1B includes plants that are rare, threatened, or endangered in California; therefore, it is mandatory that they be fully considered during preparation of environmental documents relating to the California Environmental Quality Act (CEQA). All of the plants that make up List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. Extensive inventory and monitoring by protocols is underway for the San Benito evening-primrose and the rayless layia (*Layia discoidea*). The remaining special status plant species in the CCMA will be part of an inventory and monitoring program scheduled for Spring 2004 and beyond.

Table X. Native Plant Species of Management Concern in the Clear Creek Management Area

Common Name Scientific Name Family	Life Form	Legal Status	Habitat	Vegetation Community
Federally Listed Plant Species				
San Benito Evening-primrose <i>Camissonia benitensis</i> Onagraceae	annual herb	FT BLM SS CNPS List 1B	chaparral, cismontane woodland, serpentine terraces. Known only from San Benito and w. Fresno Counties	Serpentine barrens, foothill pine / chaparral – woodland, serpentine riparian
BLM Special Status Plant Species				

Rayless layia <i>Layia discoidea</i> Asteraceae	annual herb	BLM SS FSC CNPS List 1B	Chaparral, cismontane woodland, lower montane coniferous forest, serpentine alluvium and serpentine talus. Known only from W. Fresno and San Benito Counties, primarily within the CCMA ultramafics.	Serpentine barrens, foothill pine / chaparral – woodland, southern ultramafic Jeffrey pine forest, serpentine riparian
Pale yellow tidytips <i>Layia heterotricha</i> Asteraceae	annual herb	BLM SS FSC CNPS List 1B	cismontane woodland, juniper woodland, valley and foothill grassland, on alkaline or clay soils, 300 to 1600 m elevation	This rare species is known from one site on private land in the far southeast corner of the CCMA.
Golden madia <i>Madia radiata</i> Asteraceae	annual herb	BLMS CNPS List 1B	cismontane woodland, valley and foothill grassland, 25 to 900 m elevation	There is one record of this species at the south end of the CCMA. Another occurs about 400 m from the CCMA boundary on the north side.
Mt Diablo Phacelia <i>Phacelia phacelioides</i> Hydrophyllaceae	annual herb	BLMSS CNPS List 1B	Chaparral, cismontane woodland, talus slopes, serpentine	Serpentine barrens, Non-serpentine
Panoche pepperweed <i>Lepidium jaredii</i> ssp. <i>album</i> Brassicaceae	annual herb	BLMS CNPS List 1B	valley and foothill grassland, on alluvial fans and washes, 185 to 275 m elevation	Botanists have found this species about 100 m outside the CCMA eastern boundary.
gray (Indian Valley) bushmallow <i>Malacothamnus aboriginum</i> Malvaceae	perennial deciduous shrub	BLMS CNPS List 1B	chaparral, cismontane woodland, on rocky soil, usually in burned areas, 150 to 1700 m elevation	This species is known from two locations inside the CCMA.
San Benito Fritillary <i>Fritillaria viridea</i> Liliaceae	annual herb	BLM SS CNPS List 1B	Chaparral, serpentine slopes.	Serpentine barrens, foothill pine / chaparral – woodland, southern ultramafic Jeffrey pine forest
San Benito Spineflower <i>Chorizanthe biloba</i> var. <i>immemora</i> Onagraceae	annual herb	BLM SS CNPS List 1B	Chaparral, cismontane woodland, sandy and gravelly soils. Known only from the East slope of the Diablo Range.	Foothill pine/chaparral - woodland
Slender pentachaeta <i>Pentachaeta exilis</i> ssp. <i>aeolica</i> Asteraceae	annual herb	BLM SS CNPS List 1B	Valley and foothill grassland. Known only from Monterey and San Benito Counties.	Non-serpentine

Talus Fritillary <i>Fritillaria falcata</i> Liliaceae	annual herb	BLM SS CNPS List 1B	Chaparral, cismontane woodland, shale granite or serpentine talus.	Serpentine barrens, foothill pine / chaparral – woodland, southern ultramafic Jeffrey pine forest
Other Plant Species of Management Concern				
<i>Aspidotis Carlotta-halliae</i> Carlotta Hall's Lace Fern Pteridaceae	fern	CNPS List 4	Generally serpentine slopes, crevices, outcrops	Serpentine barrens, foothill pine – chaparral woodland, southern ultramafic Jeffrey pine forest
Heerman's Buckwheat <i>Eriogonum heermannii</i> Polygonaceae	Perennial shrub	CNPS List 4	Serpentine, sandy washes	Serpentine riparian (terraces)
Monardella antonina ssp. Benitensis Lamiaceae	Perennial subshrub	CNPS List 4	Chaparral, serpentine	Serpentine barrens, foothill pine – chaparral woodland, southern ultramafic Jeffrey pine forest
Santa Clara thornmint <i>Acanthomintha lanceolata</i> Lamiaceae	annual herb	CNPS List 4	Chaparral, often serpentine, cismontane woodland, coastal scrub, rocky.	Serpentine barrens, foothill pine – chaparral woodland, southern ultramafic Jeffrey pine forest
San Benito Thornmint <i>Acanthomintha obovata</i> ssp. <i>obovata</i> Lamiaceae	annual herb	CNPS List 4	Chaparral, often serpentine, cismontane woodland, coastal scrub, rocky.	Serpentine barrens, foothill pine – chaparral woodland, southern ultramafic Jeffrey pine forest
South Coast Range Morning Glory <i>Calystegia collina</i> ssp. <i>venusta</i> Convolvulaceae	Perennial herb	CNPS List 4	Chaparral, cismontane woodland, valley and foothill grassland, serpentinite	Serpentine barrens, foothill pine – chaparral woodland, southern ultramafic Jeffrey pine forest
Hernandez Bluecurls <i>Trichostema rubisepalum</i> Lamiaceae	Annual herb	CNPS List 4	Gravelly streambeds	Serpentine riparian, Serpentine vernal pools

Special Status Plant Species

Rayless Layia - *Layia discoidea*

The rayless layia is a two- to six-inch tall herbaceous member of the sunflower family which, produces in May inconspicuous yellow flowers lacking the showy, outwardly-extending ray flowers typical of most sunflowers. The legal status of this species includes federal species of concern, BLM

special status and CNPS list 1B. The distribution of the rayless layia includes approximately 25 known populations limited to the CCMA and to the Hepsedam Peak - Laguna Mountain area of Laguna Ranch two miles southwest of the CCMA. This distribution is as follows;

14 in Clear Creek watershed (all on public – fencing partially protects seven populations; another is the sole population of this species located in the San Benito Mountain Research Natural Area),

7 in San Carlos Creek watershed (five on public land),

2 in the Laguna Creek watershed (both on private land),

1 in Picacho Creek watershed (public),

1 in White Creek watershed (public),

25 TOTAL (21 of which are on public lands within the CCMA)

Habitat for the rayless layia includes steep rocky (talus) slopes, serpentine barrens, openings on steep slopes within chaparral stands and under forest canopy, and stream terraces. Potential and occupied rayless layia sites occur in the following vegetation communities; serpentine barrens, serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine forest, and serpentine riparian. Portions of seven populations have been protected. Road construction and vehicle traffic have impacted portions of these and other known populations and available habitat for this species in the CCMA to the extent that this species may warrant listing as federally threatened or endangered in the near future.

Pale Yellow Layia – *Layia heterotricha*

The pale yellow layia is known from few occurrences in non-serpentine soils southeast of the CCMA and one record on private lands within the CCMA. This fragrant member of the sunflower family is a CNPS 1B species that inhabits open, clay soils found in cismontane woodland, pinyon and juniper woodland, valley and foothill grassland.

Showy Madia – *Madia radiata*

Showy madia, a CNPS 1B species, has been observed on non-serpentine soils in the south end of the CCMA. The golden yellow flowers open in clusters during March and April providing showy displays. This uncommon, annual herb occurs on grassy slopes of cismontane woodlands and valley and foothill grasslands.

Mount Diablo Phacelia - *Phacelia phacelioides*

The Mount Diablo phacelia, a BLM special status, CNPS 1B rare species, is a two- to twelve-inch tall member of the waterleaf family. It produces purple-striped, white flowers in a coiled inflorescence at the tops of its branches from April to May. This plant is known to occur in fourteen rocky or chaparral sites in Alameda, Contra Costa, Stanislaus, and Santa Clara counties, and two sites in San Benito county within the CCMA. Within the CCMA the Mount Diablo Phacelia can be found in serpentine foothill pine-chaparral woodland and non serpentine vegetation communities.

Panoche Pepperweed – *Lepidium jaredii* ssp. *album*

The Panoche pepperweed, a member of the mustard family, is a CNPS 1B species that occurs outside the CCMA in non-serpentine soils. This tiny annual herb occurs in alkali soils within valley and

foothill grasslands near the CCMA, however, no locations have been sited within the CCMA boundaries.

Indian Valley Bushmallow – *Malacothamnus aboriginum*

The Indian valley bushmallow is a small perennial shrub known from s. San Benito, e. Monterey and w. Fresno counties. Only two locations of this hairy shrub are known from the CCMA on rocky soils. This species responds favorably to fires and is often seen in greater numbers in burned areas.

San Benito Spineflower - *Chorizanthe biloba* var. *immemora*

The San Benito spineflower is a BLM special status, CNPS 1B annual herb that occurs in Fresno, Monterey, and San Benito counties. Its habitat includes sandy to gravelly openings on sedimentary soils in dry woodland and chaparral. These soils are found in the serpentine foothill pine-chaparral woodland, and serpentine riparian vegetation communities within the CCMA. Reveal and Hardham (1989) documented one of the few known populations of this species was documented near the mouth of Clear Creek in 1988. In 1994, BLM fenced a one-mile long area that surrounds this location to prevent impacts from vehicle use. Little is known about the San Benito spineflower, but it is exceedingly rare (Reveal and Hardham 1989).

San Benito Fritillary - *Fritillaria viridea*

The San Benito fritillary is a BLM special status species and CNPS 1B, is a lily that grows at two to four years of age a one- to three-foot stem with periodic whorls of leaves and green-brown flowers. It is known from Monterey, San Benito, and San Luis Obispo Counties. Recent surveys in the CCMA have documented several new populations in openings between shrubs in the serpentine barren, serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine and non-serpentine vegetation communities. Habitat for this species is quite widespread in the CCMA and the San Benito fritillary may have several hundred populations in the CCMA.

Talus Fritillary - *Fritillaria falcata*

The talus fritillary is a lily that grows from a bulb five to six inches below ground. Between March and May, plants produce mottled yellow-green flowers nearly prostrate on the ground. This fritillary occurs in five counties but only nine populations of this species have been recorded, and it is considered as BLM special status and CNPS 1B. Most populations support less than 100 individuals. One of the two populations in the CCMA supports several hundred individuals, making this the largest population of this species. Most individuals within this population are inside a protective fence enclosure. The other population in the CCMA is inside the San Benito Mountain Research Natural Area. This population is unfenced but impacts or threats to this population have not been recorded at this site. Low-intensity searches for additional populations of this fritillary, in apparently suitable habitat, have not documented additional populations, indicating that this species may be extremely rare. Inventory needs should be conducted in openings between shrubs in the serpentine barren, serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine and non-serpentine vegetation communities.

Slender Pentachaeta - *Pentachaeta exilis* ssp. *aeolica*

The slender pentachaeta is a three- to five-inch tall herbaceous member of the sunflower family. This species is considered as BLM special status and CNPS 1B. It produces flowers with red-yellow centers (tube flowers) and white, outwardly extending (ray) flowers during April-May. This species

is exceedingly rare and is currently known from only two sites in the Santa Lucia Mountains near The Indians and from two sites near the mouth of Clear Creek in non-serpentine valley oak savannah. During 1994, BLM fenced the only known population of this species on public lands within the CCMA as well as most of the grassland that is suitable habitat for this species.

Other Plant Species of Concern (CNPS List 4)

In addition to the above special status plant species, several uncommon plant species that are typically associated with serpentic soils occur throughout the CCMA as well. The following species are on the CNPS List 4, a watch list for species of limited distribution.

Carlotta Hall's Lace Fern – *Aspidotis carlotta-halliae*

A member of the Pteridaceae family, the Carlotta Hall's lace fern is a perennial fern with fronds that are 8-15 cm long, with leaflets (frondlets) that are tri-pinnate and leathery. This uncommon lace fern is known from five counties in the central western geographic subdivision of California. Carlotta Hall's lace fern habitat consists of rocky outcroppings and crevices, primarily on serpentine. The number of occurrences within the CCMA is unknown and inventory efforts are underway.

Hernandez BlueCurls – *Trichostema rubisepalum*

The Hernandez blue curls is a highly aromatic, annual plant that occurs in gravelly stream beds in Napa, Tuolumne, Mariposa and San Benito counties. This species is known from only a few occurrences throughout the CCMA in the serpentine riparian vegetation community.

San Benito Thornmint - *Acanthomintha obovata* ssp. *obovata*

The San Benito thornmint is an aromatic annual herb that blooms from April to July. The plants are four to 25 cm high, glandular, with spiny leaves and with purple-tipped white flowers. This member of the mint family occurs on grassy slopes, in oak woodlands, and in chaparral, only in San Benito and Monterey counties. A few populations are known to occur within the CCMA in serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine forest and non-serpentine vegetation communities.

Santa Clara Thornmint – *Acanthomintha lanceolata*

This aromatic, spiny, annual herb, Santa Clara thornmint, is a member of the mint family. The plants are ten to 30 cm high, glandular, with pink-tipped white flowers. This thornmint occurs in few scattered location in seven counties, including San Benito and Fresno counties. Its habitat includes rocky serpentine outcrops in serpentine barren, serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine forest and non-serpentine vegetation communities. Several populations are present within the CCMA, however, a thorough inventory needs to be conducted.

San Benito Monardella - *Monardella antonina* ssp. *benitensis*

The San Benito monardella is a fragrant, perennial herb that blooms July-August. The plants are low growing, generally less than 60 cm with purple flowers that occur in clusters. This species occurs on serpentine barrens and outcroppings and is only known from the New Idria serpentine area in San Benito County. Several populations have been documented within the CCMA serpentine barren, serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine forest and non-serpentine vegetation communities. Thorough inventory efforts have not been conducted.

Guirado's Goldenrod – *Solidago guiradonis*

Guirado's goldenrod, a rare perennial member of the sunflower family, is known only from the CCMA in both San Benito and w. Fresno counties. This lovely goldenrod occurs in serpentine riparian vegetation community in heavy, asbestos-laden soils.

Western Heermann's Buckwheat – *Eriogonum heermannii* var. *occidentale*

The western Heermann's buckwheat, a member of the buckwheat family, is a dioecious shrub bearing white to pink flowers that bloom from July to October. Its habitat is clay or shale slopes of only San Benito and Monterey counties. Within the CCMA, this buckwheat grows on the lower Clear Creek stabilized terrace. Further inventory and monitoring efforts are planned for 2004.

South Coast Range Morning Glory - *Calystegia collina* ssp. *venusta*

The South Coast Range morning glory is known from a four-county area: Santa Barbara, Monterey, San Benito, and Fresno Counties. Plant surveys during 1991-1992 uncovered several populations in the Diablo Range near Vallecitos Valley, on Laguna Mountain, at Turkey Flat, and at the mouth of Clear Creek. This morning glory may occur on serpentine in some areas, and it is abundant on serpentine near Table Mountain in southeastern Monterey County. In the CCMA the south coast range morning glory is found in serpentine foothill pine-chaparral woodland, southern ultramafic Jeffrey pine and non-serpentine vegetation communities.

Native Animals of Management Concern in Clear Creek Management Area

Twenty-five native animals of management concern occur or have the potential to occur in the Clear Creek Management Area. The occurrence of any native animal species of management concern on public lands is a factor considered in planning for the CCMA. Bureau wildlife biologists queried the California Natural Diversity Data Base for twenty USGS 7.5-minute quadrangles, including the CCMA and the surrounding region, to augment information in BLM files on native animals species of management concern that do occur and could occur in the CCMA. Biologists did not consider animals such as the California tiger salamander, or rare invertebrates, which have not been found within ten miles of the CCMA or that occupy habitats not found in the CCMA. California state species of special concern may not have extensive data to include in this document. Future monitoring, confirmed sightings, or specimens recovered from the CCMA will establish a known occurrence for species that may or are likely to occur in the CCMA. These new occurrences will become a factor considered in future planning for the CCMA. All sensitive animal species are part of the CCMA Wildlife Habitat Protection Plan (BLM, 2003). Monitoring programs are currently being developed. Species descriptions come from the following Internet sources: www.dfg.ca.gov, www.sdnhm.org, sacramento.fws.gov, and endangered.fws.gov/wildlife.html.

The HFO –BLM notes observations and is developing monitoring protocol for the six DFG California Species of Special Concern which occur in the CCMA. "Species of Special Concern" (SSC) status applies to animals not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.

Table XI. Native Animal Species of Management Concern in Clear Creek Management Area

Common Name <i>Scientific Name</i>	Legal Status	Habitat	Vegetation Type	Potential for Occurrence
INVERTEBRATES				
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE	Vernal pools	Serpentine Vernal Pools	Initial surveys completed March 17, 2004, Results pending.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	Vernal pools	Serpentine Vernal Pools	Initial surveys completed March 17, 2004, Results pending.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	Vernal pools	Serpentine Vernal Pools	Initial surveys completed March 17, 2004, Results pending.
Valley elderberry longhorn <i>Desmocerus californicus dimorphus</i>	FT	Riparian habitats and associated habitats where elderberry (<i>Sambucus sp.</i>) grows	Serpentine Riparian	Unknown
Ciervo aegialian scarab beetle <i>Aegialia concinna</i>	BLM sensitive	Larvae live in soil or sand, feeding on organic materials or plant roots, little known	Non-Serpentine (other)	Unknown
San Joaquin dune beetle <i>Coelus gracilis</i>	BLM sensitive	Adult dune beetles spend a majority of their time in sandy soils, whereas larval forms are found exclusively in loose sands, little known	Non-Serpentine (other)	Unknown
AMPHIBIANS				
Foothill yellow-legged frog <i>Rana boylei</i>	BLM sensitive, USFWS SC, DFG SSC	partly shaded, shallow streams and riffles, with some cobble-sized substrate for egg-laying.	Serpentine Riparian	Clear Creek is known as a core population of the FYLF. Surveys indicate the presence of self-sustaining populations in all perennial streams within the CCMA.
California Red-legged frog <i>Rana aurora draytonii</i>	FT	Ponds and pools with dense riparian vegetation	Serpentine Riparian, Serpetine Vernal Pools	Recently discovered on lands within the CCMA south of Condon Peak.

REPTILES				
Northwestern pond turtle (<i>Clemmys marmorata marmorata</i>) and Southwestern pond turtle (<i>Clemmys marmorata pallida</i>)	UFSWS SC, DFG SSC & BLM sensitive, DFG SSC	aquatic habitat including ponds, marshes, rivers, streams with aquatic vegetation. Requires basking sites and sandy banks or grassy open fields in upland habitat for egg-laying.	Serpentine Riparian	Has been observed in the Clear Creek/San Benito River confluence where all habitat requirements occur. (The two subspecies are considered together here due to the difficulty in field identification and overlapping ranges)
Two-striped garter snake <i>Thamnophis hammondi</i>	BLM Sensitive DFG SSC	aquatic, in or near permanent fresh water, along streams with rocky bottoms and riparian habitat.	Serpentine Riparian	Has been observed within the CCMA streams
Coast horned lizard <i>Phrynosoma coronatum frontale</i>	UFSWS SC DFG SSC	variety of habitats including open areas for sunning, brushes for cover, friable soils and abundant supply of ants and other insects.	Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Occurs throughout the CCMA at a various elevations.
BIRDS				
California condor <i>Gymnogyps californianus</i>	FE, DFG SE	foraging; foothills, grasslands, oak-savannah, roosting /nesting higher elevation on cliffs.	Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Recent reintroduction at Pinnacles National Monument within 25 miles distance from CCMA. Former foraging habitat southern San Joaquin Valley.

Bald eagle <i>Haliaeetus leucocephalus</i>	BLM sensitive, USFWS SC, DFG SE,	breeding; mountain and foothill forests and woodlands near reservoirs; migratory	Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	One known breeding/nest pair on NE edge of Hernandez Reservoir, contiguous to CCMA; other winter migrants within 25 mile radius of CCMA
Golden eagle <i>Aquila chrysaetos</i>	DFG SSC	rock outcroppings, forest and woodlands, grasslands, streams and waterways.	Serpentine Foothill Pine-Chaparral Woodland, Serpentine Chaparral, Non-Serpentine (other)	Has been observed within CCMA. Nests within 25 miles of CCMA at Pinnacles National Monument.
Prairie falcon <i>Falco mexicanus</i>	DFG SSC	variety of habitats; open grassland, woodlands, streams and rocky outcroppings.	Serpentine Foothill Pine-Chaparral Woodland, Serpentine Chaparral, Non-Serpentine (other)	Observed in the overall CCMA, no known nesting.
Sharp-shinned hawk <i>Accipiter striatus</i>	DFG SSC	mixed conifer forests, woodlands.	Serpentine Foothill Pine-Chaparral Woodland, Serpentine Chaparral Non-Serpentine (other)	Nests within the San Benito Mountain RNA and throughout forested areas within the CCMA.
Bell's sage sparrow <i>Amphispiza belli belli</i>	DFG SSC	chaparral, coastal sage scrub.	Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Occurs within the CCMA chaparral.
MAMMALS				
Western mastiff bat <i>Eumops perotis californicus</i>	BLM sensitive DFG SSC	Open woody and brushy habitats in arid, and semi-arid areas. Roosts in buildings, crevices in cliffs and trees, and tunnels	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown

Pallid bat <i>Antrozous pallidus</i>	BLM sensitive DFG SSC	Open woody and brushy habitats in arid, and semi-arid areas. Roosts in caves, mine tunnels, crevices in rocks, buildings and trees.	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown
Townsend's western big-eared bat <i>Plecotus townsendii townsendii</i>	BLM sensitive DFG SSC	Open woody and brushy habitats in arid, and semi-arid areas. Roosts in caves, mine tunnels and buildings.	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown
Fringed myotis <i>Myotis thysanoides</i>	BLM sensitive	Open woody habitats in arid, and semi-arid areas. Roosts in caves and buildings.	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown
Long-eared myotis <i>Myotis evotis</i>	BLM sensitive	Open, thinly woody habitats in arid, and semi-arid areas. Roosts primarily in buildings or trees, occasionally caves.	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown
Small-footed myotis <i>Myotis ciliolabrum</i>	BLM sensitive	Open woody habitats. Roosts in caves, mine tunnels, crevices in rocks, buildings, and trees.	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown

Yuma myotis <i>Myotis yumanensis</i>	BLM sensitive	Open woods in arid areas. Roosts in caves, tunnels, and buildings	Serpentine Riparian, Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown
Big-eared kangaroo rat <i>Dipodomys elephantinus</i>	DFG SSC	chaparral woodland communities	Serpentine Foothill Pine-Chaparral Woodland, Southern Ultramafic Jeffrey Pine Forest, Serpentine Chaparral, Non-Serpentine (other)	Unknown

FE = Federally Endangered, FT = Federally Threatened, SC = Federal Species of Concern, DFG SE = CA State Endangered, DFG ST = CA State Threatened, DFG SSC = CA Species of Special Concern

Branchiopods

Conservancy fairy shrimp – *Branchinecta conservatio*

Vernal pool fairy shrimp – *Branchinecta lynchi*

Vernal pool tadpole shrimp – *Lepidurus packardi*

These vernal pool invertebrates are considered together here because of overlapping habitat requirements within the CCMA. The vernal pool fairy shrimp is federally listed as threatened. The conservancy fairy shrimp and the vernal pool tadpole shrimp are federally listed as endangered. The California linderiella fairy shrimp is a U.S. Fish and Wildlife service federal species of concern. These invertebrates inhabit rain-filled ephemeral pools, within the vernal pool vegetation complex of the CCMA, that form in depressions in bedrock and meadows. Pools must fill frequently and persist long enough for the species to complete its lifecycle, which takes place entirely within vernal pools. The ephemeral wetlands that support this network of populations are remnants of what was formerly a pristine vernal pool ecosystem, but which has been converted to mainly agricultural and urban uses. This highly disturbed remnant habitat is imperiled by a variety of human-caused activities, primarily urban development, water supply and flood control projects, and agriculture.

The Conservancy fairy shrimp (*Branchinecta conservatio*), and the Vernal pool fairy shrimp (*Branchinecta lynchi*), are small crustaceans ranging in size from about ½ to one inch long. They have delicate elongate bodies, large stalked compound eyes, no carapaces, and eleven pairs of swimming legs. They glide gracefully upside down, swimming by beating their legs in a complex, wavelike movement that passes from front to back. Fairy shrimp feed on algae, bacteria, protozoa, rotifers and bits of detritus. The vernal pool tadpole shrimp (*Lepidurus packardi*) is a small crustacean with compound eyes, a large shield-like carapace (shell) that covers most of the body, and a pair of long cercopods (appendages) at the end of the last abdominal segment. Vernal pool tadpole shrimp adults reach a length of 2 inches in length. They have about 35 pairs of legs and two long cercopods.

Insects

Valley elderberry longhorn – *Desmocerus californicus dimorphus*

The valley elderberry longhorn beetle is a federally listed species (threatened). Valley elderberry longhorn beetles are stout-bodied ranging from ½ to 1 inch in length. Adult males have red-orange elytra (wing covers) with four spots. Adult females have dark colored elytra. The valley Elderberry beetle is an insect subspecies endemic to the central valley of California. The beetle is found in riparian and upland associated habitats where elderberry (*Sambucus* sp.) grows. Potential Valley elderberry longhorn beetle habitat is defined by the presence of elderberry plants in areas below 3,000 feet in elevation. Within the CCMA, the valley elderberry longhorn beetle will be associated with the riparian vegetation communities where its food source, elderberry, occurs. Due to the extensive destruction of California's Central Valley riparian forests the valley elderberry longhorn beetle, though wide-ranging, is in long-term decline.

Ciervo aegialian scarab beetle – *Aegialia concinna*

The Ciervo aegialian scarab beetle, a tiny, flightless beetle, is a BLM sensitive species. Little is known about its specific life history traits and habitat. Larvae live in soil or sand, feeding on organic materials or plant roots. The Ciervo aegialian scarab beetle has been associated with Delta and inland dune systems and sandy substrates; however, plant associations specific to this species have not been reported. This invertebrate may occur in the non-serpentine areas within the CCMA that meet its habitat requirements.

San Joaquin dune beetle – *Coelus gracilis*

The San Joaquin dune beetle is a BLM sensitive species. Little is known about this tiny brown beetle's specific life history traits and habitat. Activity coincides with the growth period of the winter ephemeral plants under which San Joaquin dune beetles reside. Adult dune beetles spend a majority of their time in sandy soils, whereas larval forms are found exclusively in loose sands. This invertebrate may occur in the non-serpentine areas within the CCMA that meet its habitat requirements. Adults typically are found 5 to 10 centimeters (2.0 - 3.9 inches) underground under a canopy of vegetation, and less often under ground with a bare surface.

Amphibians

Foothill yellow-legged frog - *Rana boylei*

The foothill yellow-legged frog is a BLM sensitive species, a U.S. Fish and Wildlife Service federal species of concern and a California species of special concern. This frog usually ranges in size from that of a nickel to a 50-cent piece. Formerly, it occurred from western Oregon south along coastal mountains to Los Angeles County, California and in the Sierra Nevada foothills. It is now rare or absent south of northwestern San Luis Obispo County and the southern Sierra Nevada foothills. The foothill yellow-legged frog inhabits rocky streams, creeks, and rivers in chaparral, woodland, and forest. This frog is associated with the riparian vegetation community, and occurs in all major creeks of the CCMA, with the largest population in Picacho Creek. During warm months, foothill yellow-legged frogs occupy the entire length of Clear Creek.

California red-legged frog – *Rana aurora draytonii*

The California red-legged frog is a federally listed species (threatened), with critical habitat proposed in the federal register. California's largest native frog, it ranges from 1.5 to 5 inches in length. The abdomen and hind legs of adults are largely red; the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. The adults require dense riparian vegetation closely associated with still or slow moving water.

The historic range of the California red-legged frog 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. California red-legged frogs have been documented in 46 counties in California, but now remain in only 238 streams or drainages in 31 counties.

Reptiles

Northwestern pond turtle *Clemmys marmorata marmorata* and Southwestern pond turtle *Clemmys marmorata pallida*

These two subspecies of the Western pond turtle (*Clemmys marmorata*) are considered together here because the two intergrade and are difficult to distinguish in some localities. The Southwestern pond turtle is a BLM sensitive species and a California species of special concern. The Northwestern pond turtle is a California Species of Special Concern. It ranges in size from three to seven inches long. This pond turtle is mainly found east of the Cascade-Sierra Nevada crest in northwest California, with outlier populations in southern California. For part of its life cycle, this turtle depends on streams, or lakes and reservoirs in open woodland, grassland, or open forest associated with the riparian vegetation community, of the CCMA. In the CCMA, the western pond turtle occurs in lower Clear Creek and in the San Benito River but has not been documented in any other CCMA creeks, perhaps because of the lack of large enough pools.

Coast horned lizard – *Phrynosoma coronatum ssp. frontale*

The coast horned lizard is a California Species of Special Concern and a U.S. Fish and Wildlife Service federal species of concern. This lizard, cryptic in coloration, blends into the environment, and ranges in size from 2.5 to 4 inches. Coast horned lizards are known to occur in a variety of habitats, including chaparral, grassland and coniferous forests. Within the CCMA, this species is most commonly sighted in the shrub-dominated communities where loose, fine soils and an abundance of native ants occur which includes the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas. It relies on open areas for sunning and nearby brush for cover.

Two-striped garter snake - *Thamnophis hammondi*

The two-striped garter snake is a BLM sensitive species and a California species of special concern. This snake ranges in size from seven to eighteen inches and occurs in perennial fresh water locations such as streams with rocky beds. It can be found from the vicinity of Salinas (Monterey County, California) to northwestern Baja California. Within the riparian vegetation community of the CCMA, the two-striped garter snake occurs in Clear Creek and White Creek sub-watersheds and may occur in all other creeks in the CCMA.

Birds

California condor - *Gymnogyps californianus*

The US Fish and Wildlife Service listed the California condor as federally endangered on March 11, 1967 (32 FR 4001) and currently the California condor is listed by the state of California as endangered. This immense vulture has a wingspan of nearly ten feet and weighs about 22 pounds. It is one of the largest flying birds in the world, as well as one of the rarest. Adults are black except for white under-wing linings and edges of the upper secondary coverts. The head and neck are mostly naked; the skin on the neck area is gray, grading into various shades of yellow, red, and orange on the head. As scavengers, condors do not kill for food but feed on available carrion.

The California condor declined quickly over the past century. The last wild condor was captured in 1987; the US Fish and Wildlife Service 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. In San Benito County a reintroduction program is underway at the Pinnacles National Monument, approximately ten to fifteen miles west of the CCMA. Release at the National Monument is scheduled for December 2004.

Habitat for the California condor consists of arid foothills and mountains of southern and central California, and formerly included the San Joaquin Valley. Potential condor foraging and nesting habitat exist within and around the CCMA within the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas. The BLM will consider the habitat needs and food supply for California condors in future planning for the CCMA.

Bald eagle - *Haliaeetus leucocephalus*

The bald eagle was listed as endangered in 1970 and declassified as threatened on July 12, 1995. The bald eagle is a BLM sensitive species, a U.S. Fish and Wildlife Service federal species of concern and a California endangered species. This species has no designated critical habitat. Original declines in bald eagles were attributed to the use of DDT. In 1978, only 40 nest territories were known in California. As of 1997, 142 bald eagle nests were known from the six northern California National Forests, and public and private lands sites in California (CDFG 1998). In the BLM Hollister Field Office area, bald eagles are found during the winter and are generally associated with open bodies of water, such as reservoirs.

Wintering habitat for bald eagles is varied but requires a food source close by, with proximity probably the most important factor influencing perch selection. Favored perch trees are invariably located near feeding areas, and individual eagles consistently use preferred branches (Stalmaster 1976). Winter surveys seem to indicate that bald eagles roost singly in larger trees that may be characteristic for open areas (Isaacs and Anthony 1983). There is no evidence of a communal bald eagle roost within the BLM Hollister Field Office area. Bald eagles winter along open bodies of water in the CCMA area, in particular the San Benito River and the Hernandez Reservoir near the CCMA. U S Geological Survey and California Department of Toxic Substance Control are currently measuring mercury levels in Clear Creek to characterize potential threat to bald eagles in the Hernandez Reservoir. These monitoring studies are ongoing and will be used in adaptive management of the CCMA. Vegetative communities within the CCMA that may serve as roosts or perches can be found in the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas.

Sharp-shinned hawk – *Accipiter striatus*

The sharp-shinned hawk, a California Species of Special Concern, is the smallest accipitrid raptor species. It is approximately eleven inches long, with male birds just barely larger than an American robin. The sharp-shinned hawk formerly bred in small numbers throughout northern California and in even smaller numbers in southern California. At present the breeding population appears greatly reduced, but good data are lacking. Only a few individuals are reported during the summer months, and a small breeding population in Contra Costa and Alameda counties has apparently disappeared. Winter populations are larger and appear to be stable. Sharp-shinned hawks occupy forested and woodland habitats and occur within the CCMA San Benito Mountain serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas outside of the breeding season. BLM staff monitors this species annually and data are analyzed to guide management decisions.

Golden eagle – *Aquila chrysaetos*

The golden eagle, is a BLM sensitive species, a California Species of Special Concern and a California fully protected species, was once a common permanent resident in open rangeland, but is now reduced to an estimated 500 nesting pairs in California. Natural population densities are very low, and its reproductive rate is very low as well. Golden eagles nest on rocky cliffs within the Pinnacles National Monument, approximately ten miles west of the CCMA. This large eagle species occurs regularly within the CCMA along Clear Creek and in other open areas. Potential golden eagle foraging and nesting habitat exist within and around the CCMA within the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine areas.

Prairie falcon – *Falco mexicanus*

Prairie falcons, a California Species of Special Concern, and a BLM sensitive species, was once a common permanent resident throughout California, but has declined in recent decades. They inhabit dry, open country, grasslands, and woodlands. Potential Prairie falcon foraging and nesting habitat exist within and around the CCMA within the serpentine foot hill pine-chaparral woodlands, southern ultramafic Jeffery pine forest and non-serpentine vegetative communities. A small nesting population occurs within the rocky outcrops of the Pinnacles National Monument, about ten miles west of the CCMA. Prairie falcons have been sighted flying over the CCMA, however, no nesting of this species is known in the CCMA.

Bell's sage sparrow – *Amphispiza belli ssp. belli*

Bell's sage sparrow, a California Species of Special Concern, tolerates a fairly broad range of shrublands, from coastal sage scrub to diverse types of dry chaparral on interior foothills. Nevertheless, sage sparrows are not distributed uniformly through tracts of seemingly suitable habitat. Within the CCMA, where Bell's sage sparrow breeds and nests, most sightings have been in dense chamise (*Adenostoma fasciculatum*) habitat, and not necessarily throughout the entire serpentine foot hill pine-chaparral woodlands vegetation type. The taxonomy of Bell's sage sparrow subspecies is uncertain at present, and genetic studies will determine whether populations of coastal California year-round resident populations, are distinct from migratory desert populations nesting in the Great Basin and Mojave deserts. If the two subspecies deserve status as full-species, systematic analysis will drive the degree of recognized endangerment for both populations (Fitton, pers comm., 2003).

Mammals

Yuma myotis – *Myotis yumanensis*

The Yuma Myotis is a BLM sensitive species and a California species of special concern. This bat species forages primarily over water and above low vegetation in meadows, and roosts in crevices, caves, and buildings.

Long-eared myotis – *Myotis evotis*

The Long-eared Myotis is a BLM sensitive species. Long-eared myotis bats feed on insects captured in flight or gleaned from foliage among trees, over water, and over shrubs. Long-eared myotis bat habitats include forested areas over a range of elevations. The Long-eared Myotis roosts primarily in hollow trees, especially large snags, and prefer riparian edge habitat.

Fringed myotis – *Myotis thysanoides*

The Fringed Myotis is a BLM sensitive species. This species is found in mid to lower elevations in deciduous and mixed conifer forest habitats, where it feeds in open areas and over water by gleaning insects from foliage. Roosts include caves, buildings, and trees, especially large conifer snags.

Western small-footed myotis – *Myotis ciliolabrum*

The Small-footed Myotis is a BLM sensitive species. This bat species forages in wooded and brushy habitats near water, and roosts in mines, caves, and trees.

Townsend's western big-eared bat – *Plecotus townsendii townsendii*

Townsend's western big-eared bat is a BLM sensitive species and a California species of special concern. This colonial bat roosts primarily in caves, mine tunnels and buildings. This bat species requires caves, mines, or buildings for roosting, and forages for insects on brush and trees in moist areas. Habitats include oak, pine and chaparral woodlands.

Pallid bat – *Antrozous pallidus*

The Pallid bat is a BLM sensitive species and a California species of special concern. Pallid bats prefer forested habitats over a wide range of elevations. This colonial bat roosts in caves, mine tunnels, crevices in rocks and trees.

Western mastiff-bat – *Eumops perotis californicus*

The Western mastiff bat is a BLM sensitive species and a California species of special concern. Mastiff bats are found in a wide variety of habitats to over 10,000 feet in elevation. They roost primarily in crevices on cliff faces, and forage primarily over meadows and other open areas, but will also feed over forest canopy.

Big-eared kangaroo rat - *Dipodomys elephantinus*

The big-eared kangaroo rat is a California species of special concern. This kangaroo rat reaches body length of about five inches with a tail seven to eight inches long. Its distribution is restricted to chaparral from the Del Puerto Canyon area of Stanislaus County to the Gabilan and Diablo Mountains

in southern San Benito County (Williams 1986). Collections for museum specimens of this species come from the area near the peak of San Benito Mountain (1936) and near Sawmill Creek (1944). In 1980, Williams (pers. comm. 1994) trapped individuals of this species near the Jade Mill near the northern edge of the CCMA serpentine block. Because serpentine foot hill pine-chaparral woodlands is common in the CCMA and this is the preferred habitat of the big-eared kangaroo rat, threats to the species population in the CCMA may be negligible in the CCMA. However, wide trails, which are common in the CCMA, may act as barriers that this species has trouble crossing (Best, pers. comm., 1994). In addition, this kangaroo rat has never been observed in large numbers (Best, pers. comm., 1994). Given the discrepancy from this scant information, more studies would clarify this species' status in the CCMA.

APPENDIX G

AIR QUALITY

Although motor vehicle use within the Clear Creek Management Area contributes gaseous air pollutants from engine exhaust (including carbon monoxide, oxides of nitrogen, and fine particulate matter), by far the most significant air pollutant emissions would be fugitive particulate matter from unpaved road surfaces.

An analysis of potential particulate matter emissions by Alternative was prepared for the Clear Creek Management Area EIS (Archer 2004), using U.S. Environmental Protection Agency (2003) emission factors, assumed soil (NWS 2003) and precipitation (WRCC 2003) conditions, as well as motor vehicle types, properties and vehicle miles traveled.

Table G-1 indicates the assumed seasonal and total distribution of vehicle miles traveled for All Terrain Vehicles (ATV), Sport Utility Vehicles (SUV), and motorcycles (MC). Table G-2 summarizes the total annual particulate matter emissions (PM-2.5 fine particulate matter; PM-10 inhalable particulate matter; and TSP Total Suspended Particulates) for the proposed action. This analysis assumed the total vehicle miles traveled would not change significantly under the proposed action; rather existing use would simply be redistributed on open routes. Given these assumptions, total particulate matter emissions are predicted to increase slightly (about four per cent) above existing conditions.

Table G-1. Assumed Vehicle Miles Traveled by Vehicle Type

Vehicle Type	Total VMT	Summer VMT	Winter VMT
ATV	111,180	43,360	67,820
SUV	96,511	37,639	58,872
MC	864,738	337,248	527,490

Table G-2. Calculated Particulate Matter Emissions by Alternative (tons/year)

Pollutant Type	Proposed Action
PM-2.5	28
PM-10	188
TSP	483

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APPENDIX H WATER QUALITY DATA

Table 1: Beneficial Uses for Hernandez Reservoir, San Benito River, and Clear Creek.

	Hernandez Reservoir	San Benito River	Clear Creek
Municipal and Domestic Water Supply (MUN)	X	X	X
Agricultural Supply (AG)	X	X	
Ground Water Recharge	X	X	
Water Contact Recreation (REC-1)	X	X	X
Non Contact Water Recreation (REC-2)	X	X	X
Warm Freshwater Habitat (WARM)	X	X	X
Navigation (NAV)	X		
Freshwater Replenishment	X	X	
Commercial and Sport Fishing (COMM)	X	X	
Spawning, Reproduction, and/or Early Development (SPWN)	X	X	
Industrial Service Supply (ISS)		X	

Note: Clear Creek is not specifically listed in the Basin Plan, therefore, two general uses (encompassing four Beneficial Uses) designated for all water bodies in the Region apply to Clear Creek:

- Municipal and Domestic Water Supply (MUN),
- Protection of both recreation and aquatic life (REC-1 REC-2, WARM).

Table 5. Summary of historic Clear Creek water column data.

Year	Data Source	# of samples	% above 0.050 µg/L	Arithmetic average
1995	USGS	2	100%	1.15 µg/L
1996	USGS + RWQCB/DFG	2	50%	0.15 µg/L
1998	RWQCB/CCAMP	5	0%	0.012 µg/L
1999	USGS + CCAMP	4	25%	0.099 µg/L
2000	USGS	4	25%	0.155 µg/L*
2001	USGS	4	50%	0.19 µg/L
2002	RWQCB	14	21%	0.04 µg/L

Note: * = USGS lab used PQL above 0.2 µg/L, average influenced by method of ND = ½ PQL.

Table 3. Available Mercury Data for Clear Creek and the Surrounding Area.

Sample ID	Date/ Location	Mercury, total in water (µg/L)	Sediment Mercury (mg/kg)	Note
USGS-Jan0995	1/9/95, Clear Crk Gage	1.5	0.47	1
USGS-Mar2295	3/22/95, Clear Crk Gage	0.80	0.28	1
USGS-Mar1296	3/12/96, Clear Crk Gage	0.20	5.0	
RB3-CC1	5/12/96, Clear Crk Gage	ND	0.27	2
USGS-97CC1	10/25/97, Clear Creek, Frontier Lab	0.0177		5
CCAMP- 305GOA	6/98, Clr Crk, Goat Mtn.	0.004	0.18	
CCAMP- 305HAH	6/98, Clr Crk, Halfway Hill		0.19	
CCAMP- 305CCC	9/1/98 crk @ Clr Crk Rd	0.003		
CCAMP- 305CCC	10/1/98 crk @ Clr Crk Rd	0.002		
CCAMP- 305CCC	11/1/98 crk @ Clr Crk Rd	0.004		
CCAMP- 305CCC	12/1/98 crk @ Clr Crk Rd	0.047		
CCAMP- 305CCC	1/1/99 crk @ Clr Crk Rd	0.004		
CCAMP- 305CCC	2/1/99 crk @ Clr Crk Rd	0.004		
CCAMP- 305CCC	3/1/99 crk @ Clr Crk Rd	0.385		
USGS-99CC01R	5/12/99, Clear Creek; Rytuba	<0.005 (ND)	2.37	5
USGS- 20000124	1/24/00, Clear Crk Gage	<0.3 (ND)	0.41	3
USGS-20000221	2/21/00, Clear Crk Gage	<0.3 (ND)	0.72	3
USGS – 20000328	3/28/00, Clear Crk Gage	E0.17*	0.33	3, 4
USGS – 20000906	9/06/00, Clear Crk Gage	<0.3 (ND)	0.27	3
USGS- 20010111	1/11/01, Clear Crk Gage	0.2	0.32	3
USGS – 20010222	2/22/01, Clear Crk Gage	0.54	0.24	3
USGS – 20010327	3/27/01, Clear Crk Gage	<0.01 (ND)	0.22	
USGS – 20010905	9/05/01, Clear Crk Gage	<0.01 (ND)	0.11	
RB3- 305CL1	4/3/02, near “switchbacks”	<0.035	0.088	
RB3- 305CL2	4/3/02, @ staging area 6	E0.041*	<0.05	
RB3- 305CL3	4/3/02, u/s of Alpine Mine Rd	<0.035	0.16	
RB3- 305CL4	4/3/02, d/s of Alpine Mine Rd	E0.045*	<0.05	
RB3- 305CL5	4/3/02, @ staging area 2	0.064	0.088	
RB3- 305CL6	4/3/02, d/s of stage area 2	0.089	0.22	
RB3- 305CL7	4/3/02, @ Clear Crk. Gage	0.18	0.33	
RB3- 305CL1	5/15/02, near “switchbacks”	<0.035	0.072	
RB3- 305CL2	5/15/02, @ staging area 6	<0.035	0.059	
RB3- 305CL3	5/15/02, u/s of Alpine Mine Rd	<0.035	0.16	
RB3- 305CL4	5/15/02, d/s of Alpine Mine Rd	<0.035	<0.05	
RB3- 305CL5	5/15/02, @ staging area 2	<0.035	0.073	
RB3- 305CL6	5/15/02, d/s of stage area 2	<0.035	0.21	
RB3- 305CL7	5/15/02, @ Clear Crk. Gage	<0.035	0.11	
USGS-	2/4/02, Clear Crk Gage	0.13 (diss.=0.04)	0.22	
USGS -	3/27/02, Clear Crk Gage	0.02	1.3	
USGS -	6/7/02, Clear Crk Gage	0.01	0.34	
USGS -	8/27/02, Clear Crk Gage	0.04	0.20	
Continued on next page				

Hernandez Res. Or San Benito River	Table 3. (Continued) Date/Location	Mercury, total in water (µg/L)	Sediment Mercury (mg/kg)	Note
RB3 – SBR-1	5/12/96, <i>Hernandez Reservoir</i>	ND	1.3	2
RB3 – SBR-2	5/12/96, San Benito R. just below Clear Creek	0.34	0.24	4
RB3 – SBR- 3	5/12/96, San Benito R. just above Clear Creek	ND	1.2	2
RB3 – SBR – 4	5/13/96, upper San Benito R., above RB3 – SBR-3	ND	0.25	2
RB3 – SBR – 5	5/13/96, San Benito R. near Picacho Creek	ND	ND	2
CCAMP- 305LAZ	6/98, <i>Hernandez Res.</i> , Marina	0.001	0.21	
RB3- 305CL8	4/3/02, San Benito R @ u/s side of Clear Crk Rd crossing	<0.035	0.22	
RB3 – 305SB1	5/15/02, San Benito R @ d/s side of Clear Crk Rd crossing	E0.037*	0.19	
RB3- 305SB2	5/15/02, San Benito R. aprx 75 feet u/s of Clear Creek inflow	<0.035	0.11	
RB3- 305HR1	10/18/02 <i>Hernandez Res.</i> , nr dam		0.10	
RB3- 305HR2	10/18/02, <i>Hernandez Res.</i> , s. shore		0.12	
RB3- 305HR3	10/18/02, <i>Hernandez Res.</i> @ mouth of Laguna Creek		0.053	
CCAMP- 305.50.60	Lake Hernandez/ San Benito R fish tissue sampling, 11/30/95			0.69 mg/kg
CCAMP- 305.50.60	Lake Hernandez/ San Benito R. fish tissue sampling, 11/30/95			0.52 mg/kg
	All other fish samples pre-1985			

Notes:

1 = Data from US Geological Survey Annual Water summary, 1995

2 = Quantitation Limit reported as 0.36 µg/l, higher than water quality objectives, data from Region 3 working files, laboratory analyses done by CA Dept. of Fish and Game

3 = data reported by US Geological survey in electronic data from USGS NWIS website

4 = data reported as estimated concentration below quantitation limit

5 = data reported in draft Rytuba et al, 2000, Table 3.

* = estimated value, data between practical quantitation limit (pql) and method detection limit (mdl)

bold type indicates water values in excess of CTR objective or sediment values above the PEL.

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1993	32.97	0.00	0	0
NOVEMBER	31.56	0.69	0	1
DECEMBER	38.90	11.83	0	12
JANUARY 1994	38.88	17.27	0	17
FEBRUARY	80.30	71.95	1	73
MARCH	55.40	1.36	0	1
APRIL	40.40	0.40	0	0
MAY	34.56	0.50	0	0
JUNE	18.71	0.00	0	0
JULY	8.39	0.00	0	0
AUGUST	3.11	0.00	0	0
SEPTEMBER ...	3.26	0.00	0	0
TOTAL	386.44	104.00	1	105

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1994	6.98	0.00	0	0
NOVEMBER	10.92	0.04	0	0
DECEMBER	13.26	0.00	0	0
JANUARY 1995	761.21	2034.63	4008	6043
FEBRUARY	279.00	26.20	137	163
MARCH	1530.10	3728.89	40342	44071
APRIL	596.00	50.96	84	135
MAY	332.80	1.62	8	10
JUNE	229.90	0.00	0	0
JULY	127.00	0.00	0	0
AUGUST	70.20	0.00	0	0
SEPTEMBER ...	44.00	0.00	0	0
TOTAL	4001.37	5842.34	44579	50422

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1995	39.20	0.00	0	0
NOVEMBER	37.70	0.37	0	0
DECEMBER	56.70	53.82	1	55
JANUARY 1996	65.80	115.76	7	122
FEBRUARY	271.80	595.29	70	665
MARCH	346.60	468.08	83	551
APRIL	161.10	1.97	5	7
MAY	111.20	12.85	7	20
JUNE	65.00	0.00	0	0
JULY	43.80	0.00	0	0
AUGUST	31.46	0.00	0	0
SEPTEMBER ...	35.25	0.00	0	0
TOTAL	1265.61	1248.14	174	1422

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1996	41.69	0.00	0	0
NOVEMBER	39.28	42.47	2	44
DECEMBER	183.00	249.13	74	323
JANUARY 1997	441.70	70.65	301	371
FEBRUARY	337.40	19.52	69	88
MARCH	211.40	2.00	10	12
APRIL	142.50	0.39	2	2
MAY	106.40	0.00	0	0
JUNE	65.00	0.00	0	0
JULY	42.60	0.00	0	0
AUGUST	28.04	0.00	0	0
SEPTEMBER ...	23.21	0.00	0	0
TOTAL	1662.22	384.16	456	841

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1997	23.63	0.00	0	0
NOVEMBER	43.52	48.89	2	51
DECEMBER	104.00	266.23	20	286
JANUARY 1998	146.50	47.66	15	63
FEBRUARY	1306.80	4373.45	4270	8643
MARCH	852.00	397.60	239	637
APRIL	627.00	195.70	71	267
MAY	669.00	219.80	87	307
JUNE	436.20	0.00	0	0
JULY	211.90	0.00	0	0
AUGUST	119.80	0.00	0	0
SEPTEMBER ...	87.30	0.00	0	0
TOTAL	4627.65	5549.33	4703	10252

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1998	73.10	0.00	0	0
NOVEMBER	48.18	7.68	0	8
DECEMBER	38.99	0.40	0	0
JANUARY 1999	45.82	0.35	0	0
FEBRUARY	97.10	33.28	1	34
MARCH	116.20	20.97	0	21
APRIL	189.10	56.78	1	58
MAY	127.30	6.24	0	6
JUNE	86.70	0.00	0	0
JULY	41.81	0.00	0	0
AUGUST	23.40	0.00	0	0
SEPTEMBER ...	16.47	0.00	0	0
TOTAL	904.17	125.70	2	128

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1999	11.02	0.00	0	0
NOVEMBER	16.46	0.00	0	0
DECEMBER	19.68	0.00	0	0
JANUARY 2000	96.90	61.33	12	73
FEBRUARY	324.50	214.62	80	295
MARCH	269.70	53.66	6	60
APRIL	151.80	15.72	5	21
MAY	95.20	0.15	0	0
JUNE	63.00	0.00	0	0
JULY	34.98	0.00	0	0
AUGUST	23.16	0.00	0	0
SEPTEMBER ...	16.01	0.00	0	0
TOTAL	1122.41	345.48	103	448

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 2000	23.07	0.00	0	0
NOVEMBER	18.38	0.01	0	0
DECEMBER	18.65	0.00	0	0
JANUARY 2001	73.88	46.38	0	47
FEBRUARY	136.20	52.60	12	65
MARCH	372.50	103.22	228	332
APRIL	156.00	2.21	4	7
MAY	86.90	0.01	0	0
JUNE	55.40	0.00	0	0
JULY	32.20	0.00	0	0
AUGUST	23.08	0.00	0	0
SEPTEMBER ...	20.69	0.00	0	0
TOTAL	1016.95	204.43	246	450

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 2001	15.40	0.00	0	0
NOVEMBER	48.79	9.94	13	23
DECEMBER	99.30	164.65	11	175
JANUARY 2002	99.30	121.02	4	125
FEBRUARY	56.60	25.09	1	26
MARCH	44.30	1.59	0	2
APRIL	36.70	1.43	0	1
MAY	26.46	0.04	0	0
JUNE	11.00	0.00	0	0
JULY	1.97	0.00	0	0
AUGUST	0.65	0.00	0	0
SEPTEMBER ...	0.77	0.00	0	0
TOTAL	441.24	323.76	29	352

DISTRICT CODE 06

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY
11154700 -- CLEAR C NR IDRIA CA

PROCESS DATE 4-02-04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, filtered, ug/L	Cobalt water, filtered, ug/L	Iron, water, filtered, ug/L	Lithium water, filtered, ug/L	Manganese, water, filtered, ug/L	Mercury water, filtered, ug/L	Mercury water, unfiltered recoverable, ug/L	Molybdenum, water, filtered, ug/L	Nickel, water filtered, ug/L	Selenium, water, filtered, ug/L	Mercury bed sed <62.5um dry svd lab, total, ug/g
	(01005)	(01035)	(01046)	(01130)	(01056)	(71890)	(71900)	(01060)	(01065)	(01145)	(34912)
January											
29	61.5	<8	<10	18	<1.6	E.02	E.02	<30	E2.4	<3	.34
March											
15	33.3	<8	<10	10	2.7	E.01	2.75	<30	4.4	<3	.33
April											
9	67.6	<8	<10	17	1.8	.02	E.02	<30	2.6	<3	.29
May											
22	75.2	<8	<10	19	<1.6	.14	.03	<30	2.0	<3	.32

Remark codes used in this report:

< -- Less than

E -- Estimated value

DISTRICT CODE 06

PROCESS DATE 4-02-04

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY
11154700 -- CLEAR C NR IDRIA CA

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Instantaneous discharge, cfs	Temperature, water deg C	Bedload sediment discharge average unit composite, t/d/ft	Bedload sediment discharge, tons/day
	(00061)	(00010)	(04122)	(80225)
March				
7	2.4	15.0	.20	1.9
7	2.4	15.0	.21	1.9
15	16.0	15.5	.48	4.4
15	16.0	15.5	.26	4.4
April				
09	2.2	21.5	.55	2.2
09	2.1	21.5	.44	2.2

APPENDIX I
HUMAN HEALTH RISK ASSESSMENT, SEPTEMBER 15, 2004



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

To: Interested Parties

From: Lynn Suer 
Remedial Project Manager
Superfund Division (SFD-7-2)
Site Cleanup Branch

Date: February 5, 2005

Subject: Technical Memorandum: Human Health Risk Assessment - Asbestos
Air Sampling, Clear Creek Management Area, California, September 15th, 2004

The attached technical memorandum, prepared by CH2MHILL for the U.S. Environmental Protection Agency, has been reviewed and approved for public release.

Human Health Risk Assessment - Asbestos Air Sampling Clear Creek Management Area, California September 15th , 2004

The purpose of this memorandum is to evaluate the potential human health risks for asbestos inhalation exposures during motorcycling recreational activities, based on the data obtained during the asbestos air sampling pilot study conducted at the Clear Creek Management Area (CCMA) on September 15, 2004. Potential excess Lifetime Cancer Risks (ELCR) were estimated for the Lead Motorcyclist, First Trailing Motorcyclist, and Second Trailing Motorcyclist receptors (Table 1).

The estimated ELCR was calculated for three exposure scenarios: a One-day per Year Exposure, a Reasonable Maximum Exposure (RME) of 5 days per year, and a High Estimate Exposure of 12 days per year (Table 2). The estimated ELCR values were compared to the risk management range of 1E-06 to 1E-04 that is generally used by EPA. Estimated ELCR values within or exceeding this range may require a risk management decision that includes evaluating site-specific characteristics and exposure scenarios to assess if remedial action is warranted.

For all three exposure scenarios, the estimated ELCR values were within or exceeded the risk management range:

One-day per Year Exposure. ELCR for the lead, first trailing, and second trailing motorcyclist were, 3E-06, 4E-05, and 6E-05, respectively.

RME Exposure. ELCR for the lead, first trailing, and second trailing motorcyclist were, 1E-05, 2E-04, and 3E-04, respectively.

- High Estimate Exposure. ELCR for the lead, first trailing, and second trailing motorcyclist were, 4E-05, 6E-04, and 9E-04, respectively.

The results of this study suggests that further sampling is needed to confirm the results of this one-time sampling event and to determine if risk management-based mitigation measures are needed to reduce the exposures of recreational motorcycle riders to naturally occurring asbestos at the CCMA.

Background:

The CCMA is located in San Benito County, California and is within a 48-square-mile area that contains large amounts of naturally occurring asbestos. The CCMA is one of the four geographically distinct areas of the Atlas Asbestos Mine Superfund Site. It is managed by the U.S. Department of the Interior, Bureau of Land Management (BLM), Hollister, California. The naturally barren slopes, bald ridges, network of bulldozed mining trails,

and isolated location makes the CCMA a popular location for recreational use by off-road motorcyclists, including many families with children, who camp in the area (Popendorf and Wenk, 1983).

Since the late 1970's the BLM has conducted studies to identify and quantify the dust exposures of recreational users and rangers within the CCMA. The "Human Health Risk Assessment for the Clear Creek Management Area" was developed for the BLM by PTI Environmental Services (1992) to assess the potential hazards and risks posed to public health associated with the inhalation of airborne asbestos generated during off-road vehicle use, as well as other site uses that generate less dust. This current work is part of the task to update the 1992 Human Health Risk Assessment (HHRA).

Introduction:

The asbestos air sampling pilot study was conducted at the CCMA on September 15, 2004. The asbestos air sampling and analysis approach, and methodology followed for the asbestos sampling pilot study are presented in the "Sampling and Analysis Plan for Asbestos Air Sampling, Clear Creek Management Area" (CH2M HILL, 2004). The purpose and objective of the pilot sampling and analysis effort was to reality test the asbestos air sampling and laboratory analysis methods presented in the SAP. In this way, field experience at the CCMA could be gained and adjustments made, as needed, to the SAP to optimize field sampling procedures and laboratory analysis before large-scale field sampling was conducted in November 2004.

Breathing zone air samples were collected from study participants during motorcycling riding, SUV driving, and other activities conducted at the CCMA on September 15, 2004. Using standard asbestos sampling techniques, air samples containing asbestos fibers were collected from personal breathing space air. This was done using a calibrated air pump attached to a plastic cassette, which contained an asbestos fiber-sampling filter.

The collected samples were sent to an analytical laboratory (Lab/Cor Inc.) and analyzed for asbestos type and concentrations in air by Transmission Electron Microscopy (TEM) using ISO 101312 methodology (Lab/Cor, Inc., 2004).

EPA requested that the potential health risks be estimated from exposures to airborne asbestos during motorcycle riding. The results and conclusions of this risk assessment will give EPA an initial estimate of potential risks to recreational motorcycle riders at the CCMA and will be used to further refine the SAP before the larger scale field sampling is conducted. The results and CCMA-specific experience gained from this risk assessment will also be used to assist in the development of the CCMA Risk Assessment Update Work Plan, which will be developed at a later date.

The three samples selected for evaluation were collected by motorcyclists while traveling over a 23-25 mile route of unpaved roads and trails. The results of the TEM laboratory analysis of these samples (Lab/Cor, Inc., 2004) were reported as PCM (Phase Contrast Microscope) equivalent fibers (Table 3):

- Lead Motorcyclist: 0.0443 fibers/ml
- First Trailing Motorcyclist: 0.659 fibers/ml
- Second Trailing Motorcyclist: 0.955 fibers/ml.

For this human health risk assessment, exposures and risks were calculated using EPA based approaches and methodology as presented in the PTI Environmental Services HRA (1992) as described in the following sections.

Asbestos Dose-Response:

The EPA weight of evidence classification for asbestos is "A"; human carcinogen (Table 4). The basis of the classification, the observation of increased mortality and incidence of lung cancer, mesotheliomas, and gastrointestinal cancer in occupationally exposed workers, are consistent across investigators and study populations (U.S. EPA, 2004).

The unit risk for asbestos is $2.3\text{E-}01 \text{ (f/ml)}^{-1}$ [fibers/milliliter]⁻¹. The unit risk should not be used if the air concentration exceeds $4\text{E-}02$ fibers/ml, since above this concentration the slope factor may differ from that stated (U.S. EPA 2004). In this risk assessment the calculated chronic exposure concentrations are compared to $4\text{E-}02$ fibers/ml. The unit risk is based on fiber counts made by phase contrast microscopy (PCM), which detects only fibers longer than 5µm and >0.4 µm in diameter.

The quantitative unit risk estimate is limited by uncertainty in the exposure estimates, which results from a lack of data on early exposure in occupational studies and the uncertainty of conversions between various analytical measurements for asbestos.

Exposure Estimate:

The following airborne asbestos inhalation exposure algorithm is based on the 1992 PTI HRA:

$$EC = \frac{C_a \times ET \times EF \times ED}{AT}$$

Where,

- EC = Chronic Exposure Concentration (averaged over a 70-year lifetime) [f/ml]
- C_a = Asbestos Concentration in fibers per cubic centimeter (f/ml) (95% UCL)
- ET = Exposure Time in hours/day
- EF = Exposure Frequency in days/year
- ED = Exposure Duration in years
- AT = Averaging Time of 24 hours/day x 365 days/year x 70 years (lifetime).

All Chronic Exposure Concentrations estimated in this study (Tables 5, 6 and 7) were less than $4\text{E-}02$ fibers/ml.

Risk Calculation:

The upper-bound excess lifetime cancer risks were calculated using the following equation described in EPA risk assessment guidance documents (EPA 1989) and is based on that presented in the 1992 PTI HRA:

$$\text{ELCR} = \text{EC} \times \text{URF}$$

Where,

ELCR = Excess Lifetime Cancer Risk

EC = Chronic Daily Exposure Concentration (averaged over a 70-year lifetime)
[f/ml]

URF = Unit Risk Factor for inhalation of asbestos [0.23 (f/ml)⁻¹].

Estimated potential cancer risks are presented in Tables 5, 6 and 7.

Results:

For purposes of this evaluation, the potential for unacceptable risk, was identified using the following criteria. ELCR values were compared to the risk management range of 1E-06 to 1E-04 that is generally used by EPA. ELCR values within or exceeding this range may require a risk management decision that includes evaluating site-specific characteristics and exposure scenarios to assess if remedial action is warranted.

For all three exposure scenarios, the estimated ELCR were within or exceeded the risk management range:

- **One-day per Year Exposure.** ELCR for the lead, first trailing, and second trailing motorcyclist were, 3E-06, 4E-05, and 6E-05, respectively (Table 5).

RME Exposure. ELCR for the lead, first trailing, and second trailing motorcyclist were, 1E-05, 2E-04, and 3E-04, respectively (Table 6).

High Estimate Exposure. ELCR for the lead, first trailing, and second trailing motorcyclist were, 4E-05, 6E-04, and 9E-04, respectively (Table 7).

The ELCRs for all three exposure scenarios are summarized in Table 8.

Uncertainty Analysis:

This risk assessment presents quantitative estimates of current and future potential cancer risks. However, it is important to note that these numbers do not predict actual health outcomes. The one-day per year, RME, and high-end scenario risk estimates are calculated in a conservative, health protective manner that tends to overestimate risks. Thus any actual health impacts are likely to be lower than these estimates. Specific uncertainties that should be considered when interpreting the results for this risk assessment include:

-
- Single Event, Single Rider, Single Sample for Each Riding Position. The asbestos samples were collected during a single sampling event, during the dry-season at the CCMA, with a single motorcycle rider for each riding position, and a single sample analyzed for each rider. Therefore the representativeness of the collected samples has a great degree of uncertainty. For example, the other riders may have different styles of riding (for instance, speed) that influence the amount of dust generated.

Single 23 to 25-mile Motorcycle Route. The CCMA is a 48 square mile wilderness area. Exposures were monitored over a single 23 - 25 mile motorcycle route, which contributes uncertainties to the estimated exposures. Other parts and routes of the CCMA may have higher or lower levels of asbestos in the soil

Dry Season - September 15th, 2004. Asbestos air monitoring samples were collected on one day, September 15th, 2004, during the dry season. Therefore the representativeness of the collected samples has a great degree of uncertainty. The dry season is assumed to contribute more asbestos fiber-containing dust to the air, while the wet season is assumed to have comparably less asbestos containing dust in the air. On the other hand more motorcycle riders use the CCMA during the cooler weather wet season.

Exposure Parameters. The exposure parameters used were based on both EPA and site-specific exposure estimates reported by recreational motorcyclists at a CCMA public meeting (PTI, 1992). EPA default exposure parameters are selected to be protective of public health. The estimates by the recreational riders at the CCMA public meeting included the high-end estimates of long-term on-site motorcycle use by attendees present. Variations in exposure parameters will exist but this range probably covers most cases

TEM Methodology for Asbestos Analysis. The use of TEM for asbestos fiber analysis adds more reliability to the enumeration and identification of asbestos fibers compared to historical phase contrast microscopy (PCM). However uncertainties arise from the current practice of expressing TEM analysis results in terms of PCM equivalent values. These uncertainties are minimized by applying standardized counting rules to the PCM equivalent analysis.

EPA Cancer Slope Factor for Asbestos Fibers. The cancer slope factor used in the risk assessment was the value presented in current EPA guidance. The EPA Integrated Risk Information System (IRIS) was the source of the asbestos cancer slope factor used in the risk calculations. As noted in OSWER Directive 9285.7-53 (dated December 5, 2003), the EPA hierarchy of human health toxicity values recommended for use in risk assessments lists EPA's IRIS as the sole Tier 1 source. The hierarchy recognizes the EPA should use the best science available on which to base risk assessments. In general, if health assessment information is available in the IRIS for the contaminant under evaluation, risk assessors normally need not search further for additional sources of information. Since EPA's development and use of peer review in toxicity assessments, IRIS assessments have undergone external peer review in accordance with Agency peer review guidance. IRIS health assessments contain Agency consensus toxicity values.

Since IRIS toxicity values are routinely re-evaluated and updated, there is some uncertainty as to when a specific toxicity value will be updated. Recently, IRIS has posted the IRIS Chemical Assessment Tracking System, a compilation of status reports

on EPA's IRIS assessments currently in progress, on the IRIS website. The chemical assessment for asbestos (noncancer effects) is in progress with a First Draft expected December 31, 2004 and a Second Draft expected March 31, 2005; Internal Peer Consultation is expected October 31, 2005; Agency Review is expected August 31, 2006; External Peer Review and Public Availability is expected March 31, 2007; Final ORD/NCEA Approval is expected October 31, 2007; and web posting of the asbestos risk assessment toxicity values for noncancer effects is expected January 31, 2008. Thus the results of the IRIS process to develop a new, final toxicity value for noncancer effects for asbestos are expected in 2008.

It should be noted that an assessment of the cancer toxicity value for asbestos is not currently posted on the IRIS Chemical Assessment Tracking System. Therefore, a projected date for review and updates to the asbestos cancer toxicity value is not currently available.

Conclusions:

For all three exposure scenarios, the estimated Excess Lifetime Cancer Risks were within or exceeded the risk management range generally used by EPA. The results of this study suggest that further sampling is needed to confirm the results of this one-time sampling event and to determine if risk management based, mitigation measures are needed to reduce the exposures of recreational motorcycle riders to naturally occurring asbestos at the CCMA. Additionally, air monitoring of asbestos exposures of recreational users of the CCMA should be considered for the wet season as well at the dry season. With lower temperatures, the wet season is a popular time for motorcycling and motorcycle racing events at the CCMA.

References:

CH2M HILL. 2004. Sampling and Analysis Plan for Asbestos Air Sampling, Clear Creek Management Area, San Benito County, California. October.

Lab/Cor, Inc. 2004. CCMA "Dry-Run" - FINAL REPORT, Number 041068R4 (Laboratory TEM Results). November 15.

PTI Environmental Services. 1992. Human Health Risk Assessment for the Clear Creek Management Area. Prepared for: U.S. Department of the Interior, Bureau of Land Management, Hollister, CA. Bellevue, Washington. September.

U. S. EPA (U. S. Environmental Protection Agency). 1989. Risk Assessment Guidance for Superfund (RAGS), Volume 1, Human Health Evaluation Manual (Part A), Interim Final. EPA/540-1-89/002. December 15.

U. S. EPA (U. S. Environmental Protection Agency). 2004. Integrated Risk Information System (Asbestos), internet database. October 5.

Table 1

Exposure Scenarios

Human Health Risk Assessment

CCMA Dry Run Asbestos Exposures (September 15, 2004)

Exposure Area	Exposure Scenario	Receptor	Exposure Media of Concern
CCMA	Recreational Use	Adult Motorcyclists	
		Motorcyclist: Lead	Air
		Motorcyclist: First Trailing	Air
		Motorcyclist: Second Trailing	Air

Table 2
Exposure Assumptions
Human Health Risk Assessment
CCMA Dry Run Asbestos Exposures (September 15, 2004)

Exposure Parameter		One-day Per Year Exposure		Reasonable Maximum Exposure (RME)		High Estimate Exposure	
		Adult Motorcyclist	Source	Adult Motorcyclist	Source	Adult Motorcyclist	Source
Exposure Frequency (days/year)	EF	1	PTI, 1992	5	PTI, 1992	12	PTI, 1992
Exposure Time for inhalation of asbestos (hours/day)	ET	5.4	PTI, 1992	5.4	PTI, 1992	7	PTI, 1992
Exposure Duration (years)	ED	30	EPA, 1989	30	EPA, 1989	30	EPA, 1989
Averaging Time for carcinogens (yr)	ATc	70	EPA, 1989	70	EPA, 1989	70	EPA, 1989

Table 3
Exposure Point Concentrations
Human Health Risk Assessment
CCMA Dry Run Asbestos Exposures (September 15, 2004)

Exposure Area	Constituent	Units	Exposure Point Concentration
Motorcycling Trails - CCMA	Lead Motorcyclist		
	Asbestos	f/ml	4.43E-02
	First Trailing Motorcyclist		
	Asbestos	f/ml	6.59E-01
	Second Trailing Motorcyclist		
	Asbestos	f/ml	9.55E-01

Notes:

EPC : Exposure Point Concentration

f/ml: Fibers per milliliter

Table 4
Carcinogenic Toxicity Values
Human Health Risk Assessment
CCMA Dry Run Asbestos Exposures (September 15, 2004)

Constituent	Carcinogenic WOE Classification	Inhalation Carcinogenic Unit Risk [f/ml] ⁻¹	Inhalation SF Source
Asbestos ¹	A	0.23	IRIS

Notes:

EPA Group:

A - Human carcinogen

IRIS: Integrated Risk Information System. EPA 2004.

¹ The unit risk should not be used if the air concentrations exceed 4E-02 fibers/ml, since above this concentration the slope factor may differ from that stated (IRIS, USEPA, 2004). In this risk assessment the calculated Chronic Exposure Concentrations are compared to 4E-02 fibers/ml.

Table 5

Risk Calculation Worksheet - Carcinogenic Effects - Adult Motorcyclist
One-day Per Year Exposure
 Human Health Risk Assessment
 CCMA Dry Run Asbestos Exposures (September 15, 2004)

Exposure Scenario Information	Exposure Scenario:	Recreational User
	Exposure Medium:	Air
	Exposure:	1-day per year
	Receptor Population:	Motorcyclist
	Receptor Age:	Adult
Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	1
Exposure Time for inhalation (hours/day)	ET	5.4
Exposure Duration (years)	ED	30
Averaging Time for carcinogens, 70 year lifetime (hours)	ATc	613,200

Risk Calculations					
Exposure Route	Chemical of Potential Concern	EPC Value [fibers/ml]	Chronic Exposure Concentration [fibers/ml]	Unit Risk [fibers/ml]-1	Cancer Risk
Inhalation	<i>Lead Motorcyclist</i>				
	Asbestos	4.43E-02	1.17E-05	2.30E-01	2.69E-06
	<i>First Trailing Motorcyclist</i>				
	Asbestos	6.59E-01	1.74E-04	2.30E-01	4.00E-05
	<i>Second Trailing Motorcyclist</i>				
	Asbestos	9.55E-01	2.52E-04	2.30E-01	5.80E-05

Table 6

Risk Calculation Worksheet - Carcinogenic Effects - Adult Motorcyclist

Reasonable Maximum Exposure (RME)

Human Health Risk Assessment

CCMA Dry Run Asbestos Exposures (September 15, 2004)

Exposure Scenario Information	Exposure Scenario:	Recreational User
	Exposure Medium:	Air
	Exposure:	RME
	Receptor Population:	Motorcyclist
	Receptor Age:	Adult
Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	5
Exposure Time for inhalation (hours/day)	ET	5.4
Exposure Duration (years)	ED	30
Averaging Time for carcinogens, 70 year lifetime (hours)	ATc	613,200

Risk Calculations					
Exposure Route	Chemical of Potential Concern	EPC Value [fibers/ml]	Chronic Exposure Concentration [fibers/ml]	Unit Risk [fibers/mL]-1	Cancer Risk
Inhalation	<i>Lead Motorcyclist</i>				
	Asbestos	4.43E-02	5.85E-05	2.30E-01	1.35E-05
	<i>First Trailing Motorcyclist</i>				
	Asbestos	6.59E-01	8.70E-04	2.30E-01	2.00E-04
	<i>Second Trailing Motorcyclist</i>				
	Asbestos	9.55E-01	1.26E-03	2.30E-01	2.90E-04

Table 7

Risk Calculation Worksheet - Carcinogenic Effects - Adult Motorcyclist
High Estimate Exposure
Human Health Risk Assessment
CCMA Dry Run Asbestos Exposures (September 15, 2004)

Exposure Scenario Information	Exposure Scenario:	Recreational User
	Exposure Medium:	Air
	Exposure:	High Estimate Exposure
	Receptor Population:	Motorcyclist
	Receptor Age:	Adult
Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	12
Exposure Time for inhalation (hours/day)	ET	7
Exposure Duration (years)	ED	30
Averaging Time for carcinogens, 70 year lifetime (hours)	ATc	613,200

Risk Calculations					
Exposure Route	Chemical of Potential Concern	EPC Value [fibers/ml]	Chronic Exposure Concentration [fibers/ml]	Unit Risk [fibers/mL]-1	Cancer Risk
Inhalation	<i>Lead Motorcyclist</i>				
	Asbestos	4.43E-02	1.82E-04	2.30E-01	4.19E-05
	<i>First Trailing Motorcyclist</i>				
	Asbestos	6.59E-01	2.71E-03	2.30E-01	6.23E-04
	<i>Second Trailing Motorcyclist</i>				
	Asbestos	9.55E-01	3.92E-03	2.30E-01	9.03E-04

Table 8**Summary of Excess Lifetime Cancer Risk Results***Human Health Risk Assessment**CCMA Dry Run Asbestos Exposures (September 15, 2004)*

Exposure Scenario/ Receptor	One-day Per Year Exposure	Reasonable Maximum Exposure (RME)	High Estimate Exposure
	Cancer	Cancer	Cancer
Lead Motorcyclist	3E-06	1E-05	4E-05
First Trailing Motorcyclist	4E-05	2E-04	6E-04
Second Trailing Motorcyclist	6E-05	3E-04	9E-04

Notes:**Bolded results** = an excess lifetime cancer risk greater than 1E-06

APPENDIX J AGENCY AND ORGANIZATION COMMENTS ON CCMA DRAFT RMP AMENDMENT AND DRAFT EIS & BLM RESPONSES

This appendix contains a copy of comment letters received by the Hollister Field Office from agencies and organizations on the Clear Creek Management Area Draft RMP Amendment and Draft EIS, and responses to these comments prepared by BLM in accordance with 40 CFR 1504.3.

Table J-1 lists the agencies and organizations that submitted comments on the CCMA Draft RMP Amendment and Draft EIS. This table also directs the reader to a copy of agency and organization comments in Table J-2 and BLM's responses to these comments in Table J-3.

Table J-4 is a legend of acronyms and "Comment Codes" used to track comments on the CCMA Draft RMP Amendment and Draft EIS.

A summary of public comments on the CCMA Draft RMP Amendment and Draft EIS and BLM's responses to these comments are located in Appendix K.

Many comment received by BLM were beyond the scope of the Proposed CCMA Plan Amendment and Final EIS. These comments and other comments that represent opinions are acknowledged by BLM with the following response: "Comment noted. No response necessary".

Table J-1; Commenting Agencies and Organizations

Comment Code	Agency/ Organization	Commenter	Comment	Response
H-AG-DTSC	Department of Toxic Substances Control	James L. Tjosvold	AG-1 App. J: pp. 3-4	AG-1-R App. J: pg. 65
H-AG-EPA	United States Environmental Protection Agency	Enrique Manzanilla	AG-2 App. J: pp. 5-23	AG-2-R App. J: pp. 65-69
H-AG-MBUAPCD	Monterey Bay Unified Air Pollution Control District	Janet Brennan	AG-3 App. J: pp. 24-26	AG-3-R App. J: pp. 69-73
H-AG-USGS	United States Geological Survey	Brenda Johnson	AG-4. App. J: pg. 27	AG-4-R App. J: pg. 73
H-AG-USFWS	United States Fish & Wildlife Service	Brian Peterson	AG-5 App. J: pp. 28-29	AG-5-R App. J: pg. 73
H-ORG-BRC	Blue Ribbon Coalition	Paul A. Turcke	OR-1 App. J: pp. 30-37	OR-1-R App. J: pp. 74-75
H-ORG-CNPS	California Native Plant Society	Emily Roberson	OR-2 App. J: pp. 38-50	OR-2-R App. J: pp. 75-79
H-ORG-CUNN	Private Landowner	Gene Cunningham	OR-3 App. J: pg. 51	OR-3-R App. J: pp. 79-94
H-ORG-ORBA	Off Road Business Association	Joshua Mackenroth	OR-4 App. J: pp. 52-60	OR-4-R App. J: pp. 94-111
H-ORG-SCVGMS	Santa Clara Valley Gem and Mineral Society	Frank Monez	OR-5 App. J: pp. 61-62	OR-5-R App. J: Pg. 112
H-ORG-VWA	Ventana Wilderness Alliance	Thomas A. Hopkins	OR-6 App. J: pp. 63-64	OR-6-R App. J: pp. 112-113

Table J-2; Comments from Agencies and Organizations

AG-1; California Department of Toxic Substances Control

 Terry Temminnen Agency Secretary Cal/EPA	 Department of Toxic Substances Control 8800 Cal Center Drive Sacramento, California 95826-3200	 Arnold Schwarzenegger Governor
November 12, 2004		
United States Department of Interior Bureau of Land Management Attn: Mr. George Hill Hollister Field Manager 29 Hamilton Court Hollister, California 95203-2535		
DRAFT RESOURCE MANAGEMENT PLAN AMENDMENT AND DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CLEAR CREEK MANAGEMENT AREA, CALIFORNIA		
Dear Mr. Hill:		
Thank you for requesting that the Department of Toxic Substances Control (DTSC) review the May 2004 Draft Environmental Impact Statement (DEIS) for the Clear Creek Management Area (CCMA) covering 75,000 acres of public land surrounding the Atlas Asbestos Mine Superfund site. The U.S. Department of Interior, Bureau of Land Management (BLM) intends to consider comments received during the 90 day comment period which ends on November 15, 2004 in preparing a Proposed Plan Amendment and Final Environmental Impact Statement. The focus of our review is ensuring that human health and the environment are protected from adverse exposure to naturally occurring asbestos (NOA). The following are comments regarding the environmental assessment.		
As expressed in our June 20, 2003 letter to Mr. Robert Beehler, Field Manager at BLM, recent information regarding the potential human health effects of NOA exposure has been reported. Recent work regarding asbestos exposure in Libby, Montana indicates brief exposures to high concentrations can lead to various asbestos related diseases. The values recorded by air monitoring at the CCMA are also short term infrequent high exposures of asbestos. The procedure normally used in risk assessments of adjusting over a lifetime dose is contradicted by the Libby data. Past human health risk assessments prepared for the CCMA likely underestimate risk since the exposure scenario for children with their higher risk potential is ignored. In addition, the Phase Contrast Microscopy (PCM) analytical method that was used to determine the concentrations of fibers used in past risk assessments is not an accurate technique as PCM misses a number of asbestos fibers in certain situations. Transmission Electron		
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Mr. George Hill
November 12, 2004
Page 2

Microscopy is the preferred method to measure concentrations of fibers for risk assessment. These issues and recent developments regarding health risk of NOA render the 1992 risk assessment for CCMA inaccurate and invalid.

The DEIS does not provide an analysis of the risk posed to human health from NOA for activities within CCMA. Without a proper risk assessment there is no basis for selecting activities that can be safely conducted in CCMA. The United States Environmental Protection Agency (U.S. EPA) is conducting exposure assessment testing this fall and in the summer of 2005 that can be the basis of a human health risk assessment for activities within CCMA.

After review of the DEIS, DTSC recommends that BLM not make a decision regarding route designations and acceptable activities at CCMA until EPA completes its activity based exposure assessment next summer under a worst case exposure scenario. Also, DTSC recommends that BLM map the concentrations of soil asbestos so that it can consider activities in relationship to the risks associated with these asbestos concentrations. Based on the exposure assessment and knowledge at the distribution of NOA concentrations within CCMA, BLM should complete a risk assessment to determine the risks of representative activities and locations within CCMA. Based on an appropriate risk assessment, BLM should evaluate human activities within a revised draft environmental impact statement.

If you have any questions, please contact Mr. Steven Ross at (916) 255-3694.

Sincerely,



James L. Tjesvold, P.E., Chief
Northern California-Central Cleanup Operations Branch

cc: Ms. Debbie Schechter
U. S. Environmental Protection Agency
Site Cleanup Branch
75 Hawthorne Boulevard, Mail Stop SFD-7-2
San Francisco, California 94105

AG-2; United States Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

December 1, 2004

Michael Pool, State Director
Bureau of Land Management
2800 Cottage Way, Suite W-1834
Sacramento, CA 95825-1886

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OFFICE OF THE
REGIONAL ADMINISTRATOR

Subject: Draft Resource Management Plan Amendment and Draft Environmental Impact Statement (DEIS) for the Clear Creek Management Area [CEQ # 040322]

Dear Mr. Pool:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced document. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementation Regulations at 40 CFR 1500-1508, and Section 309 of the Clean Air Act. Our detailed comments are enclosed.

This DEIS analyzes specific alternatives to manage the 63,000-acre Clear Creek Management Area (CCMA), a popular off-highway vehicle (OHV) recreation area, in the Bureau of Land Management's (BLM) Hollister Resource Area. The proposed action keeps 246 miles of routes and 466 acres of barren slopes open to use, and expands the existing San Benito Mountain Research Natural Area (RNA) to 3,991 acres. This DEIS is tiered to a programmatic EIS prepared by BLM during the 1990s, which evaluated general management alternatives for the CCMA. In 1999, BLM issued a Record of Decision (ROD) selecting an alternative that would leave 270 miles of routes and 937 acres of barren slopes open to OHV use and include 4,082 acres in the RNA. EPA rated the programmatic DEIS as Environmental Objections-Insufficient Information (EO-2) due to the potential health risks from exposure to naturally occurring asbestos in the CCMA and the technical deficiencies of the 1992 health risk assessment. Please see our June 29, 1993, preliminary DEIS comments; February 15, 1994, DEIS comments; and June 3, 1996 Final EIS comments.

EPA has rated this DEIS as 3 - Inadequate Information (see enclosed "Summary of Rating Definitions"). Pursuant to Section 309 of the Clean Air Act, EPA could refer this action to the President's Council on Environmental Quality (CEQ), if we determine that the public health or environmental quality impacts are unsatisfactory after additional information and analyses are provided. However, we believe we have a significant opportunity to collaborate on the development of an asbestos exposure evaluation (currently being conducted by EPA), and incorporate this information in a Revised or Supplemental DEIS. It is consistent with the

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missions of both of our agencies to cooperate on the important public health issues associated with recreational use at the CCMA.

The CCMA is underlain by serpentinite, the parent rock for asbestos. BLM has designated 30,128 acres of the CCMA as an Asbestos Hazard Area of Critical Environmental Concern (ACEC). The OHV recreation area includes the ACEC. Exposure to asbestos at the high levels found by EPA in the CCMA can lead to harmful health effects, including lung cancer, mesothelioma, and other non-cancer, life threatening diseases.¹ The DEIS continues to rely on an inadequate 1992 health risk assessment and does not adequately characterize exposure to asbestos in the CCMA for common activities, including OHV use, recreation, camping, and occupational activities; the potential impacts to smokers and young children; or indirect effects from asbestos tracked outside of the CCMA. Based on our review of the DEIS, we have concluded that the information in the DEIS does not adequately assess potentially significant impacts to human health from the proposed action and alternatives.

This fall, EPA initiated a new asbestos exposure evaluation in the CCMA. The purpose of this evaluation is to provide accurate information on asbestos exposure associated with typical activities in the CCMA. Preliminary sampling from a dry period in September, 2004, shows substantially higher exposure values in the CCMA than those used in the BLM's 1992 risk assessment. The additional information that will be gained from EPA's exposure evaluation is critical to an informed decision regarding future CCMA management. Since sampling needs to be conducted in both the dry and wet seasons, we expect validated data to be available in June, 2005. Therefore, we recommend that BLM rely on EPA's completed exposure evaluation to recalculate the health risk, and incorporate this information in a Revised or Supplemental DEIS.

Because of the potential for significant health impacts, the Revised or Supplemental DEIS should also analyze a full array of reasonable alternatives and mitigation measures in order to avoid or reduce these impacts. Other reasonable alternatives that are not evaluated in the current DEIS include: complete closure of the CCMA, complete closure of the CCMA during the dry season, and implementation of mitigation measures to reduce human exposure to asbestos. Mitigation measures that merit further consideration include: requiring permits for CCMA access; requiring permit holders to sign an informed consent waiver; limiting the number of days per year an individual may enter the area; restricting access by young children; prohibiting camping inside the Asbestos Hazard Area; eliminating events that result in extraordinary high OHV use; mandatory decontamination of vehicles prior to leaving the CCMA; and mandatory use of respirators (e.g., during certain exposure periods/activities).

EPA is committed to sharing the data and conclusions from the exposure evaluation as they become available so that your decision for future management of the CCMA is based on the

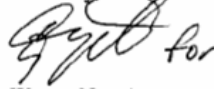
¹Source: EPA's Integrated Risk Information System (IRIS); Agency for Toxic Substances and Disease Registry: Toxicological Profile for Asbestos.

most accurate and updated information. In the interim, we recommend that BLM immediately implement all mitigation and monitoring commitments from the 1999 ROD.

In addition to our primary concern with asbestos exposure and associated health risks, EPA has also identified other environmental issues of concern. EPA has concerns regarding potential impacts to air quality from small particulate matter (PM10) emissions. We commend BLM for reclaiming several abandoned mines in the CCMA and closing them to OHV use in order to reduce mercury loadings in the Clear Creek watershed. OHV activities continue to degrade overall water quality in the CCMA, however, and the DEIS provides insufficient information on existing water quality, and whether the proposed action would improve water quality to acceptable levels. Furthermore, we are requesting additional information regarding impacts to the threatened San Benito Evening Primrose.

We appreciate the opportunity to review this DEIS and request a copy of the Revised or Supplemental DEIS when it is filed with our Washington, D.C. office. We will be sharing our exposure evaluation findings with you as they become available, and are committed to working with you to provide you with the most accurate information with which to make a decision on future CCMA management. If you have any questions, please call me at (415) 947-8702 or Enrique Manzanilla, Director of the Community and Ecosystems Division at (415-972-3843, or have your staff contact Jeanne Geselbracht at (415) 972-3853.

Sincerely,



Wayne Natri
Regional Administrator

004159

Enclosures: EPA Detailed Comments
Summary of Rating Definitions
Comparison of Clear Creek Management Area Air Concentrations
ATSDR Toxicological Profile for Asbestos

cc: Mike Chrisman, California Resources Agency
Jim Branham, California Environmental Protection Agency
Allan Lloyd California Air Resources Board
BB Blevins, California Department of Toxic Substances Control
Ruth Coleman, California State Parks
Richard Boyd, California Air Resources Board
Peter Venturini, California Air Resources Board
Caren Trgovcich, California Department of Toxic Substances Control

Steve Ross, California Department of Toxic Substances Control
Janet Brennan, Monterey Bay Unified Air Pollution Control District
Hector Guerra, San Joachin Valley Air Pollution Control District
Doug Gouzie, Central Coast Regional Water Quality Control Board
Pam Buford, Central Valley Regional Water Quality Control Board
Lowell Landowski, California State Parks
Alex Gonzalez, California State Lands Commission
Connie Rutherford, U.S. Fish and Wildlife Service, Ventura
Maria Barcos-Wallace, U.S. Occupational Safety and Health Administration, San Francisco
Anne Miller, EPA Office of Federal Activities, Washington, D.C.

EPA DETAILED COMMENTS ON THE CLEAR CREEK MANAGEMENT AREA RESOURCE
MANAGEMENT PLAN AMENDMENT DEIS, NOVEMBER, 2004

Human Health Risk

The proposed alternative, which allows continued recreational use in the Clear Creek Management Area (CCMA), is likely to pose a significant public health risk from exposure to naturally occurring asbestos. Exposure to asbestos at high levels can lead to harmful health effects, including lung cancer, mesothelioma, and other non-cancer, life threatening diseases.² As we have indicated in the past, the CCMA's geology makes it an unsuitable location for OHV recreation. In previous comments on the CCMA³, EPA objected to BLM's risk assessment and recommended the evaluation of alternatives and/or additional mitigation measures that could accomplish BLM's goals for the CCMA while fully protecting public health and environmental resources. This DEIS continues to rely on an inadequate 1992 health risk assessment and does not adequately characterize exposure to asbestos in the CCMA for common activities such as off-highway vehicle (OHV) recreation, camping, and occupational activities.

Preliminary results from recent EPA sampling efforts provide further evidence that the 1992 risk assessment underestimates asbestos exposure at CCMA. EPA is conducting a new exposure evaluation in the CCMA to provide updated and accurate information on asbestos exposure from disturbance of soil containing asbestos. Our preliminary sampling in the dry season has revealed *substantially higher exposure values* in the CCMA than those used in the 1992 risk assessment. For example, EPA data indicate the tail rider in a line of three motorcycles was exposed to 0.955 fibers/cubic centimeter (f/cc), which is nine times the highest concentration reported for a tail motorcycle rider in the 1992 risk assessment, as well as nine times the Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) of 0.1 f/cc. (Although the OSHA PEL is not applicable to the general public, per our comments below, it has been used over the years by BLM and the public for comparison purposes). This high exposure concentration, which occurred during dry conditions, may not represent exposure concentrations under all conditions at the CCMA. EPA has conducted additional sampling in the wet season, and will complete dry season sampling in the spring of 2005. We expect validated data to be available in June, 2005.

EPA's preliminary data indicate a potentially higher risk to OHV users than BLM's 1992 risk assessment. EPA's complete evaluation will sample a range of conditions and analyze all samples with transmission electron microscopy (TEM) analysis. TEM analysis is better able to resolve fiber types and dimensions than phase contrast microscopy (PCM), which was used in the

²Source: EPA's Integrated Risk Information System (IRIS); Agency for Toxic Substances and Disease Registry: Toxicological Profile for Asbestos.

³See EPA's June 29, 1993 comments on BLM's preliminary DEIS; February 15, 1994 comments on the DEIS; and June 3, 1996 comments on the FEIS.

1992 risk assessment. EPA's complete exposure evaluation will provide important information for BLM in the development of alternatives and mitigation measures at the CCMA.

Recommendation: We strongly recommend that BLM incorporate the results of EPA's completed exposure evaluation in a Revised or Supplemental DEIS to insure the scientific integrity of the discussions and analyses (40 CFR 1502.24) used to inform BLM's decision. EPA is committed to sharing our data and analysis and working with BLM as this information becomes available.

Risks to children and smokers need to be assessed. Our comments on BLM's programmatic EIS identified the need for additional information regarding the potential health risks to children and smokers. Young children exposed to asbestos in the CCMA have a higher risk of developing mesothelioma during their lifetime than older adults because the latency period for developing this cancer can be 30 to 40 years. Even brief exposures to asbestos levels found in the CCMA may cause fibers to remain in the lungs for an extended period of time. Therefore, the exposure does not end when the visitor leaves the CCMA. Furthermore, intense repeated exposures during periods as short as several months can lead to asbestosis.⁴ The cancer risk from asbestos exposure is also much greater for smokers than for non-smokers. The current DEIS does not address these important issues.

Recommendation: The Revised or Supplemental DEIS should discuss each alternative's potential direct and indirect impacts to CCMA visitors, including young children and smokers. BLM should base its decision regarding future CCMA management on appropriate risk values for all potential CCMA users for various activities, combinations of activities, and frequency/duration of use.

Risks associated with offsite track-out of asbestos need to be assessed. Our comments on BLM's programmatic EIS also identified the need for additional information regarding the potential health risks associated with the exposure caused by asbestos dust that is carried offsite (track-out) on clothing and vehicles. Track-out is an indirect effect (40 CFR 1508.8(b)) of driving on serpentinite. Without proper washing facilities at CCMA exit points, track-out of asbestos dust from vehicles can result in asbestos exposure in homes and driveways, car washes, and other public places visited by recreationists after leaving the CCMA. Asbestos on CCMA recreationists' clothing can also be carried into homes, restaurants, stores, and other public places where other people may be exposed to it. Regular contact with dust from asbestos-laden clothing can cause asbestos-related respiratory diseases in people who have not had direct contact with the original asbestos source.⁵ In addition, asbestos can remain in car vents and interiors as a

⁴American Thoracic Society, Diagnosis and Initial Management of Nonmalignant Diseases Related to Asbestos, American Journal of Respiratory Critical Care Medicine, v. 170, 641-715, 2004.

⁵Agency for Toxic Substances and Disease Registry: Toxicological Profile for Asbestos, 179.

continuing source of asbestos exposure. Asbestos mud and dust tracked out of the CCMA can be a source of exposure every time it is redisturbed.

Recommendation: The Revised or Supplemental DEIS should describe the potential track-out scenarios to homes, vehicle interiors, car washes, and public places recreationists may visit after leaving the CCMA. The document should describe the potential asbestos exposure to CCMA visitors, their families, and the public outside of the CCMA from track-out of asbestos-containing mud and dust on vehicles, clothing, and equipment. The discussion should include the effects of continuing exposures from track-out, and explain how the risk values were determined. The feasibility of constructing vehicle wash facilities at some or all CCMA exit points should be evaluated.

OSHA standards do not apply to the general public. The DEIS documents BLM's continued use of OSHA's permissible exposure limit (PEL) of 0.1 f/cc of air to determine "safe" levels of asbestos exposure for CCMA visitors. In addition, each month BLM's "Clear Creek Bulletin" posts recently monitored asbestos values in the CCMA and implies that conditions below the OSHA PEL are "low dose" exposures and safe. However, the levels of asbestos observed in the CCMA are high doses for the general public. Furthermore, the "Clear Creek Bulletin" inaccurately states that OSHA recommends wearing a respirator if asbestos values are above the PEL. OSHA regulations require employees working in the regulated area to comply with all relevant asbestos regulations, but they do not include recommendations to the general public. EPA has previously indicated to BLM that the OSHA PEL is inappropriate for determining "safe" asbestos exposure levels for the general public visiting the CCMA. OSHA standards for public health and safety only apply to occupational settings. The PEL is not based on health risk to the general public, including young children. For this reason, use of the PEL as a "safety" standard in BLM public education outreach materials is misleading.

Recommendation: BLM should not use the OSHA PEL as an indicator of safe conditions in the CCMA and discontinue these statements in the "Clear Creek Bulletin" and other public outreach and educational materials. Informational materials should disclose the potential health effects of asbestos exposure to the general public, including young children and smokers. Appropriate, scientifically based information is currently available in the Agency for Toxic Substances and Disease Registry's (ATSDR) "Toxicological Profile for Asbestos" (enclosed). The Revised or Supplemental DEIS should clarify that the OSHA PEL is an inappropriate standard to describe exposure at the CCMA for the general public.

Additional information is needed regarding compliance with OSHA regulations for BLM employees. While the OSHA PEL is inappropriate for determining "safe" asbestos exposure levels for the general public using the CCMA, the OSHA PEL applies to all BLM employees and contractors working in the CCMA. The DEIS (p. 3-14) states that BLM personnel are required to follow the OSHA regulations related to asbestos, including personal air monitoring, personal decontamination, and vehicle and equipment decontamination. BLM

personal monitoring data indicate that BLM staff working in the CCMA are frequently exposed to asbestos in exceedance of OSHA's PEL. Staff are also required to shower and change clothes before leaving the regulated zone. However, the DEIS does not mention BLM employees' requirement to wear respirators in the CCMA at all times and does not indicate whether or how BLM is complying with all OSHA regulations related to asbestos. The shower building and vehicle wash rack are located at an administrative site northwest of the Asbestos Hazard Area, and are not adjacent to the regulated zone in accordance with OSHA regulations.

Recommendation: The Revised or Supplemental DEIS should describe all asbestos-related OSHA regulations that apply to BLM employees working in the CCMA, including requirements regarding respirators, protective clothing, decontamination, waste disposal, and personal air and medical monitoring, and discuss how BLM is currently meeting these requirements. The Revised or Supplemental DEIS should also describe how BLM will ensure compliance with OSHA regulations regarding location of the CCMA decontamination facilities.

The characterization of chrysotile asbestos should be revised. The DEIS describes chrysotile asbestos found at CCMA as short fiber asbestos, which is not supported by the data. The 1992 risk assessment relied on PCM measurements, which only detects long fibers. EPA's current exposure evaluation is examining both long and short fibers and has found significant levels of long fibers (PCME or phase contrast microscopy equivalent). As noted above, EPA is committed to sharing our data and analysis with BLM as this information becomes available.

Recommendation: The Revised or Supplemental DEIS should eliminate any discussion of short fiber asbestos because this does not accurately reflect the data provided.

Alternatives Analysis and Mitigation Measures

The DEIS does not analyze a full range of alternatives and/or mitigation measures that accomplish BLM's goals while fully protecting public health. In accordance with the Council on Environmental Quality's (CEQ) NEPA implementation regulations, the EIS must include appropriate mitigation measures not already included in the proposed action or alternatives (40 CFR 1502.14(f)), and discuss appropriate means to mitigate adverse impacts (1502.16(h)).

With regard to mitigation measures, we are concerned that previous mitigation commitments have not been implemented by BLM and other actions have been taken since the previous ROD that conflict with these same commitments. For example, according to the 1996 FEIS, camping inside the Asbestos Hazard Area of Critical Environmental Concern (ACEC) increases the cancer risk to users. In EPA's 1996 FEIS comments, we recommended that camping within the Asbestos Hazard ACEC be excluded until the health risks were better known. Accordingly, in the 1999 ROD (p. 10), BLM committed to developing a plan, over the subsequent three years, to relocate staging areas outside of the ACEC and discouraging camping within the ACEC. The proposed alternative in the current DEIS allows for primitive camping

inside the Asbestos Hazard ACEC. We understand BLM recently constructed new restrooms in the existing staging areas (inside the Asbestos Hazard ACEC), which encourages both staging and camping in these areas. These actions are inconsistent with BLM's previous commitments.

In BLM's *"Issue Paper, EPA and BLM Clear Creek EIS Protest Resolution"* (p.2), BLM committed to enforcing a dry/high dust seasonal restriction such that "vehicles would be restricted to a series of maintained and possibly dust-suppressed roads." The 1999 ROD (p. 2) stated that seasonal route closures would be implemented during excessively dry periods, and the FEIS estimated that this would reduce OHV visitation by about 20 percent. The ROD (p. 10) also committed to dust suppressing staging areas and approximately 30 miles of main transportation routes "as appropriate" to reduce dust generation and associated asbestos exposure. The FEIS (p. 105) estimated that dust suppression should reduce asbestos emissions by approximately 50 percent.

Since the ROD was signed, we understand that BLM has never closed the CCMA due to dry conditions. This was also a key element in the U.S. Fish and Wildlife Service's 1997 Biological Opinion. We also understand that only a few miles of roads have been dust suppressed with water a few times in the last several years because water has not been available and road watering has not been very effective (pers. comm. between George Hill, BLM, and Jeanne Geselbracht, EPA, 9/9/04). Therefore, dust suppression measures have not been implemented effectively or consistently, and asbestos emissions have not been reduced. BLM also committed to constructing a vehicle wash rack to reduce track-out of asbestos and other particulates. This has not been constructed. The current DEIS proposes many of the same mitigation measures, but it is unclear whether resources would be available to implement them. For example, dust suppression with water trucks and a vehicle wash rack require water availability. However, the Implementation Plan (Appendix C) does not list developing a water source as an action item or give it a priority rating. Furthermore, Appendix C lists researching and implementation of dust controls as a midterm action, which would first occur in three to four years. Dust control should be a high priority and included as an Immediate Action.

Recommendation: BLM should consider other reasonable alternatives and mitigation measures to reduce human exposure to asbestos in the CCMA. Additional alternatives should be evaluated including complete closure of the CCMA and full dry season closure of the CCMA. The Revised or Supplemental DEIS should also evaluate mitigation measures to reduce human exposure to asbestos. Mitigation measures that merit further consideration include: requiring permits for CCMA access; requiring permit holders to sign an informed consent waiver; limiting the number of days per year an individual may enter the area; restricting access to young children; prohibiting camping inside the Asbestos Hazard ACEC; eliminating events that result in extraordinary high OHV use; mandatory decontamination of vehicles prior to leaving the CCMA; and mandatory use of respirators.

The Revised or Supplemental DEIS should discuss how each of these measures, individually or in combination, could help to reduce asbestos exposure and potential health risks in the CCMA. The discussion should incorporate EPA's exposure evaluation and describe how the new exposure values were used to determine the risk reduction associated with these measures. The discussion should also identify the construction, operation, and maintenance costs, staffing needs, and feasibility of each measure, and indicate implementation and enforcement feasibility.

BLM should address the availability of water for dust suppression and vehicle decontamination; and discuss whether chemical stabilization of the main routes (R001-R019) or smaller routes are feasible and cost effective.

The effectiveness of each measure should also be evaluated (e.g., 10 percent reduction of particulate emissions where measure is applied). BLM should commit to implementation, effectiveness, and validation monitoring for each measure, and the Revised or Supplemental DEIS should address how monitoring results will be used to adaptively manage the CCMA.

The Revised or Supplemental DEIS should describe the risks associated with camping in the Asbestos Hazard ACEC based on EPA's exposure evaluation, and identify alternatives to staging and camping in the ACEC.

Dry season closures need to be clarified. Under the proposed action, all routes except R001 through R019 would be closed during "dry" conditions based on air monitoring if the OSHA PEL is reached in two consecutive weeks. The OSHA PEL is not an appropriate criterion to determine dry conditions. Furthermore, the projected benefits of partial route closure, especially with respect to asbestos exposure to individuals using the remaining open routes, is not described.

Recommendation: BLM should discontinue using the OSHA PEL for determining dry season closures, and the Revised or Supplemental DEIS should specify that it will not be used. The Revised or Supplemental DEIS should describe the estimated air pollutant emissions reductions and any benefit from reduced asbestos exposures that would result from partial route closure during "dry" conditions.

Dust suppression triggers need to be identified. The DEIS (p. 4-3) states that BLM would dust suppress main routes during high use periods in dry dusty conditions but does not define the specific criteria that would be used to determine these conditions. Would they be the same as those that would close all routes except R001 through R019?

Recommendation: In evaluating alternatives or mitigation measures that involve closure and/or road watering during dry conditions, BLM should develop appropriate criteria based on soil moisture and associated health risk. The Revised or Supplemental DEIS

should identify and discuss the new criteria. Furthermore, in determining closures, the variability of soil moisture from place to place across the CCMA should be considered. BLM should also commit to watering roads during all high use periods in dry conditions.

Other Air Resources

Additional information on particulate matter emissions and vehicle miles traveled is needed. The DEIS (p. 4-2,3 and Appendix I) states that the proposed action would reduce particulate emissions and asbestos dust generation and improve air quality. The DEIS (p. 4-13) also states, “[a]n overall reduction in the area available for vehicle access may have little effect to reduce airborne asbestos emissions.” The DEIS indicates that the No Action Alternative would result in direct impacts to air quality, associated asbestos emissions, and human health from unrestricted vehicle use (p. 4-4 and Appendix I) and that mobile sources operating within the CCMA may be causing exceedences of the State and Federal standards for PM10 (particulate matter smaller than ten microns) (p. 3-3). Appendix G indicates that PM10, PM2.5 (particulate matter smaller than 2.5 microns), and total suspended particulate emissions would be virtually the same, in tons per year, under the proposed action as under No Action. This is because the vehicle miles traveled (VMT) would be the same for each alternative. However, particulate concentrations (expressed in terms of mass of pollutant per volume of air, consistent with the National Ambient Air Quality Standards (NAAQS)) could potentially increase under the proposed action if the VMT would be concentrated on significantly fewer miles of routes and fewer acres of barren slopes than under the No Action Alternative. Therefore, the concentrations of particulate, including asbestos, to which OHV recreationists may be exposed could be higher under the proposed action than under the no action alternative.

The 24-hour and annual NAAQS for PM10 are 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 50 $\mu\text{g}/\text{m}^3$, respectively. In BLM’s *Issue Paper, EPA and BLM Clear Creek EIS Protest Resolution*, BLM committed to conducting additional modeling, in cooperation with local air boards, to determine more clearly whether PM10 standards would be met under the proposed action. However, modeling to determine consistency with air quality standards has not been done, and the DEIS provides only emissions estimates, which cannot be compared with the NAAQS or State ambient air quality standards. In addition, the DEIS (p. 3-32) indicates that visitor use is increasing at a rate of about five percent per year. Although Appendix G projects particulate emissions for each alternative, it is unclear which year’s VMT were used to calculate these emissions.

Recommendation: The Revised or Supplemental DEIS should provide current VMT and PM10 and PM2.5 emissions in the CCMA. The BLM should conduct air quality dispersion modeling based on projected PM10 and PM2.5 emissions for each alternative for 2005 and subsequent years of this management plan. These projections, which should include special events such as OHV rallies, should be provided in the Revised or Supplemental DEIS and compared with the NAAQS. The Revised or Supplemental DEIS should discuss how BLM would ensure compliance with appropriate standards and

identify and describe mitigation measures that would be applied to further reduce emissions.

Road surface moisture should be reassessed in the particulate matter estimates.

EPA has reviewed BLM's "Spreadsheet Estimate of Total Particulate Matter Emissions by Alternative." The estimates and underlying assumptions are well documented and well presented. However, the assumption for surface material moisture content is based on national soil moisture maps prepared by the National Oceanic and Atmospheric Administration, from which BLM derived a value of 40 percent for winter and 28 percent for summer for the project area. These values seem extraordinarily high considering that EPA's AP-42, Section 13.2.2 Unpaved Roads, which provides the equations used in developing the emission factors for the analysis, cites a default moisture content value of 0.5 percent. While AP-42 discourages use of that default value, the ranges of source conditions (for surface material moisture content) that were tested in developing the equations are 0.03 to 13 percent (see AP-42, Section 13.2.2, Table 13.2.2-3). Therefore, we believe that the assumed values of 28 percent and 40 percent may be too high. For comparison purposes, if the default value were used instead, the emissions estimates for PM-2.5 and PM-10 would be approximately 2.4 times higher and the total suspended particulates (TSP) estimate would be approximately 3.5 times higher than those presented in the DEIS.

Recommendation: BLM should clarify the use of the high road surface material moisture content values, or recalculate the particulate matter emissions from unpaved road use under each of the alternatives based on a site-specific determination of representative road surface moisture content (percent), using the field sampling and laboratory analysis procedures contained in AP-42, Appendices C.1 and C.2. Otherwise, BLM should use the default value in AP-42. The Revised or Supplemental DEIS should provide the revised emissions estimates and revise the conclusions of the air quality evaluation accordingly.

Water Quality and Watershed Resources

The Clean Water Act requires that existing instream water uses and water quality necessary to protect the existing beneficial uses shall be maintained and protected. However, it is unclear from the information provided in the DEIS whether BLM's proposal will adequately protect water quality. BLM should incorporate appropriate best management practices (BMPs) and other necessary measures to enable full protection of beneficial uses of waters, attainment of surface water quality standards, and compliance with the Clean Water Act (40 CFR 131.12).

Pursuant to the Clean Water Act, especially Section 313, BLM has an obligation to assure that all water quality standards, both narrative and numeric, are met in all waters of the CCMA and downstream waters for all water quality parameters at all times. BLM's monitoring and mitigation program must be adequate to demonstrate that the CCMA complies with or is progressing toward compliance with the Clean Water Act (and implementing regulations) within a reasonable period of time.

Sediment reduction targets. The existing average sediment yields from undisturbed soil, barren hillclimbs, and the road network in the CCMA are 3.2 tons/acre/year, 4.9 to 16 tons/acre/year, and 80.2 tons/acre/year, respectively (DEIS, p. 3-11). In our comments on the previous DEIS and FEIS, we recommended that BLM specify objectives for erosion reduction (e.g., a given percent of reduction in all areas) based on the needs of watershed restoration and BLM's responsibilities to protect soil resources and comply with water quality standards and objectives, rather than identifying a range of road miles without specific erosion reduction targets. We recommended that BLM use these goals to determine the acceptable mileage and categories of routes that could remain open. The DEIS does not set or assess specific erosion reduction targets for each watershed, or provide estimates of sediment yield reductions as a result of best management practices implemented since the 1999 ROD.

According to the DEIS (p. 4-9), the current overall sediment yield from roads in the CCMA is estimated to be 24,969 tons/year. The proposed action would reduce this to 16,680 tons/year. This appears to be an improvement, but it is unclear how this projected yield would be spread out over the CCMA. The significance of this projected reduction is unknown with respect to each watershed and other resources such as the San Benito Evening Primrose, which is listed as threatened under the Endangered Species Act. Therefore, it remains unclear whether the proposed action would result in continued extreme sediment yields for specific watersheds. With no watershed targets or action levels, the DEIS is unclear how monitoring results will be used to adaptively manage the CCMA and what conditions would trigger specific mitigation measures.

Recommendation: The Revised or Supplemental DEIS should project sediment yields (in tons/acre/year) for each watershed, and identify sediment reduction targets for each watershed based on watershed restoration and water quality needs. The discussion should address how mitigation measures are expected to ensure that sediment reduction targets are met and the feasibility of implementation. The discussion should address the construction, operation, and maintenance costs of each measure, as well as staffing needs, practicability issues, and the likelihood of implementation. The effectiveness of each measure should also be described and assessed (e.g., percent reduction of sediment yield where measure is applied). BLM should commit to implementation, effectiveness, and validation monitoring for each measure, and the Revised or Supplemental DEIS should thoroughly describe and discuss how monitoring results would be used to adaptively manage the CCMA.

Asbestos contamination of surface waters. Review of water quality data indicate that asbestos concentrations in Hernandez Reservoir likely exceed the Federal water quality standard to protect drinking water. Furthermore, in a September 4, 1996, meeting with EPA, BLM indicated that only one water sample was collected for asbestos analysis in Clear Creek, and that sample exceeded the water quality standard. The water quality standard for asbestos is 7,000,000 fibers/liter. Data also indicate that several water bodies on the east side of the CCMA are adversely affected by the transport of sediment and asbestos from the CCMA. Such impacts appear to constitute violations of State numeric and narrative water quality standards for the

protection of several designated beneficial uses (objectives pursuant to California's Porter-Cologne Act).

In BLM's February 19, 1998, response to EPA's FEIS protest letter, BLM committed to conducting more studies to determine the causes of elevated asbestos and mercury levels in CCMA watersheds. In addition, the 1999 ROD (p.7) stated that, because heavy metals and asbestos were concerns in this area, BLM had contracted a water quality study in 1997 to determine the magnitude of heavy metals being deposited into streams from 15 abandoned mines.

Although BLM has acknowledged asbestos contamination of surface waters as a problem, it appears that neither the 1997 study nor any subsequent monitoring addressed asbestos. The current DEIS does not provide adequate information regarding either existing conditions or potential impacts of the alternatives from asbestos contamination to demonstrate current or future compliance with the applicable standard.

Recommendation: BLM should conduct additional water quality sampling of asbestos in the water column to assess whether asbestos water quality standards for the protection of municipal water supply (MUN) are being met. The sampling plan should be designed to assess water in Clear Creek and Hernandez Reservoir. A minimum of 15 samples would provide sufficient information regarding water quality for this parameter. Sites where the asbestos standard is exceeded may indicate areas vulnerable to soil erosion. These areas would need special protection from OHVs and additional erosion control management practices.

Control of mercury loads. We wish to acknowledge BLM's efforts in reducing mercury loads to Clear Creek. Earlier this year, a total maximum daily load (TMDL) for mercury in Clear Creek was finalized by the California Regional Water Quality Control Board (RWQCB), Central Coast Region, and approved by EPA. The total mercury objective for Clear Creek is 0.050 micrograms per liter ($\mu\text{g/L}$). Mercury in Clear Creek continues to exceed this objective. However, according to the RWQCB⁶, data suggest the BLM has properly identified the source of mercury runoff entering Clear Creek and has taken proper steps to reduce or eliminate this load. The RWQCB has also indicated that high-use OHV areas are not a significant source of mercury loading; and abandoned mine lands may no longer be contributing appreciable loads of mercury to Clear Creek, possibly because of BLM's recent efforts to remediate those mine areas. Recent erosion control and mercury load control efforts at abandoned mines in the CCMA have included removal and/or entombment of mining wastes, capping of residual material with clean, native soil, revegetation of disturbed areas, and monitoring.

⁶Central Coast Regional Water Quality Control Board, Total Maximum Daily Load Technical Support Analysis for Mercury Impairment of Clear Creek and Hernandez Reservoir, 2/25/04.

Other pollutants in CCMA watersheds. Although it appears that reclamation of abandoned mines has reduced mercury loads in Clear Creek, it is unclear from the information in the DEIS how effectively other pollutants will be reduced in the CCMA watersheds. In previous correspondence (July 8, 1994 and June 3, 1996), EPA specifically noted the lack of information on existing water quality, and potential impacts of the proposal on beneficial uses and water quality standards, especially in east side streams. We provided some information to BLM and recommended that additional information be obtained in order to make informed decisions about the existing and potential environmental impacts from CCMA management. The information provided by EPA included the following:

- Lead and chromium concentrations in Panoche/Silver Creek have exceeded state objectives for drinking water during large runoff events;
- Detection levels for cadmium, lead, and mercury are too high on Los Gatos/Arroyo Pasajero to detect threats to aquatic life;
- Selenium concentrations have exceeded Federal standards and State objectives for aquatic habitat protection and drinking water in Panoche/Silver Creek;
- Selenium concentration violations may occur in Cantua and San Benito Creeks;
- Boron concentrations in Panoche/Silver, Cantua, and Los Gatos Creeks exceed Federal recommended standard (.55 mg/l) for protection of aquatic habitat; and
- Mercury impairment is documented in San Carlos and Panoche Creeks.

The DEIS provides little additional information regarding water quality in these east side watersheds. It is unclear whether BLM has a plan for obtaining water quality data for the east side streams and adaptively managing them.

Recommendation: For the east side streams in the CCMA, the Revised or Supplemental DEIS should provide readily available water quality information; identify specific reduction targets for soil erosion, sediment yield, and metals; and discuss BLM plans for watershed monitoring and adaptive management.

Management alternatives and effects on water quality. The DEIS indicates that if a route is difficult to manage and too costly to maintain, the route's management objective could be changed to reduce the level/cost of necessary maintenance. However, changing the route management objective to reduce the level of required maintenance could result in negative impacts to soils, vegetation, and water quality.

Recommendation: We recommend that prior to changing route management objectives to reduce maintenance requirements, BLM should evaluate whether this would result in

increased soil erosion, adverse impacts to vegetation or water quality, or other impacts. BLM should consider route closure as an adaptive management alternative if routes become too difficult or costly to properly maintain.

Biological Resources

The San Benito Evening Primrose (*Camissonia benitensis*) is a threatened plant species endemic to the CCMA. In its 1997 Biological Opinion pursuant to Section 7 of the Endangered Species Act, the U.S. Fish and Wildlife Service stated that minimizing surface disturbance from anthropogenic causes and minimizing alteration of hydrologic processes are key to protecting this species. Management actions to minimize habitat disturbance by vehicles included route closures, fences, barriers, signing, visitor education, and law enforcement; however, anthropogenic disturbance of *Camissonia benitensis* habitat continues (pers. comm. J. Delgado, BLM, to J. Geselbracht, EPA). We understand that BLM will be consulting with the U.S. Fish and Wildlife Service on this current DEIS, and a new Biological Opinion will be issued.

Recommendation: The Revised or Supplemental DEIS should discuss how BLM intends to meet its responsibilities pursuant to the Endangered Species Act to protect *Camissonia benitensis* and its habitat from further destruction, including additional area closures if appropriate. The document should identify the costs and staffing needed to fully comply with the new Biological Opinion.

The 1997 Biological Opinion assumed that approximately 30 miles of main transportation routes would be dust-suppressed. The Biological Opinion determined that, because the bulk of sediment entering Clear Creek results from erosion of unpaved roads, successful dust suppression adjacent to Clear Creek would benefit *Camissonia benitensis* and promote proper functioning of its stream terrace habitat by reducing the transport and delivery of sediment into its habitat.

Recommendation: The Revised or Supplemental DEIS should discuss how the lack of dust suppression on unpaved roads in the CCMA has affected and would continue to affect *Camissonia* populations.

Other Comments

Several mistakes and/or missing information in the DEIS should be rectified or added in the Revised or Supplemental DEIS, including:

- The DEIS does not include a bibliography.
- The DEIS does not include a section on consultation.

- It appears that there is a typo in Appendix B. To be consistent with the map for Alternative A, Barren 6x should be designated as closed rather than open.
- The maps for alternatives A through D should depict the Wilderness Study Area, staging areas, designated campgrounds, and other areas proposed to be open to camping.

**U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action***

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

Comparison of Clear Creek Management Area Air Concentrations (f/cc), 1992 BLM Risk Assessment vs. 2004 EPA Sampling Event	
<u>1992 BLM Risk Assessment</u> (Phase Contrast Microscopy (PCM))	<u>EPA 9/15/04 Sampling Event</u> (Transmission Electron Microscopy, expressed as PCM Equivalents)
Motorcycle Riding Lead Rider Mean = .018 Range = .01 - .035 Mid Rider Mean = .042 Range = .01 - .08 Tail Rider Mean = .039 Range = 0.01 - 0.1	Motorcycle Riding Lead Rider (25% riding) 0.044 Mid Rider 0.659 Tail Rider 0.955
SUV Riding - open vehicle SUV riding Mean = .035 Range <0.01 - .097	SUV Riding - open vehicle Lead SUV Driver 0.100 Trailing SUV Driver 0.229 Trailing SUV Passenger 0.523
Ambient Non-hazardous Area No data	Ambient Non-hazardous Area Human Visitor - Oak Flat Campground 0.0252 Stationary Sampler - Oak Flat Campground 0.00649
Hazardous Area Human Visitor (no vehicle activity) Mean = < 0.01 Range = < 0.01 - 0.01	Hazardous Area Human Visitor (no vehicle activity) <0.0976 Stationary Sampler <0.00110

AG-3; Monterey Bay Unified Air Pollution Control District	
U.S. EPA/OPA 001	
PLANNING 001	
OPTIONAL FORM 19 (7-90)	
FAX TRANSMITTAL	
To: George Hill	
From: Joanne Geselbracht	
Phone: 415 972-3853	
Fax: 831-630-5055	
GENERAL SERVICES ADMINISTRATION	
24580 Silver Cloud Court - Monterey, California 93940 - 831/547-9411 - FAX 831/547-8501	
July 16, 2004	
Robert Beehler Field Manager US Dept. of Interior, BLM 20 Hamilton Court Hollister, CA 95023	
SUBJECT: DEIR AND DRAFT RESOURCE MANAGEMENT PLAN AMENDMENT FOR THE CLEAR CREEK MANAGEMENT AREA	
Dear Mr. Beehler:	
Staff has reviewed the referenced documents and has the following comments:	
1. <u>Page 3-2</u> . The following statement should be clarified: "Air basins in the State are either in "attainment" or "Unclassified" for nitrogen dioxide, sulfur dioxide, lead, and visibility reducing particles". Classification are <u>nonattainment</u> , attainment or unclassified. The NCCAB is moderate nonattainment for the ozone standard, unclassified/attainment for the CO standard, attainment for NO ₂ , SO ₂ , and nonattainment for PM ₁₀ .	
2. <u>Page 3-2</u> . The following statement should be clarified since the project is in San Benito and Fresno counties, not Monterey County: "Fresno and Monterey Counties are designated as maintenance/attainment for carbon monoxide." The NCCAB is unclassified/attainment for the CO standard. San Benito County is unclassified, and Monterey County is attainment.	
3. <u>Page 3-3</u> . The document states: "For the CCMA FEIS (1995), the BLM in cooperation with the MBUAPCD computer modeled ROG, NO _x , and CO from mobile sources. Based upon this previous analysis all common automotive emissions except PM ₁₀ were within existing air quality standards and did not exceed Federal or State regulatory thresholds. The PM ₁₀ emissions estimated by computer modeling were found to potentially exceed State and Federal standards."	
The District does not have a computer model for modeling the pollutants noted. Perhaps the statement refers to the mobile source emission inventory for San Benito County which is prepared by ARB. If, in fact, the reference is to the emission inventory, mobile source emissions cannot be directly compared to "Federal or State regulatory thresholds" (State and federal standards?). Photochemical modeling which addresses ozone is typically done on a regional basis. See the 2000 Air Quality Management Plan for a description of the photochemical ozone model prepared for the NCCAB.	

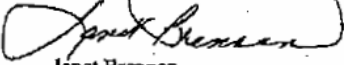
03/02/2004 FAX 559 230 5054	U.S. EPA/OFA PLANNING	0002

Regarding PM_{10} , the entire NCCAB is nonattainment for the State standard. Emissions from motor vehicles travelling on paved and unpaved roads are estimated to contribute over 50% of directly emitted PM_{10} emissions within the NCCAB.

4. Page 3-3. The DEIS states that all land-use decisions for the CCMA will need to conform to the District's "1998 Report on Attainment of the California Particulate Matter Standards...". This report does not include regulations. The statement in the EIS should be clarified, accordingly.
5. Page 3-4. The DEIS states, "The North Central Coast air basin can affect the San Joaquin Valley air basin by the prevailing winds that transport air pollutants." Transport from the NCCAB to the San Joaquin Valley air basin has not been established by ARB. Rather, the NCCAB is designated as downwind of the San Joaquin Valley air basin.
6. Page 3-4. OSHA asbestos standards should be identified so that a comparison can be made with the collected samples.
7. Page 3-14. Reference is made to a risk assessment which concluded that employees and visitors would have a statistical chance of 5 cancer deaths per 100,000. The document should note that the District's threshold of significance is 1 incidence of cancer per 100,000.
8. Page 4-2. The District meets federal particulate matter standards and therefore does not have federal plans addressing those standards. The following statement is not applicable in the context of the District's attainment status for PM_{10} : "It is assumed that all activities must be conducted in compliance with applicable rules and regulations and attainment plans for ozone and PM_{10} for the North Central Coast and San Joaquin Valley Air Basin."
9. Page 4-3. It should be noted in the impact section that the proposed alternative would generate the highest level of particulate emissions but that the difference among all alternatives is nominal. We suggest that particulate emissions for each alternative be included here as well as in Appendix G
10. The FEIS should include a risk assessment for the public's exposure to asbestos after mitigation.
11. Appendix G. VOCs should be listed as a gaseous pollutant emitted by motor vehicles. Most of the particulate emissions associated with motor vehicles is from tire wear, as noted, and travel on unpaved roads. A distinction should be made between engine exhaust emissions and other sources of motor vehicle emissions. Additionally, it is not possible to evaluate particulate matter emission estimates for each alternative with the data provided. We request that the full report be forwarded to the District for review.

09/02/2004 10:45 FAX 559 230 6084 U.S. EPA/OFA PLANNING 0003

Thank you for the opportunity to review the document. Please do not hesitate to call if you have any questions.

Sincerely,

Janet Brennan
Supervising Planner
Planning and Air Monitoring Division

AG-4; United States Geological Survey



bjjohnso@usgs.gov
10/13/2004 09:00 AM
Please respond to
bjjohnso

To: lsmith@ca.blm.gov, jngraham@ca.blm.gov, mwest@ca.blm.gov
cc:
Subject: hollister feedback

name = Brenda Johnson
organization = U.S. Geological Survey
email = bjjohnso@usgs.gov
subject = Draft Clear Creek Resource
FeedbackType = Comment
request_comment = USGS has reviewed the Draft EIS Clear Creek Resource
Management Plan and has no comments.

Thanks

page_referred_from = <http://www.ca.blm.gov/hollister/nepa.html>

fo = 10

Submit = Send Request

AG-5; United States Fish & Wildlife Service	
US FWSO	Fax: 916-414-6712
Nov 15 2004 10:03	P. 02
	
United States Department of the Interior	
FISH AND WILDLIFE SERVICE Sacramento Fish and Wildlife Office 2800 Cottage Way, Room W-2605 Sacramento, California 95825-1846	
In reply refer to: 1-1-04-1-2539	NOV 12 2004
Memorandum	
To:	Field Manager, Bureau of Land Management, Hollister Field Office Hollister, California
From:	Chief, Endangered Species Division, Sacramento Field Office, Sacramento, California <i>Chf Nazam</i>
Subject:	Request for Comments on the Draft Clear Creek Resource Management Plan Amendment and Environmental Impact Statement, San Benito and Fresno Counties, California
This responds to your request for informal comments on the Draft Clear Creek Resource Management Plan Amendment and Environmental Impact Statement. This response is provided in accordance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 <i>et seq.</i>) (Act). Section 9 of the Act prohibits the "take" (e.g., harm, harass, pursue, injure, kill) of federally-listed wildlife species. "Harm" (i.e., "take") is further defined to include habitat modification or degradation that kills or injures wildlife by impairing essential behavioral patterns including breeding, feeding, or sheltering. Congress established two provisions (sections 7 and 10) that allow for the "incidental take" of endangered species of wildlife by Federal agencies, private interests, and non-Federal government agencies. Incidental take is defined as take that is "...incidental to, and not the primary purpose of, the carrying out of an otherwise lawful activity." Such take requires authorization from the U.S. Fish and Wildlife Service (Service) or the National Marine Fisheries Service, as appropriate, that anticipates a specific level of take for each listed species. Take incidental to an otherwise lawful activity may be authorized by one of two procedures. If a Federal agency is involved with the permitting, funding, or carrying out of the project, then initiation of formal consultation between that agency and the Service pursuant to section 7 of the Act is required if it is determined that the proposed project may affect a federally listed species. Such consultation would result in a biological opinion that addresses the anticipated effects of the	
	

US FWSO

Fax: 916-414-6712

Nov 15 2004 10:03

P. 03

Field Manager

2

project to the listed species and may authorize a limited level of incidental take. If a Federal agency is not involved with the project, and federally listed species may be taken as part of the project, then an incidental take permit pursuant to section 10(a)(1)(B) of the Act would need to be obtained. The Service may issue such a permit upon completion of a satisfactory habitat conservation plan (HCP) for listed species that would be affected by the project.

We have specific comments regarding the vernal pools. On pages 3-21 and page 8 of Appendix 1, it states that fencing and pipe barriers have been placed to protect the vernal pools from off-highway vehicle recreational activities. How far back is the protective fencing and pipe barriers from the vernal pools in feet? We recommend that any protective barriers utilized have at least a 250-foot set back distance from any vernal pools, and we also recommend that a hydrological evaluation be conducted to determine if runoff from off-highway vehicle use will adversely affect the vernal pools.

We appreciate the opportunity to comment on the Draft Clear Creek Resource Management Plan Amendment and Environmental Impact Statement. If you have any questions regarding this letter, please contact Brian Peterson or Susan Jones at (916) 414-6630.

cc:

Annette Tenneboe, California Department of Fish and Game, Fresno, California
Army Corps of Engineers, Regulatory Branch, Sacramento, California
Connie Rutherford, USFWS, Ventura, California

OR-1; Blue Ribbon Coalition

MOORE SMITH BUXTON & TURCKE, CHARTERED

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Of Counsel

* Also admitted in Oregon
* Also admitted in Washington
* Also admitted in South Dakota
* Also admitted in New Mexico

September 21, 2004

Delivered via U.S. Mail and Facsimile to 831-630-5055

Robert A. Beehler
BLM Hollister Field Manager
20 Hamilton Court
Hollister, CA 95023

RE: Request For Extension – Clear Creek Management Area EIS

Dear Field Manager Beehler:

We are writing on behalf of our clients the BlueRibbon Coalition, California Off Road Vehicle Association, California Association of 4 Wheel Drive Clubs, American Motorcyclist Association District 36 and Salinas Ramblers Motorcycle Club to request an extension of the deadline for comments to the Draft Resource Management Plan Amendment and Draft Environmental Impact Statement for the Clear Creek Management Area (the "DEIS"). We respectfully request that you expeditiously consider this request as the current deadline for submission of comments is October 15, 2004. As we will explain in greater detail below, an extension is necessary to rectify legal flaws in the scoping process leading to the DEIS, to include a legally-defensible range of alternatives, to correct errors resulting from premature release of the DEIS, and to further sound public policy in managing the Clear Creek Area.

The Clear Creek Management Area ("CCMA") offers outstanding recreational opportunities, including hiking, rockhounding, hunting, and off-highway vehicle riding. The CCMA is renowned in California and the western U.S. for its unparalleled single-track trail riding and other unique riding values within reasonable proximity to the California central coast and Bay Area. The Salinas Ramblers have regularly hosted the nationally-sanctioned Quicksilver Enduro at the CCMA which is the longest-running enduro sanctioned by the American Motorcyclist Association. As presently formulated, the DEIS and Proposed Plan Amendment would unnecessarily jeopardize these legitimate recreational activities.

BLM has not properly complied with scoping requirements in generating the DEIS. On April 29, 2003, BLM published its Notice of Intent to prepare an amendment to the applicable

Request for Extension to CCMA DEIS
September 21, 2004
Page 2

land use plan (the "NOI"). 68 Fed.Reg. 22733 (Apr. 29, 2003). The NOI explained the plan amendment would be analyzed through an environmental assessment ("EA"), advised scoping comments would be accepted for 30 days, and promised "all public meetings will be announced at least 15 days prior to the event." Id. No public meetings were held. Neither the NOI nor any other presently-available BLM document details the extent to which the NOI was circulated, but some input was apparently provided by some interested publics, including our clients. Among the concerns expressed were whether an EA would be sufficient to accomplish the proposed plan amendment, and whether the agency should therefore conduct a more thorough environmental impact statement analysis. The agency apparently took these concerns to heart, but unfortunately failed to re-initiate scoping to improve upon the EA's deficient scoping efforts. Instead, the agency prepared the DEIS, only issuing a "correction" to the NOI at the same time, and in the same document, as announcing the Notice of Availability of the DEIS on July 19, 2004. 69 Fed.Reg. 43011 (Jul. 19, 2004).

Applicable regulations mandate that scoping "shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." 40 C.F.R. § 1501.7. Under this process the agency is required to invite the participation of affected entities and interested persons. Id. at (a). If changes to the proposal occur or significant new circumstances or information arise which bear on the proposal or its impact then the agency must revise the determinations made in the scoping process. Id. at (c). Failure to comply with these mandatory directives can invalidate the decision flowing from the flawed NEPA analysis. State of Wyoming v. USDA, 277 F.Supp.2d 1197, 1219 (D.Wyo. 2003).

The failure to conduct adequate scoping has caused serious flaws in the DEIS. The DEIS does not contain adequately detailed maps, therefore preventing our clients and the public from understanding, and therefore commenting upon, the specific trail designations at issue. BLM has failed to adequately research and document property ownership within the CCMA, resulting in assertion of BLM jurisdiction over state, county and/or private property. The majority of trails in the DEIS's lengthy "route designation record" show a designation date of "21 Sept 03" which seems questionable since BLM was probably not issuing formal designations on that date, which was a Sunday. See, DEIS, Appx. A at 20-31. Similarly, the DEIS repeatedly refers to a route network of "approximately 440 miles", "nearly 440 miles" and "over 440 miles" but the largest aggregate mileage depicted in Table 2-1 of the DEIS is 398 miles. DEIS at 2-17. Errors of this nature reflect the inadequate scoping process and prevent meaningful public understanding of, and comment upon, the agency's proposal.

The DEIS reflects BLM's concern over scoping shortcuts, incorrectly asserting that the presented alternatives were "developed through the public participation process..." and glossing over the details of the EA scoping process. DEIS at 2-1; ES-3 (including erroneous statement that notice of availability and correction to NOI was published in May 2004 Federal Register). At no time during even the minimal "scoping" efforts in the spring of 2003 was the range of possible alternatives reviewed with any of our clients or other members of the public. Similarly,

Request for Extension to CCMA DEIS
September 21, 2004
Page 3

there has been no public review or discussion of specific alternatives or alternative themes prior to the unveiling of the DEIS.

As a result of this deficient process one or more viable, if not superior, alternatives have been omitted from the DEIS. In particular, our clients believe an alternative can be crafted which better protects the CCMA's sensitive resources while preserving its unique single-track trail riding opportunities. In principle, this alternative would provide for intensive management of vehicle access to the Clear Creek drainage, which presents the greatest resource protection challenges, while allowing more flexible management of other less-sensitive areas. Our clients have attempted to formulate a draft alternative incorporating these themes, and please find attached a narrative description of this alternative, as well as spreadsheets identifying the resultant trail mileage and barrens acreage available for vehicle use under this proposal. We present this alternative not to usurp the agency's role in formulating management strategy, but simply to identify the extent to which viable and reasonable alternatives have escaped public review as a result of the agency's inadequate analytical process.

We respectfully request that BLM suspend the October 15, 2004, deadline for comments on the DEIS and suspend further review of the DEIS as presently drafted. We further request that BLM formally announce its intent to re-initiate scoping on a CCMA EIS, which shall appropriately involve all affected entities and interested persons and include a robust analysis of alternatives that maximize resource protection and recreation opportunity in the Clear Creek Management Area.

Thank you for considering this request. Please contact our office if you have questions or wish to discuss this matter further.

Sincerely,

MOORE SMITH BUXTON & TURCKE,
CHARTERED



Paul A. Turcke

/PAT
encl.

cc: Secretary Gale Norton
CA State Director Mike Pool

Alternative E - Focused Management/Expanded Recreation Opportunities

The description of this alternative incorporates the Alternative B discussion by reference, and only those components that differ from Alternative B are presented.

This alternative places a high priority on protection of critical resources in the Clear Creek drainage while providing enhanced motorized access within the CCMA to accommodate the challenging off-roads events that have made Clear Creek one of the top ten OHV recreation sites in the United States.

This alternative adopts the definition of "Limited Use" as it was defined in the 1999 Record of Decision. Use will be allowed on all existing routes that are not signed closed.

Because the vast majority of sensitive areas exist in the Clear Creek drainage, management efforts will be to intensely manage OHV recreation in this area. All routes in the Clear Creek drainage will be signed open or closed.

To protect sensitive single track resources that are expensive to maintain, those routes outside the Clear Creek drainage will not be signed but will be shown on a user map and will be open for casual and permitted use. To avoid confusion and cost, the BLM will work with OHV groups to mark closed routes. Since most routes outside the Clear Creek drainage slated for closure have experienced little or no historic use, the signing will be an on-going process.

This alternative would provide a larger route network to select from for enduro and permitted events. Additional motorized access would be provided for OHV recreation and hunting activities in the Condon Peak area.

Determination of the individual designated routes and barrens is in the attached spreadsheet. Aerial digital imagery would be used to complete the route inventory of those routes not included in the existing database for the CCMA. Upon completion of soil loss assessment, up to an additional 10 percent of the miles of routes under this alternative may be added to the designated route network after evaluation utilizing the criteria developed in this environmental impact statement. This could result in as much as a 335 mile network of routes.

OHV recreation use on barrens would be dispersed throughout the CCMA. The boundaries of the SBMRNA under this alternative would not provide all the additional protection of watershed values for Sawmill Creek and San Carlos Creek as found in Alternatives A or C but would closely follow the proposed boundaries in the CCMA Plan Amendment (1995), with minor modifications.

The expansion would include a cross-section of the unique serpentine and adjacent ecotones. A substantial portion of the expanded boundaries would not follow readily identifiable geographic features such as routes. The area between T124 and R001 would not be included in the expansion, as not contributing substantially to incorporating areas with unique vegetation communities. T 153, T154 and T155 on the northeast side of the RNA and R010 ("Ridge Route") would be included in the route network with substantial mitigation measures required.

Management Actions

This alternative would implement the management actions as described for Alternative A and B, except as specifically described below:

This Alternative would amend the Hollister Resource Management Plan for the Clear Creek Management Area. Routes and areas (barrens) will be designated open, closed, or limited based on the criteria in Appendix A and B. The expanded boundaries of the San Benito Mountain Research Natural Area are designated as delineated on the map in Appendix J.

Routes of Travel

Action This alternative would result in 293 miles of routes designated as open and limited as shown on map in Appendix J. This alternative would, at a future date, analyze an expanded route inventory based on new information developed from aerial imagery. These additional routes would be analyzed using the same criteria discussed under the route designation process.

Action R010C and R012 through the SBMRNA would be designated open rather than administrative.

Action Special Recreation Permit (SRP) OHV events would be allowed on designated open and limited routes.

Barrens

Action This alternative would result in approximately 1,016 acres of barrens designated as open. Barrens considered for designation as open would be dispersed throughout the CCMA. These barrens are listed in the Polygon Spreadsheet.

Stopping and Parking

Action Stopping and parking would be allowed within 40-feet of the centerline of an open or limited route, and within open and limited barrens except for within the SBMRNA and specifically restricted areas (sensitive habitat, mines, private lands, etc.).

Action Develop upper and lower Jade Mill area camping/staging area with facility improvements, designated areas, and a phased implementation to expand the capacity to accommodate up to 100 vehicles. Improve the route network above Jade Mill as a play area with a motocross track and trails for mini-bike riders.

Action Develop a non-OHV camping area at the junction of R013 and R011 to accommodate visitors who wish solitude and a camping location close to the SBMRNA.

San Benito Mountains Research Natural Area

Action The SBMRNA would be expanded to 3,522 acres following the proposed boundaries in the CCMA Plan Amendment (1995), with minor modifications. (See map in Appendix J). The "Bowl" area (Polygon 40) would be excluded from the expanded RNA boundary and would continue to be open for OHV use.

Action Existing routes within the expanded SBMRNA, T 153, T154, T155 plus as yet unidentified routes used for enduro events, would remain open.

	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	notes
Route Designation						
Open	209	230	198	398	276	
Limited	9	15	5	0	17	
Total Recreation	218	245	203	398	293	
Admin						
Admin	28	25	27	0	15	
Closed	152	128	168	0	46	
Total	398	398	398	398	354	
Trail Type						
Paved	9	9	9	9		
Improved	40	40	40	42	26	includes paved
4WD	26	26	26	30	27	
Jeep	60	66	52	80	55	
ATV	31	35	28	56	39	
STT	80	94	75	181	146	
Total	248	270	230	398	293	no admin
Routes on Private					19	
Total Routes					373	
Barrens						
Barrens	466	813	466	2800	999	see addl spreadsheet
RNA	3991	3522	4580	4082	3522	

Barrens Detail

Polygon	Size	Amount/% Closed/Priv.	OHV Avail.
PG 2	295.9	111	184.9
PG 5	36.0		36.0
PG 6	347.0	40%	208.2
PG 7	66.0		66.0
PG 9	64.4		64.4
PG 10	51.1		51.1
PG 13	43.8		43.8
PG 14	99.8	15%	84.8
PG 28	23.3		23.3
PG 29	34.5		34.5
PG 32	24.5		24.5
PG 33	24.1		24.1
PG 34	6.7		6.7
PG 40	124.5	40%	74.7
PG 41	31.3		31.3
PG 42	13.5		13.5
PG 43	10.4		10.4
PG 44	17.0		17.0
PG48	17.0		17.0
	1313.8		1016.2

OR-2; California Native Plant Society

California Native Plant Society

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November 12, 2004

Robert A. Beehler
Field Manager
Bureau of Land Management
Hollister Field Office
20 Hamilton Ct.
Hollister CA 95023

Dear Mr. Beehler:

The following are the comments of the California Native Plant Society (CNPS) on the Draft Resource Management Plan Amendment (Draft RMP) and Draft Environmental Impact Statement (DEIS) for the Clear Creek Management Area (CCMA).

Introduction

The California Native Plant Society (CNPS) is a non profit organization of more than 10,000 laypersons and professional botanists organized into 33 chapters throughout California. The mission of the California Native Plant Society is to increase understanding and appreciation of California's native plants and to conserve them and their natural habitats, through education, science, advocacy, horticulture and land stewardship. Our members and chapters work closely with the Bureau of Land Management (BLM) and other State and Federal agencies to manage and conserve rare and common botanical resources in California. Our members also use California's public lands, including the CCMA, extensively for research, education and recreation.

Our comments will focus on the impacts of management of the CCMA, particularly management of motorized recreation, on the San Benito Evening Primrose (*Camissonia benitensis*, CBE), other imperiled plants, plant communities, and their habitats.

CNPS has long been extremely concerned about management of the CCMA. The area provides habitat for numerous rare and imperiled plants including CBE and Rayless Layia (*Layia discoidea*) (DEIS p. 3-24). We have worked with BLM for more than 20 years to protect these species and their habitats in the CCMA. The CCMA is an extremely important and valuable area ecologically. The DEIS states that the CCMA exhibits "a fragile ecology, diversity and assemblage of rare and unique plants. In total, Clear Creek and surrounding watersheds support plant and animal communities that are important from the perspective of California native biodiversity" (DEIS p. 3-16). Regarding damage to CBE habitat, the DEIS states that "moderately high to extremely high rates of soil erosion appear to be concentrated near routes, [and] hillclimbs...." (DEIS p. 3-10) Regarding CBE, the DEIS states that several areas are "high priority for



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... protection as a result of continued damage by off-road vehicle (ORV) use in sensitive species habitat." (DEIS p. 3-17).

CABE is a highly imperiled annual species endemic to serpentine-derived alluvial deposits only found within the vicinity of the CCMA. Of 27 known occurrences, 20 are entirely and 2 are partially on lands administered by the BLM. 18 of those sites are within the CCMA. Its' population fluctuates widely both spatially and temporally, with population numbers ranging from a few hundred to 165,000. This plant appears to spend much of its life as seed bank. Its annual reproduction and recruitment depend heavily on local weather in the CCMA (DEIS p. 3-24). Species such as CABE, whose reproduction, recruitment and therefore survival rely so heavily on climate driven "recruitment years" require conservation of high quality suitable habitat, even if seemingly unoccupied, throughout their ranges so that it is available when recruitment opportunities occur (U.S. FWS, 2003). As habitat is destroyed by ORV damage to soils, streams, and local hydrology, the ability of CABE successfully to capitalize on "recruitment years" has become increasingly compromised.

For these reasons, CNPS is concerned about the possibility of extinction of this imperiled species if current levels of ORV use and damage are allowed to continue. Federal agencies are required by law to prevent species extinction. Section 7 of Federal Endangered Species Act directs:

"(a) Federal Agency Actions and Consultations.--

- (1) ...All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by *carrying out programs for the conservation of endangered species and threatened species* listed pursuant to section 4 of this title.
- (2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") *is not likely to jeopardize the continued existence of any endangered species or threatened species....*" (emphasis added)

Moreover, the goal of the Federal Endangered Species Act (ESA) is not merely to prevent extinction. It is to recover listed species (ESA § 2(b); § 3(3)). Thus it necessary not merely to conserve CABE and its habitat in place, but also to conserve, and if needed restore, unoccupied potential habitat that may be colonized by or planted with CABE if an opportunity arises. Further, global climate change and other factors also may make CABE's current habitat unable to support the species and force CABE to migrate on its own. This possibility adds to the importance of conserving potential habitat.

CNPS supports the adoption of Alternative C – Enhanced Environmental Protection.

However we are very concerned that measures to protect species, resources, and habitat will not be implemented within the CCMA whatever alternative is adopted. This has unfortunately been our consistent experience with past plans including the 1998 Record of Decision (ROD) and the 2004 Interim Protection Strategy (IPS).

For this reason, CNPS recommends that the CCMA be closed to motorized recreation pending completion of this NEPA process and pending a "no jeopardy" finding by the

U.S. Fish and Wildlife Service in Section 7 consultation.

The purpose of the recommendations in these comments is to avoid the need to "uplist" CABA to endangered status, to avoid jeopardy to CABA, to protect other rare species so the further listings are not needed, and to protect the rare plant communities in this very special area.

History of ORV Damage to San Benito Evening Primrose

The 1985 listing rule identified ORV use as the principle threat to the Primrose and its habitat. The FWS listed CABA as "threatened" rather than "endangered" based on the assumption that the BLM would implement conservation measures to prevent jeopardy and promote species recovery (50 Fed. Reg. 5757). Unfortunately, despite decades of evidence of ORV damage to CABA, other imperiled species, and their habitats in the CCMA, the BLM has not met its commitments to protect or restore the species and its habitat.

Although CABA was listed in 1985, BLM proposed no measures to reduce ORV damage until the 1998 ROD. That ROD proposed to (i) reduce the then existing 420 miles of designated routes in the CCMA to 270 miles; (ii) reduce recreation areas from the then existing 4,000 acres of barrens used by ORVs throughout the CCMA to 937 acres; (iii) protect existing populations of CABA through fencing, annual inventories, monitoring and closures as necessary (see below) and attempt to expand its range; (iv) reduce erosion and sediment transport in all CCMA watersheds; (v) expand the boundaries of the San Benito Mountain Natural Area to cover 4082 acres and redesignate it as a Research Natural Area.

Almost none of the protection proposals have actually been implemented.

The CCMA is heavily used by ORVs. The CCMA became a focused use area because the serpentine habitats offered open slopes for ORV use.

ORV use is essentially unregulated at the CCMA. Every monitoring visit by CNPS and BLM to CABA sites has shown ORV trespass in Upper Clear Creek, Indian Hill complex and Larious Canyon, with other sites also showing signs of occasional to frequent trespass. There are a number of reasons for this. The area is large, and therefore difficult to control. It has many points of entry. It has only a single law enforcement officer, who although diligent and dedicated, cannot possibly sufficiently patrol the thousands of acres, the numerous entrances or keep the thousands of visitors in the CCMA out of prohibited areas.

Off-roading damage to the Primrose and its habitat has been monitored since 1983. One of the key components of the 1998 ROD was the 1997 Biological Opinion (U.S. Fish and Wildlife Service, 1997; (BO)) which found that the continued survival of CABA would not be jeopardized if the conservation measures identified in the ROD and BO, and summarized below, were implemented.

The 1997 BO set criteria for closure of the CCMA in order to protect CABA. Any of the following criteria trigger closure of the CCMA: (1) fifteen incidents of resource damage to known protected BLM-managed CABA occurrences (ten incidents of damage lead to posted warnings); (2) insufficient funds or personnel leading to ineffective habitat

California Native Plant Society comments on CCMA Draft Plan/DEIS

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protection, barrier construction (i.e. fences), or area patrol (3) failure to meet threshold levels of monitoring (levels set by a mutual agreement from FWS and BLM). The BO stated that the CCMA would be reopened when the problem that caused the closure had been resolved or mitigated to a level mutually deemed adequate by FWS and BLM. The measures promised by BLM in its ROD, and expectation of compliance with those measures mandated by the BO, formed the basis for FWS "no jeopardy" finding.

Since the adoption of the ROD and BO, off-roading has greatly proliferated in the CCMA. There has been a 15%, or approximately 7,500 visitor days, increase in off-road vehicle use at Clear Creek over the last three years. Current use exceeds 50,000 visitors each year (DEIS p. 3-32, pers. commun. George Hill). Currently 900-1200 miles of off-road routes crisscross the Clear Creek Management Area (pers. commun. George Hill), 3-4 times the level cited in the 1998 FEIS and Record of Decision (ROD).

As ORV use has expanded, monitoring has shown that damage to the CAGE has increased as well. Limits on incidents of damage to CAGE and habitat set by the BLM and the 1997 BO to protect the species have been routinely exceeded. Every year since 1983, monitoring has documented more than 15 instances of damage. The most recent monitoring data, collected in the spring of 2004, are consistent with this pattern (BLM *Camissonia benitensis*/ORV Compliance Monitoring Botany Staff Summary October - March, 2003-2004). Despite the BO mandate to close the CCMA in the event of excessive damage to CAGE, BLM has never done so. BLM did issue a warning letter as mandated by the BO in December of 2003, following monitoring of more than 10 instances of damage, but did not close the area when more than 18 instances of damage were reported the following spring. CNPS requested that BLM do so, and BLM did not consult with FWS before deciding to refuse CNPS's request to close the CCMA.

Further, and perhaps more troubling, notwithstanding documented off-road vehicle damage to the Primrose and its habitat, and in the face of legal requirements to protect the plant (see above), the BLM has actually encouraged increased off-road use in Clear Creek. In 2004, BLM allowed several large motorcycle "enduro" races in the area, including one upstream from Larious Canyon, site of an important CAGE population. Two to three hundred motorcycles participate in the enduros, causing widespread habitat damage and sedimentation onto Primrose populations.

CNPS has worked with BLM for decades to seek administrative remedies to these problems. The previous management plan, adopted in the 1998 ROD, was the result of a NEPA process that took nine years to complete. During those nine years, ORV damage to CAGE and other CCMA resources proceeded unchecked. In addition, the RODs limits on ORV use were not implemented, as documented above. Instead ORV use has increased substantially.

More recently, in December of 2003, BLM released the Interim Protection Strategy for CAGE (IPS). The BLM has referred CNPS to its Interim Protection Strategy as the primary means by which BLM proposed to prevent jeopardy to CAGE pending finalization of a new ROD. Page 1 of the IPS noted that several CAGE sites continued to be inadequately protected. The IPS also acknowledged that the 1997 BO-10 incident threshold for non-compliance for the 2003-2004 season had been exceeded, and that non-compliance might continue. The IPS also identified the 1997 BO criteria which would result in closure of the CCMA under the IPS protection measures.

Like the ROD, the IPS has not been implemented. According to BLM staff, no IPS work has been done, with the exception of monitoring, since April of 2004 due to high and possibly dangerous asbestos dust levels within the CCMA. Some fence construction and other work occurred prior to April, 2004, but rogue riders cut fences and rendered many protective barriers ineffective.

Thus, nothing in our experience supports the conclusion that

- the current NEPA process will be completed with dispatch (the previous NEPA process required nine years),
- the IPS will be implemented and that CABB, other botanical resources, or their habitats will be protected during the current NEPA process, or
- that measures to protect CABB, other botanical resources, or their habitats which are adopted in the upcoming ROD will be fully or adequately implemented.

The CCMA should be Closed Pending Adoption and Implementation of Effective Conservation Measures

Consequently, CNPS recommends that the CCMA be closed to ORV use pending adoption and implementation of measures to ensure that legal requirements to protect CABB and other sensitive resources from ORV damage are met, and that the species is no longer in jeopardy of extinction.

CNPS stresses that a large portion of the management failures in protecting CABB have been due to factors outside the control of BLM. Underfunding, understaffing, political pressure, changing budgets, and changing policies have made it very difficult to adopt or implement effective, decisive or consistent land and resource management policies or plans.

We also stress that we have never wished to close the entire CCMA either temporarily or permanently. Despite decades of documented damage, we did not even request temporary closure until this year. However, given the management history and the current budgetary and political situation, we see no other alternative than to request a temporary closure while effective protection for CABB and other plants are put in place.

Conservation Recommendations for the San Benito Evening Primrose

Components of an effective protection plan that avoids both jeopardy and the need to "uplist" the species to endangered status include

- (i) adoption of a "closed unless signed open" policy
- (ii) adoption of strong, scientifically sound monitoring and adaptive management plans, and
- (iii) implementation of more effective methods than have been used in the past to keep ORV users out of sensitive species habitat

(i) Closed Unless Signed Open Policy

CNPS recognizes that ORV vehicle use is an historic, popular and legally mandated use on certain areas of California public lands, including lands administered by the BLM.

However, as noted above, inadequate law enforcement, insufficient signage, absence of maps, and conflicting, changing or unclear rules confuse both riders and the general public.

This confusion contributes to the trespass, sometimes unintentional, into prohibited areas and damage to sensitive areas, CAGE, other sensitive species and habitats.

Therefore, CNPS recommends the adoption of a "closed unless signed open" policy for the CCMA. The FEIS and final CCMA Plan should mandate that the only areas and routes available for ORV use are those that are both signed as open and clearly designated as open on agency maps. All other lands and potential routes must be unequivocally closed to off road vehicles use.

Such a policy would reduce confusion and thereby make it easier for riders to avoid inadvertent damage of protected areas and species. It will also make it easier for other users of public lands to avoid the dangers, ecological damage, noise, and dust associated with ORV use if they wish to do so.

(II) Adaptive management

As stated above, CNPS supports Alternative C – Enhanced Environmental Protected.

However, as also stated above, decades of experience with BLM's slow pace in planning and failure to meet their management commitments for the CCMA force us to doubt that whatever Alternative is adopted will be implemented in a timely or effective manner.

The CCMA still only has a single law enforcement officer who must patrol tens of thousands of acres. No agency can properly control illegal ORV use an area as large as the CCMA, and with so many points of entry, with only a single law enforcement officer, no matter how hardworking and dedicated they are. It is, in fact, ridiculous to expect to achieve adequate control of 50,000 ORV users per year under such circumstances.

In these types of situations, CNPS recommends that "adaptive management" strategies be adopted so that management is adjusted to protect resources whether or not adequate staff and funding is available.

The 1997 BO mandates closure of the CCMA when impacts to CAGE exceed acceptable limits. These criteria provide an excellent example of such an adaptive management strategy. We recommend that these measures, combined with a requirement for biweekly monitoring of incidents of damage, be incorporated into the final ROD for this Plan/EIS.

In the meantime, while the final EIS is being developed and the ROD is finalized, we recommend that the CCMA be closed to motorized recreation.

This closure should last until measures to protect CAGE, its habitat, and other rare species and communities are in place.

Specifically the CCMA should be reopened to motorized recreation when:

- (1) The ROD and BO are finalized, including the resolution of appeals and other

- challenges.
- (2) Key CAFE sites, as identified in the IPS and the DEIS, have been protected through route closures, route concealment, fencing and other measures; and the measures have been proven effective through documented reductions in incidents of damage (see below)
 - (3) Route designations have been completed and a schedule for route closures, barrier construction, and maintenance has been adopted.
 - (4) The final ROD and BO contain an "adaptive management plan" which mandates
 - i. closure of the CCMA following the criteria to protect CAFE, as mandated by the 1997 BO
 - ii. biweekly monitoring of impacts to CAFE sites and habitat during peak use season
 - iii. annual reports of compliance with the schedule for route closures, barrier construction and maintenance
 - iv. monitoring and determination of "incidents of damage" will be carried out by qualified FWS and BLM botanists
 - v. closure of the CCMA if the schedule for route closures, barrier construction and maintenance is not met
 - (5) A "no jeopardy" finding for CAFE has been made by FWS for the final ROD
 - (6) the BLM, EPA, and FWS determine that the CCMA can be reopened without risk to CAFE, its habitat, BLM staff or public health.
 - (7) An "closed unless signed open" policy for the CCMA is codified by the ROD and implemented
 - (8) Measures to inventory and protect other rare plants in the CCMA have been implemented.

We base this closure recommendation on the following facts:

- FWS was so concerned about CAFE protection that they (i) stated that it would be listed as endangered if protection measures were not implemented and (ii) included CCMA closure criteria in the 1997 BO. Conditions in the CCMA have, if anything, worsened since that time.
- At least 18 instances of damage to CAFE occurrences and habitat were recorded 2003/04 use season, however the CCMA was not closed
- The BLM has been unable to implement many, if not most, of the IPS CAFE protection strategies due to inadequate staffing, funding, and unsafe ambient dust levels
- The previous NEPA process required nine years to produce a ROD
- Most route and area closures will not occur until the final ROD is adopted.
- The current NEPA process is already more than a year behind its initial schedule
- A notice of intent to sue has been filed by some riders' groups. If their litigation moves forward, it could create lengthy delays in finalization of the current plan

Thus, we fear that there will be long delays before a final ROD/FONSI is reached and that CAFE, other rare species, and habitats will continue to experience damage during that time. Our analysis of the species status, trend and of current management forces us to conclude that this species may be at jeopardy of extinction if current levels of damage are allowed for many more years.

(III) Effective Methods to control ORV use

As noted above, most riders stay within allowed areas and follow rules. Most problems are caused by rogue riders who enjoy breaking rules and riding into closed areas. To control these few riders, different methods are necessary. The "closed unless signed open" policy is one such method.

Other methods that have been found to be effective include:

- Adequate law enforcement. More law enforcement officers must be retained by the CCMA since the current situation is clearly not working.
- Increased penalties for trespass and unauthorized use. These penalties should be widely publicized so as to be most effective
- Clear rules that all areas are closed to ORV use unless officially designated, mapped, and signed as open
- Intensive signage of open routes (e.g. every ¼ mile) to make sure there is no ambiguity regarding where routes go
- Avoidance of posting "closed area" signs which can invite trespass by rogue riders
- Construction of barriers using natural materials such as brush, boulders, or logs to conceal closed or unauthorized routes
- Obliteration, concealment of closed or unauthorized roads and routes, and revegetation with appropriate local native species, so that they are difficult to locate and use
- Use of federal fire plan or ORV commission funds to propagate ecologically appropriate local native species for revegetation efforts
- Involvement of landscape architects, botanists and trail engineers to make concealment measures most effective and ecologically appropriate
- Proper design and maintenance of open routes to minimize ambiguity about where routes go and minimize unauthorized use and minimize riders inadvertently getting lost, sometimes in dangerous areas

Protection Of Other Rare Species and Communities

Rare Plants

Of course CAGE is not the only imperiled species in the CCMA. The DEIS identifies ten species in the CCMA that are listed as "1b" species by the California Native Plant Society *Inventory of Rare and Endangered Plants of California* (6th edition). Taxa listed as "1b" are defined as "rare or endangered in California and elsewhere". Of the 1b taxa, only CAGE has been fully inventoried, and little is known about many of the other taxa.

Most of these rare taxa are routinely subjected to direct and indirect ORV impacts. Yet no investigations of impacts or conservation plans have been developed for these plants. This must change.

Inventories for at least the other "1b" species should be a top priority for the BLM. Species conservation guides should also be developed to identify threats, analyze level of imperilment, identify mitigation measures to eliminate threats and ensure species viability, understand habitat requirements, delineate essential occupied habitat and

suitable unoccupied habitat, and document plant lifecycles.

Specifically, conservation strategies should:

- a. Identify management activities which adversely impact each species and its habitat.
- b. State which management activities are permitted and prohibited in the sensitive species habitat and why.
- c. Record the habitat requirements, known populations and potential habitat for the species.
- d. Describe the current status and trend of the species as quantitatively as possible
- e. Describe the desired condition for the species and its habitat, and the acceptable range of variability for the species and its habitat, quantitatively if possible.
- f. Describe gaps in current knowledge of the species that should be filled to improve management.
- g. Describe appropriate mitigation measures, if available, for minimizing management impacts to the species, with advantages and disadvantages of each.
- h. Describe preferred responses to unplanned emergencies such as wildfire or floods to reduce impacts on habitat.
- i. Propose a monitoring program to track species condition and trend using the quantitative indicators identified for the habitat and species described in (c) and (e) above.
- j. Describe possible responses to declines in habitat quality or numbers below of the acceptable range of variability identified in (e).

These tasks should be performed prior the reopening of the CCMA (assuming BLM accepts our recommendation to close it).

Rare Plant Communities

The CCMA also provides habitat for important plant communities. The most unique of these is the conifer forest which includes a species assemblage found nowhere else in the world. Motorcycle use is widespread in this forest as is severe soil damage and wind and water erosion, as well as soil compaction. Recruitment in this forest is consequently relatively low.

The CCMA also includes important examples of Valley and Blue Oak woodlands, which are also subject to intensive ORV use and soil damage. One example is the Jade Mill area which displays severe soil damage.

These plant communities must also be protected from ORV impacts under the final Plan. This should be accomplished through a thorough mapping of the rare communities and development of management plans that would limit impacts to these areas from ORV use, camping and weeds.

Invasive Non Native Weeds

The Draft Plan/DEIS does not contain a full management plan to control existing infestations or, more importantly, to prevent further spread of invasive non native plants.

CNPS proposes the following strategy for weed management in the CCMA. It is based primarily on weed management direction already widely used by the Forest Service and mandated by the Forest Serviced Manual. For the purposes of these comments, invasive nonnative plant species will be referred to as weeds.

1. Education of BLM staff and of the public

The CCMA should offer an annual weed management training program and hold a weed management planning and coordination conference.

CCMA should create a guide to the weed species present in the Area to educate the public, user groups, and BLM staff (law enforcement, road maintenance, etc.) regarding the identification of weeds and the ecological threats they pose.

The CCMA should develop weed education leaflets to be distributed through Forest Service field offices, at trailheads, and elsewhere.

2. Project Surveys and Weed Inventories

The CCMA should conduct surveys to update its weed inventory.

All project areas should be surveyed for weeds during project planning and/or NEPA analysis. Survey results will be reported in NEPA documents along with weed risk analyses and weed control plans, where appropriate.

3. Weed Risk Assessments should be performed for all ground disturbing projects such as road maintenance, culvert maintenance, recreational facility placement or maintenance, and route designations.

4. Minimize weed spread during permitted and planned activities

The CCMA should adopt measures to prevent the spread of weeds. Measures shall include but should not be limited to:

- ♦ Equipment cleaning
- ♦ Prohibitions and disincentives against movement of weed propagules from infested to uninfested areas. Routes that facilitate movement of weeds into uninfested areas should be closed.
- ♦ Use of weed-free hay and straw for erosion control, mulch, revegetation, forage, and other uses

5. Uninfested areas should be mapped and weed management plans developed that prioritizes them for protection from infestation. Areas to be given high priority for protection include sensitive or listed species habitat and rare plant communities.

6. The CCMA should review facilities, roads and trails and perform an analysis to determine which roads and trails may be moved or closed to protect high priority uninfested areas from infestation. Where facilities, roads and trails pose a high risk to priority uninfested areas but cannot be moved or closed, other management measures shall be taken to decrease the risk of infestation.

7. Weed Management Measures

The BLM should use weed eradication methods which pose the least risk of damage to surrounding organisms and ecosystems.

Herbicides will only be used for weed eradication when an interdisciplinary analysis has determined that (a) other methods are unlikely to be successful and (b) all appropriate measures to minimize risk of adverse impacts to non-target organisms have been identified and will be taken.

FEIS Must Include A Quantitative Cost and Workload Analysis

The failure of the BLM to implement past CCMA management plans or plans to protect CABE is at least partially due to inadequate staffing and funding.

We understand that the California ORV Commission recently reduced the law enforcement portion of the CCMA maintenance grant to \$20,000. This is but one example of the budgetary uncertainty that plagues all public land management agencies and the resources they are required to manage and conserve.

Most of the alternatives in the Draft Plan/DEIS, including Alternative C and the Proposed Action, propose designation of routes, closure of routes, closure of areas to protect CABE and other resources. These closures require planning and enforcement. Both comes with a cost in staff time and in materials.

In addition, effective closures – closures that actually prevent trespass – require more than just the posting of signs or erection of fences. They require use of the types of more innovative methods such as those discussed above. These methods may be expensive.

The DEIS environmental consequences section does not present an analysis of the implementation and enforcement costs to the agency (taxpayers) for the alternatives. Nor does it present a workload analysis for the alternatives. Appendix C does present a qualitative discussion of some of the costs and sources of funding in the CCMA. However, no quantitative analysis is presented of the cost (\$) or workload (FTEs) required to implement the alternatives. Nor are quantitative data presented showing the funding and staffing that are currently available.

This Plan must ensure that imperiled species, habitats, water quality and other resources are protected, irrespective of the adequacy or inadequacy of funding. This is why it is critical that the "adaptive management strategy" described above be included in this ROD, including criteria for closures of the CCMA when resource protection, monitoring, or law enforcement commitments are not met, either due to factors under the control or outside the control of the BLM.

The FEIS must present the public with an analysis of the relative cost to the taxpayers for implementation/enforcement of the various alternatives. Further, an estimate of implementation/enforcement costs for a closure of the full CCMA should be presented for comparison.

Specifically, we suggest that the final EIS present an analysis of

- (i) the relative costs of implementation for each alternative, and for closure of the area, expressed in dollars

- (ii) the likelihood that funds will be available to meet those costs, and
- (iii) a workload analysis, expressed in FTEs, for each alternative and for closure of the area

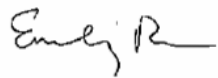
In addition to implementation/enforcement costs, ORV use in the CCMA has generated air and water pollution by asbestos, mercury and other pollutants. This pollution creates public health hazards. It also creates cost. The final EIS should include some estimate of the probable future releases of asbestos and other pollutants under the various alternatives, including an estimate of toxic releases if the CCMA is closed to ORV use. It should also present an analysis of the costs, in terms of tax dollars, for water treatment, public and private health insurance costs, and other costs associated with such emissions.

Recommendations

1. Close the CCMA to motorized recreation until the conditions described above have been met.
2. Add a quantitative cost analysis for each alternative, and for closure of the CCMA to motorized recreation, to the FEIS.
3. The FEIS should include a quantitative workload analysis (FTEs) for each alternative and for closure of the CCMA to motorized recreation. It should also include an analysis of the likelihood of implementation for each alternative, based on current FTEs and funding levels.
4. The final ROD should include monitoring and an adaptive management plan, including closure criteria to protect CCMA resources when funding and/or staffing fall below adequate levels.
5. The final ROD should include a "closed unless signed open" policy
6. Other specific route closure measures and steps to prevent further route proliferation, as described above, should be mandated by the ROD. Signage and mapping alone is not adequate.
7. Inventories and species conservation guides should be developed for rare plant species and communities, particularly CNPS 1b species and the globally unique conifer forests.
8. A weed management program should be added to the final ROD.

Thank you for the opportunity to present these comments. We hope they are useful. Please contact me if you would like clarification on any point or if I or CNPS can be of assistance.

Sincerely,



Emily B. Roberson, Ph.D.
Senior Land Management Analyst

References

U.S. Fish and Wildlife Service. 2003. Draft Recovery Plan for San Benito Evening Primrose. U.S. Fish and Wildlife Service, Portland, OR.

U.S. Fish and Wildlife Service. 1997. Biological Opinion for the Clear Creek Management Area/Resource Management Plan Amendment and Final Environmental Impact Statement and the Proposed Administrative Site Development Plan, San Benito and Fresno Counties, California. U.S. Fish and Wildlife Service, Ventura, CA.

OR-3; Gene Cunningham

GENE CUNNINGHAM

October 11, 2004

Mr. George Hill
Bureau of Land Management
Hollister Field Office
20 Hamilton Court
Hollister
California 95023

HAND DELIVERED

Re: Draft Resource Management Plan Amendment
and Draft Environmental Impact Statement for
the Clear Creek Management Area dated May 2004

Dear Mr. Hill:

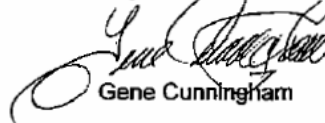
Attached are comments on the above referenced.

The above referenced document contains numerous, indeed a plethora of references to uncontrolled OHV use, OHV trails/routes unknown to the BLM and off route/trail OHV travel. This constitutes trail/route proliferation. Trail/route proliferation is a violation of the Record of Decision. Attached to this cover letter are excerpts from the Record of Decision addressing route proliferation. In that the above referenced admits trail/route proliferation in the CCMA the CCMA should be closed to OHV use.

Also attached to this cover letter is evidence of trail/route proliferation as recent as March of 2004.

The attachments to this cover letter are marked "Exhibit to Cover Letter".

Very truly yours,



Gene Cunningham

SH: 103 61 10010

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OR-4; Off Road Business Association

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Law Offices Of
Joshua D. Mackenroth
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SAN DIEGO, CA 92120
(619) 265-1873

October 12, 2004

Robert A. Beehler
United States Dept. of the Interior
Bureau of Land Management
Hollister Field Office
20 Hamilton Court
Hollister, CA 95023

Via Fax and Original via Federal Express

Re: Formal Comments on Draft Clear Creek Management Plan Area & Draft Environmental Impact Statement

Dear Mr. Beehler,

On behalf of my client, the Off Road Business Association (ORBA), we respectfully submit the following comments with regard to the Draft Clear Creek Management Plan Area Amendment (RMPA) and associated Draft Environmental Impact Report (DEIR) prepared by your office.

The Off-Road Business Association is a non-profit trade association organized under 26 USC 501(c)(6), with its office located in Santee, California. ORBA represents the interests of numerous off-road related businesses nationwide that are concerned with the continued accessibility of public lands for off-road recreation.

Over 4 million Californians choose to recreate on OHVs every year, and use has doubled over the past 20 years. OHV recreation is a 3 billion dollar a year industry in California. Despite this, state lands available for OHV use have decreased 48% in the last 20 years. As of the year 2001, there were 489,380 registered OHVs in California, a 108% increase from 1980.¹ On the federal level, OHV use has increased 700% over the last 30 years, topping 30 million users in 2002.²

However, the amount of available public land for use has decreased by 48% since 1980 statewide. Desert use areas for OHV activity have decreased by 6.5 million acres. At State Vehicle Recreation Areas, presently there are as many as 125,000 people per year recreating on 850 acres of land in some cases. OHV use has gained tremendous popularity in California as one of the premier ways in which families choose to enjoy the great outdoors. Given the ever increasing demand for public lands for OHV use, access to public lands is extremely important to ORBA Members, recreationists and the public at

¹ Source: Taking the High Road, California Dept. of Parks & Recreation (2001).

² Source: USFS Press Release 0418 (July 7, 2004).

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large. Below are our comments with regard to the specific issues raised in the RMPA/DEIR.

I. General Comments.

A. San Benito Mountain Research Area. According to the RMPA, the San Benito Mountain Research Area (SBMRNA) was designated as a Research Natural Area (RNA) due to its *"unique vegetative communities associated with the serpentine soils (and to provide) research and educational opportunities while maintaining and protecting a unique assemblage of vegetation in as natural condition as possible."* The RMPA further proposes to expand the SBMRNA from 1,880 acres to 4,082 acres and further designate the entire area as an Area of Critical Environmental Concern (ACEC). Although the RMP states that the expanded area of the SBMRNA "should have been designated as an ACEC upon approval of the previous Clear Creek Management Area Plan Amendment and 1999 Record of Decision (ROD)", we do not believe the reasons stated for designation of SBMRNA as an ACEC fit within the criteria for what could properly be classified as an ACEC. Specifically, 43 CFR §1601.0-5(a) defines an ACEC as:

(a) Areas of Critical Environmental Concern or ACEC means areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) *to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.* The identification of a potential ACEC shall not, of itself, change or prevent change of the management or use of public lands.

The presence of "unique vegetative communities" and "research and educational opportunities" at SBMRNA does not satisfy any of the criteria under the Code of Federal Regulations to properly be categorized as an ACEC. For this reason, we believe it is improper to designate the SBMRNA as an ACEC.

The proposed expanded area of the SBMRNA likewise does not fit within the definition of a Research Natural Area. The criteria for determining whether an area should properly be designated as a Research Natural Area is set forth in 43 CFR 8223.0-5. This section defines a Research Natural Area as one that is established and maintained for the primary purpose of research and education because the land has one or more of the following characteristics:

- (1) A typical representation of a common plant or animal association;
- (2) An unusual plant or animal association;
- (3) A threatened or endangered plant or animal species;
- (4) A typical representation of common geologic, soil, or water features; or
- (5) Outstanding or unusual geologic, soil, or water features.

According to the RMPA, the expansion proposal is based on the desire to protect "unique

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vegetation communities" as "forest, T&E, and sensitive species"; include watersheds and sub-watersheds for the protection of riparian habitat, include the transition zone between serpentine and non-serpentine soils, delineate routes, reducing impacts of OHV use, and basically to preserve the aesthetic beauty of the area.

With the exception of the possible existence of T&E species, *none* of the reasons cited for expanding the Research Natural Area given by the BLM falls into the definition of what a Research Natural Area should be. We are left to conclude that the only reason for the proposed expansion is simply to "protect it". The BLM has not identified any research and educational opportunities in this expanded area that could not already be studied in the existing area. The BLM here is clearly exceeding its legal authority to designate Research Natural Areas with respect to the SBMRNA designation.

B. Continuation of "Limited Use" Designation. The RMPA states that under the 1999 ROD the entire CCMA (consisting of 75,000 acres) was designated as a limited use area under 43 CFR 8340.0-5(g) as part of an interim management plan. The limited use designation provided for 270 miles of routes available to OHV use, and a paltry 937 acres of open riding area. Although the RMPA acknowledges that the CCMA is subject to ever increasing recreational demands due to the growing population of the San Francisco Bay and San Joaquin areas, it is apparent that the BLM never once considered revisiting the issue of whether to reclassify some areas of the CCMA as "open areas" under 43 CFR §8340.0-5(f).

Clearly the BLM is aware that public use of the CCMA is increasing, and should have considered redesignating limited use areas under the interim plan as open areas under the present plan in light of this increased demand for public recreation and to satisfy its obligations under the Federal Land Policy Management Act (43 USC §1701 *et seq.*), which establishes an explicit policy in favor of retaining public lands for multiple use management. Instead, the RMPA simply adopts the limited use designation as set forth in the 1999 ROD interim plan and proceeds to restrict even further the limited use routes.

C. Route Signage. We agree with the RMPA that it would be difficult, if not impossible, to designate all trails as closed unless open. Thus, ORBA supports an "open unless closed" signage policy within the CCMA, and feel that a closed unless open policy would lead to the improper citation of innocent individuals who simply had no idea they were riding in a closed area. Unless the entire CCMA has been inventoried in order to identify all existing routes and areas, the decision to list all areas as "closed unless posted open" will result in improper closure of routes which should otherwise be available for OHV use.

D. Temporary Closures To Implement Future OHV Designations. The RMPA improperly asserts that the BLM has authority to "temporarily close" OHV routes until such time as the routes are redesignated. Closures for this purpose are not authorized by the Code of Federal Regulations, and any reference to the contrary should be removed from the RMPA. Specifically, the BLM's authority to temporarily close trails or areas is set forth in 43 CFR 8341.2 (the "emergency closure" regulation) and provides that:

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Sec. 8341.2 Special rules.

(a) Notwithstanding the consultation provisions in Sec. 8342.2(a), where the authorized officer determines that off-road vehicles are causing or will cause *considerable adverse effects* upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the authorized officer shall immediately close the areas affected to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence. Such closures will not prevent designation in accordance with procedures in subpart 8342 of this part, but these lands shall not be opened to the type(s) of off-road vehicle to which it was closed unless the authorized officer determines that the adverse effects have been eliminated and measures implemented to prevent recurrence.

The above regulation was promulgated pursuant to the Federal Land Policy and Management Act (FLPMA) (43 USC §1701 *et seq.*) and applies to temporary, emergency, situations. [See, *Humboldt County v. U.S. Dept. Of The Interior*, 684 F.2d 1276 (10th Cir. 1982) (holding that temporary closure of public land under BLM emergency regulation for five years invalid under FLPMA). Even where BLM orders a temporary closure, it may only do so after there has been an explicit finding that that off-road vehicles are causing or will cause *considerable adverse effects* upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources.

Nothing in the above regulation authorizes the BLM to close a route for the simple reason that it wants to redesignate an area or route. Instead, the BLM must undertake the formal process of route designation consistent with FLPMA regulations. Any emergency closures must be lifted once the adverse effects have been remedied.

E. Route designations. The RMPA relies exclusively on the presence of existing routes, which were inventoried during field studies from July 2001 through August, 2003. The RMPA states that an inventory of approximately 440 miles of OHV routes *were completed* during these field studies. It is unclear whether the *entire* CCMA was surveyed and all the existing routes were identified. If the entire CCMA has not been inventoried and all existing routes identified, we feel preparation of the RMPA at this time is premature. This is particularly true in light of the statement that data from the aerial over flights conducted in 2004 has not been received or compared with on the ground surveys.

No explanation as to why all barrens less than 10 acres in size would be unilaterally closed unless designated open, other than to say that this decision is based on the 1999 ROD. If a barren would otherwise be suitable for OHV recreation but for the fact it is less than 10 acres in size, there is no logical reason why the area should arbitrarily be closed.

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With respect to route proliferation, the RMPA states that "route proliferation is clearly prohibited by the ROD". [RMPA, p. 2-12]. We believe that the BLM in this instance is artificially placing limits on its ability to designate future routes for OHV use by adhering to the 1999 ROD, which, by the BLM's own admission, will no longer be binding on the BLM with the adoption of the RMPA. [RMPA at p. 1-5]. The BLM provides no explanation as to why future routes, and route proliferation in general, should be prohibited under the RMPA. Clearly the BLM is free at any time to redesignate routes and areas under the Code of Federal Regulations based on monitoring use. [43 CFR 8342.3].

F. "Special Status Species" And Its Habitat: We have seen an alarming trend at both the federal and state level for land managers to affirmatively close down areas and trails based on the presence of so called "sensitive species" or in this case, "special status" species or Species of Concern. A Special Status species is defined as (1) Federally listed as Threatened or Endangered; (2) Federally proposed as Threatened or Endangered; (3) Federal candidates for listing as Threatened or Endangered; (4) State listed species; or (5) "designated as sensitive by the BLM California state Director." [RMPA at p. 3-22].

Here, the RMPA states that "BLM policy require(s) protection of sensitive resources such as threatened and endangered species and their habitat, other special status species and habitat, and cultural resources . . . [t]hese types of resources are best protected by not having routes bisect occupied or moderate-to-high potential habitat." (emphasis added). [RMPA at 2-7]. Expansion of the SBMRNA is also based, on part, for the need to protect sensitive species.

We are aware of no state or federal statute or guideline that gives the BLM (or any other agency) the authority to provide "unlisted" species the same protections afforded "listed" species. Neither the California Endangered Species Act nor the Federal Endangered Species Act grants to BLM the right to determine whether a given "unlisted" species nevertheless meets the criteria for listing. Indeed, for a plant, animal, or insect to make it on the list of threatened or endangered species, a data-intensive process must be followed. During this process, the appropriate listing agency collects information, solicits comment from scientists in the field, and ultimately makes a listing determination based on the best available technical data. And even then, the determination is subject to challenge and judicial review. According to the RMPA, however, BLM would skirt all of these processes – processes that are intended to protect the integrity of the list and ensure that it contains only those species that truly need the full protection of the ESA and California ESA. What the BLM has proposed violates the checks and balances built into the state and federal schemes, resulting in unnecessary restrictions on public use and a waste of management resources.

Obviously much of the route designations were made based on what BLM staff felt may be *potential* habitat for species that in turn, may at some time in the future qualify as a Threatened or Endangered species under the ESA. To this extent we believe the RMPA and associated DEIR are defective, and the BLM has exceeded the scope of its discretionary authority by placing areas and routes off-limits for the benefit of species

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that do not qualify for protection under the ESA. All route and area designations should be revised accordingly to delete closures or restrictions that are based on the protection of so-called "Special Status" species, "Species of Concern", or areas that are analyzed for the "potential for occurrence" of these species.

Along the same line, we note that particular attention is placed on the preservation of "unique vegetation" (see, RMPA at p. 2-14). Is this vegetation listed as Threatened or Endangered under the ESA, or is it part of a recognized critical habitat for a listed species? If not, it is improper for the BLM to treat "unique vegetation" as if it were entitled to protection under the ESA.

D. Pristine/Natural Condition Category. The RMPA creates a new category of areas to be protected labeled "pristine" areas *in addition to* the legally recognized "off-limits" areas designated as Research Natural Areas, ACECs and Wilderness Areas. [RMPA at p. 2-15]. We are aware of no legal authority for the BLM's ability to arbitrarily create additional wilderness areas or ACECs simply by calling these areas "pristine". The motivation for placing these pristine barrens (because it meets a Resource Condition Objective of the 1999 ROD, and for the purposes of contrasting OHV accessible barrens with pristine barrens) is not a legally recognized basis for closing these areas to OHV use.

II. Alternatives.

A. Planning Criteria. This section of Chapter One states that the BLM planning team set forth to evaluate what *existing* routes and areas should be designated as open, limited use, or closed. Again, we believe that the RMPA artificially restricted its scope to existing routes and areas instead of approaching the planning process from an objective "needs based" viewpoint based on increased public recreation demand and available land resources. With nearly 75,000 acres available, what areas are available for potential OHV recreation that are not already existing areas or routes? The scope of the RMPA and DEIR should be expanded to include such an assessment.

We also believe that the failure to include the Recreational Opportunity Spectrum (ROS) process as part of the DEIS at this juncture severely undermines the credibility of the DEIR. Under NEPA, an agency is required to provide an Environmental Impact Statement if it will be undertaking a "major Federal action, which "significantly affects the quality of the human environment." [42 U.S.C. § 4332(2)(C)].

In turn, the "human environment" includes the natural and physical environment *and the relationship of people with that environment*. [40 CFR 1508.14]. The word "significantly" in the context of NEPA requires an analysis of the context, in terms of society as a whole, the affected region, the affected interests, the locality and intensity of the proposed action, including the degree to which the effects on the quality of the human environment are likely to be highly controversial, or the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. [40 CFR 1508.27].

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The failure to include an evaluation of the different classes of outdoor recreation environments, activities, and experience opportunities as part of the DEIR is nothing short of a failure to account for the impact the proposed alternatives will have on the human environment. Simply put, how can one properly evaluate the needs of the public without a clear understanding of the various types of users that frequent the CCMA? It does not suffice for purposes of NEPA to state that such an evaluation will be done "in the future" after the EIS and RMPA are set in stone. We have no doubt that, should the BLM undertake the ROS process in this instance, it would find a strong need for additional OHV areas at CCMA due to the majority of park visitors being OHV enthusiasts, and thus become one of its highest priority management objectives.

B. Alternative A - Proposed Action. The RMPA states that a barrens inventory was based on a study performed in 1998 that had a minimum mapping unit size of 10 acres, and because of this minimum mapping size and input from recreation users, areas less than 10 acre units would be closed under this alternative.

The BLM, like any administrative agency, is required to provide "a rational connection between the facts found and the choice made." Natural Resources Defense Council v. United States Department of the Interior, 113 F.3d 1121, 1124 (9th Cir. 1997). This duty is not lessened when information is lacking. The BLM must still explain the reasons for its decisions. Thus, if the scientific data that is available is not sufficient to permit the BLM to draw rational conclusions about critical habitat for example, the BLM may decline to designate such areas as closed to OHV use. Here, the fact that no information is available is not a rationale basis upon which to designate an area as "closed". This approach completely side steps the requirement that the BLM apply the designation criteria set forth in 43 CFR 8342.1.

Alternative A seeks to limit OHV use to the Clear Creek area primarily due to the desire to facilitate management of OHVs in a smaller, confined area. Supposedly (according to the RMPA) this would make the job easier for law enforcement. While this may make sense from a logistical standpoint, we feel it is contrary to the stated objectives of the FLPMA to promote multiple use and maximize resource values.

C. Alternative B - Enhanced Recreation Opportunities. Although this Alternative does provide for additional OHV recreational opportunity not found in the others, we still note that the total route miles designated for that purpose are only 398 miles within a total of 75,000 acres available. At the beginning of these comments we discussed the ever increasing demand our federal parks are experiencing for quality OHV recreation. We do not believe 398 miles of trails and 813 acres of open barrens to ride on will accommodate the hundreds of thousands of OHV recreationists that will visit the CCMA in the years to come. Even under Alternative B, the RMPA states that there will be some closures of popular riding areas, such as Larius Canyon, San Carlos Peak, and Cantua watershed. Continued closures will not address the needs of OHV recreationists. We are pleased, however, to see that the BLM would entertain the issuance of Special Recreation Permits for OHV related events under this alternative.

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D. Alternative C - Enhanced Resource Protection. This alternative all but closes the CCMA to OHVs. Only 203 miles of trails and 466 acres of barrens (*less than 1%* of the entire CCMA) would be open to OHV use. Perhaps it is time for the BLM to review its visitor information studies and ask itself whether less than one percent of park visitors are OHV users, while the rest are campers and hikers. To even consider this alternative, the BLM would have to completely ignore historical visitor data and future demands from the OHV recreation community at the CCMA.

E. Mitigation Measures. The RMPA acknowledges that Clear Creek is among the top five most popular areas for central California OHV users, topping 50,000 per year. San Benito County has seen a 45% population increase and a 113% increase in OHV registrations. [RMPA at p. 3-33]. Despite this, the RMPA states that "visitation trends are expected to remain fairly constant with moderate yearly increases." To the contrary, the BLM's own facts suggest that the demands of the OHV recreating public will continue to expand exponentially at the CCMA, yet the RMPA fails to address this issue. Should visitation increase over the expected nominal estimates, the RMPA then states that even *more* restrictions to visitor access will be considered. [RMPA at p. 4-53]. This is completely at odds with the FLMPA, which states an explicit policy in favor of retaining public lands for multiple use management.

The BLM also omitted any discussion of what mitigation measures it proposes to offset the dramatic loss of OHV recreation opportunities implementation of any of the Alternatives would have on the recreating public. NEPA requires an assessment of the impact the proposals will have on the quality of the human environment - specifically *the relationship of people with that environment*. Under Alternative B, the RMPA states that "an increased emphasis on providing additional recreation facilities (for OHVs) could contribute to meeting growth in recreation demand for the area", although there is no discussion as to how the BLM will accomplish this, or whether it ever intends to. The DEIR is inadequate because no mitigation measures are provided to address the cumulative impact the loss of OHV recreation opportunities will have on the recreating public.

Under its evaluation of social and economic conditions, it appears that the sole consideration of the BLM under the RMPA is to "contribute and maintain open space for the American people". It proposes to do this by "promoting nature resource stewardship that conserves landscapes and ecosystems that [sic] American people wish to spend time". [RMPA at p. 4-52]. Again, this flies in the face of objectives of the FMPMA. With all of the lockouts and closures proposed under the each of the Alternatives, one wonders how a large and ever increasing segment of the visitors to CCMA (in this case OHV recreationists) will be able to spend time there. Here, the RMPA/DEIR social and economic impact analysis is fatally flawed. No explanation is given as to how or why the BLM arrived at its conclusion that CCMA visitors want more open space preserved as opposed to more areas for OHV use.

F. Economic Impact. The RMPA/DEIR admits that it has not estimated the economic benefits generated from recreation related expenditures by visitors to the

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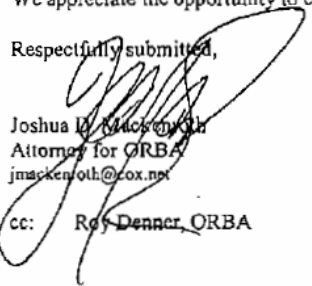
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CCMA. [RMPA at p. 3-48]. We believe it is entirely improper to consider any of the proposed Alternatives without a comprehensive analysis (not simply "estimates") of the economic impact each of the alternatives would have on the nearby affected communities.

In conclusion, we respectfully request that the BLM withdraw the RMPA/DEIR and redesign it to adequately address the needs of the OHV recreating public, including a full study of the economic impacts each alternative would have, as well as sufficient mitigation measures proposed to offset the loss of OHV accessible lands in the CCMA. Such a revised plan should not include protective measures and/or closures based on so-called "special status" species that the BLM is currently extending protection to as though such species were federally listed under the ESA, but are not.

We appreciate the opportunity to comment on this most important issue.

Respectfully submitted,


Joshua D. Mackenroth
Attorney for ORBA
jmackenroth@cox.net

cc: Roy Denner, ORBA

OR-5; Santa Clara Valley Gem and Mineral Society

407 Bluefield Drive
San Jose, CA 95136
October 4, 2004

04 OCT -5 PM 2:40

Bureau of Land Management
Hollister Field Office
20 Hamilton Court
Hollister, CA 95023

Attn: George Hill

Subject: Clear Creek Management Area Draft Resource Management Plan
Amendment and Environmental Impact Statement

Dear Mr. Hill:

As a member of the Santa Clara Valley Gem and Mineral Society, and chairman of the California Federation of Mineralogical Societies (CFMS) Public Lands Advisory - North Committee, I have reviewed the subject CCMA Draft Plan Amendment and EIS, as it relates to gem and mineral collecting, our primary interest. As a result of this review, I am submitting the following comments.

1. Chapter 1, Section 1.1, Overview. This section classes hobby gem and mineral collection with other planning issues for CCMA. The introduction overview indicates that our primary interests will be addressed in subsequent amendments to the plan.
2. Chapter 3, Section 3.5.3, Non-OHV Recreation Opportunities, provides a good description of the gem and mineral collecting hobby. In pursuit of this hobby, we often have planned field trips to the Clear Creek area, with field trip attendees occasionally camping one or more nights. These field trips may be spur of the moment decisions by one or more rock hounds, and up to and including organized field trips sponsored by the CFMS.

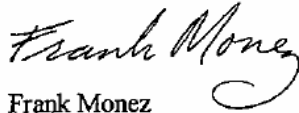
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3. Chapter 4, Environmental Consequences. Section 4.6.3, Non-OHV Recreation Opportunities. Non-OHV recreational opportunities include camping, hobby gem /mineral collecting, hunting, hiking/backpacking, wildflower hikes, wildlife watching, hang gliding, geocaching, and sightseeing. The CCMA states that these users are adequately provided for in all alternatives proposed.

4. Appendix I, Section 4.6 Recreation Resources. Alternative A, Proposed Action, under Item 4.6.3 Non-OHV Recreation Opportunities, states the majority of Non-OHV activities occur on foot (including hobby gem & mineral collecting) throughout the CCMA and are reached using major routes which would remain open.

Alternatives B and D, with more open road miles than Alternative A, should provide better access to some of the rock and mineral collecting areas. Access can be very important to some of the gem and mineral collectors that are senior citizens.

Sincerely,



Frank Monez

OR-6; Ventana Wilderness Alliance

Ventana Wilderness Alliance

Protecting the Northern Santa Lucia

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November 15, 2004

George Hill, Assistant Field Manager
Hollister Field Office
Bureau of Land Management
20 Hamilton Court
Hollister, CA 95023

VIA CERTIFIED MAIL
RETURN RECEIPT
#70023150000168893225

Re: Draft Resource Management Plan Amendment and
Draft Environmental Impact Statement for the
Clear Creek Management Area

Dear George,

The Off Road Vehicle use that occurs in the Clear Creek Management Area is a completely inappropriate activity for that terrain for two very important reasons. First and foremost is that the area has a rare and unique native flora that is being destroyed by the ever increasing and out of control ORV activity which is primarily dirt bike motorcycles. The second reason is that the rare soils in the area contain asbestos fibers that can produce serious disease, disability and death when they become airborne and are inhaled by humans.

On the first point, the existence of the globally unique San Benito Mountain conifer forest, other rare plant communities and the existence of federal, state and other listed plant species leads one to wonder why the BLM ever allowed an activity as destructive as ORV recreation to be an approved public use of the CCMA. Now, given that such use has been increasing for over twenty years with attendant increases in the destruction of the rare plant communities, one must wonder why the Hollister Field Office of the BLM has consistently failed to successfully manage or control the proliferating ORV use in a manner that guarantees the protection of these listed species and unique plant communities.

On the second point regarding the airborne asbestos, it is clear that one would have to search far and wide to find another recreational activity that is more prone to pulverizing dry soil, to the point that it can easily become friable and airborne in the slightest breeze, than dirt bike motorcycles, which is the most common ORV activity at CCMA. These machines are highly prone to spinning their rear drive wheel which not only pulverizes the asbestos laden soil but often raises "rooster tails" of dust in their wake. This activity threatens the health of not only the ORV recreational users themselves but also the health of all other recreational users of CCMA including those not engaged in the destructive ORV activity.

Page 1 of 2

George Hill, Assistant Field Manager
Hollister Field Office
Bureau of Land Management
Re: Draft Resource Management Plan Amendment and
Draft Environmental Impact Statement for the
Clear Creek Management Area

November 15, 2004

Page 2 of 2

Because of these two overriding issues, the Ventana Wilderness Alliance makes the following recommendations regarding the DEIS and implementation of the FEIS:

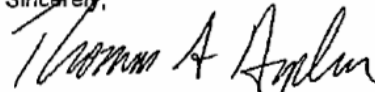
The CCMA should be immediately closed to all dirt motorcycle use (not jeeps and highway licensed 4WD vehicles) until such time as the Hollister Field Office senior management is replaced with competent managers who are committed to preserving the public's resources ahead of the interests of one specific group of recreational users. For over 10 years, the current HFO managers have failed to achieve any measurable control over the continuing destruction at CCMA. It is time for the BLM to take responsibility for these failures and replace HFO management.

CCMA should only be reopened to dirt motorcycle use when adequate BLM law enforcement capabilities are in place. One law enforcement officer, sympathetic to the desires of the ORV users, working a 40 hour week cannot begin to effectively enforce the law in an area that includes hundreds of miles of trails and that often has as many as one thousand riders on high use weekends.

CCMA should only be reopened to dirt motorcycles use when a "closed unless signed open" trail management policy is adopted and implemented in the field with all necessary signage and enforcement personnel in place. Furthermore, open play areas should be eliminated because of the impossible task of controlling the proliferation of illegal trails from these open areas.

The San Benito Mountain Research Natural Area should be enlarged to its maximum possible extent and a buffer area, outside the expanded RNA, should be established to absorb damage from rogue motorcycle riders.

Sincerely,



Thomas A. Hopkins, Member
Board of Directors

Table J-3; BLM Response to Comments

<u>AG-1-R Department of Toxic Substances Control</u> See response to U.S. EPA (AG-2-R) below.
<u>AG-2-R United States Environmental Protection Agency</u> Comment: Inadequate and insufficient data and assessment on human health risk related to exposure to naturally occurring asbestos. Response: The Draft EIS uses the most recent, complete data available on naturally occurring asbestos in the Clear Creek Management Area (see page 3-3 and pages 3-12 through 3-15 of the Draft EIS). Pages 4-12 through 4-15 and page 5-4 of the Draft EIS discuss the potential human health impacts of the alternatives due to exposure to naturally occurring asbestos. The U.S. Environmental Protection Agency (EPA) is currently conducting an asbestos exposure evaluation study in the Clear Creek Management Area. This study will provide further information on the exposure levels from various types of activities in the CCMA. Results from initial sampling events are included in Appendix I. These initial results show some higher exposure values than the 1992 risk assessment. For example, the EPA data, sampled in September 2004, indicate that the tail rider in a line of three motorcycles was exposed to 0.955 fibers/cubic centimeter (f/cc), which is higher than concentrations reported for a tail motorcycle rider in the 1992 risk assessment. BLM has had frequent communication with EPA regarding their current asbestos exposure assessment and has provided assistance in coordinating sampling events. BLM and EPA will continue to work together in completing the study and interpreting its results. Comment: BLM should incorporate additional information on asbestos exposure in a Revised of Supplemental DEIS. Response: As noted on page 3-14 of the Draft EIS, EPA is currently conducting an asbestos exposure evaluation study in the Clear Creek Management Area. Upon completion of this study, BLM will work with EPA and the public to appropriately respond to the new information. If the information is significantly different than the 1992 risk assessment, BLM will initiate a NEPA process to consider the new information and potential management responses at the CCMA in light of any new findings. Initial results from the EPA study indicate that an environmental impact statement will be necessary to consider the new information and a range of management options for

the CCMA. BLM will involve the public in any additional NEPA analysis and in considering any management changes to the CCMA.

Comment:

BLM should not use the Occupational Health and Safety Administration (OHSA) personal exposure limit (PEL) as an indicator of safe conditions for the general public.

Response:

BLM acknowledges that the OSHA PEL standards are not intended as a determinant of safe conditions for the visiting public.

Comment:

The Draft EIS does not adequately address measures to ensure BLM staff compliance with OHSA PEL standards for asbestos exposure.

Response:

The Draft EIS includes a description of measures to protect employee safety (see Draft EIS page 3-14). While measures to ensure BLM staff compliance with OSHA standards are outside of the scope of decisions and analysis being contemplated through this EIS, BLM has adopted a Health and Safety Plan to ensure that BLM employees comply with OSHA standards. This plan is available for review upon request.

Comment:

BLM should consider additional alternatives and mitigation measures to reduce human exposure to asbestos, including: dry season closures, dust suppression, wash rack, complete closure, requiring permits for access, requiring signed consent forms for access, limiting the number of days per year an individual may enter the area, restricting access of young children, prohibiting camping inside the ACEC, eliminating OHV events, mandatory decontamination of vehicles prior to leaving the area, and mandatory use of respirators.

Response:

The decisions being considered in this EIS are limited to decisions on individual routes to be open or closed and the types of use allowed on each route. The decision to make OHV use in the CCMA limited to designated routes was considered, analyzed, and adopted in the Clear Creek Management Area Proposed Resource Management Plan Amendment and Final EIS (August 1995) and its accompanying Record of Decision (January 1999). A general policy addressing dry season closures was also adopted at that time. A dry season closure was recently implemented for June 4 through October 15, 2005. BLM has implemented dust suppression activities and is currently pursuing installation of a wash rack. Consideration of alternatives and mitigation measures may occur in the future, as a result of EPA's asbestos exposure evaluation study (see Section 1.11).

Comment:

BLM should provide current vehicle miles traveled (VMT), PM 10 and PM 2.5 emissions, and conduct dispersion modeling.

Response:

BLM provided estimates of VMT by vehicle type and estimates of PM emissions by alternative, based on VMT, in Appendix G of the Draft EIS.

Comment:

BLM should clarify the use of the high road surface material moisture content values or recalculate the particulate matter emissions from unpaved road use.

Response:

Values in Appendix G represent the best available information for soil moisture content and precipitation in CCMA. Soil moisture content was derived from NRCS data, and rainfall data was factored in from the US Weather Service.

Comment:

BLM should incorporate best management practices to protect beneficial uses of waters, attainment of surface water quality standards, and comply with the Clean Water Act.

Response:

BLM has taken many steps to move toward attaining surface water quality standards. Criteria for route designation include an erosion and soil loss standard (see Appendix A, page 5 of Draft EIS). Criteria for barren designation also include offsite sedimentation and soils criteria (see Appendix B, page 1 of Draft EIS). The Draft EIS includes actions common to all alternatives that will help protect water quality, including best management practices (see Draft EIS pages 2-4, Appendix C, and Appendix D), the provision for temporary closures and/or limitations in response to soil loss or resource impacts (see Draft EIS page 2-4), and continued monitoring and evaluation of soil loss (see Draft EIS page 2-5). Mitigation measures applicable to all alternatives but the No Action alternative include measures to protect water quality (see Draft EIS pages 2-27 through 2-28). Impacts to water quality as a result of the proposed action are generally beneficial and will lead to improved water quality (see Draft EIS pages 4-5 through 4-6 and 5-1 through 5-3).

Comment:

BLM should project sediment yield for each watershed and establish sediment reduction targets for each watershed.

Response:

Projections for sediment yield are scaled to the project area (see Draft EIS page 4-9). Narrative descriptions of impacts to individual watersheds are also a part of the impacts analysis (see Draft EIS pages 4-8 through 4-12). Goals and objectives

related to sediment loss are established in the resource management plan and are not within the scope of the decisions being considered and analyzed in this EIS.

Comment:

BLM should conduct additional water quality sampling of various pollutants in water bodies throughout the planning area.

Response:

Working with USGS and other agencies and entities, BLM will continue to monitor and evaluate water quality, including asbestos, mercury, lead, chromium, cadmium, selenium, and boron. Certain monitoring activities are described in the Draft EIS on page 4-6, and Appendix C pages 1-2 and 6.

Comment:

BLM should consider closing routes if they are difficult to maintain.

Response:

Common to all alternatives (see Draft EIS page 2-4) is a provision for temporary closure “if necessary according to soil loss assessment, resource impacts, or required maintenance.”

Comment:

BLM should discuss how it intends to protect *Camissonia benitensis* and its habitat.

Response:

The BLM’s proposed action includes route and barren selection criteria that are designed to avoid impacts from OHV use to *Camissonia benitensis* (CABE). The Plan Amendment also identifies BLM’s implementation strategy, a revised monitoring plan, and adaptive management techniques to protect special status species habitat in CCMA. Pursuant to Section 7 of the Endangered Species Act, the US Fish & Wildlife Service submitted a Biological Opinion (BO) to BLM, which states the proposed action will not result in a “jeopardy” finding for CABE. Copies of the USFWS BO are available at the Hollister Field Office, upon request.

Comment:

Include sections in the EIS on the bibliography and consultation.

Response:

Chapter 5 of the Final EIS describes Consultation and Coordination on the CCMA Plan Amendment. A bibliography is also included in the FEIS

Comment:

Barren 6X should be designated as closed in the table in Appendix B to be consistent with maps.

Response:

The table has been changed to reflect Barren 6X as closed (see Appendix B).

Comment:

Alternative maps should depict the Wilderness Study Area, staging areas, designated campgrounds, and other areas proposed to be open to camping.

Response:

Alternative maps have been changed to add the WSA, staging areas, and designated campgrounds. The EIS does not consider opening or closing any new areas to camping.

AG-3-R Monterey Bay Unified Air Pollution Control District

Comment: Page 3-2; The following statement should be clarified, “Air basins in the State are either in “attainment” or “unclassified” for NO₂, SO₂, Pb, and visibility reducing particles.” Classifications are nonattainment, attainment, or unclassified. The NCCAB is moderate nonattainment for the ozone standard, unclassified/nonattainment for the CO standard, attainment for NO₂, SO₂, and nonattainment for PM₁₀.

Response: The following changes have been made to the Affected Environment, Pg. 3-2: “Air basins in the State are either in nonattainment, attainment, or unclassified for NO₂, SO₂, Pb, and visibility reducing particles. The NCCAB is in moderate nonattainment for the ozone standard, unclassified/attainment for the CO standard, attainment for NO₂, SO₂, and nonattainment for PM₁₀.”

Comment: Page 3-2; The following statement should be clarified since the project is in San Benito and Fresno counties, and not Monterey County. “Fresno and Monterey Counties are designated as maintenance/attainment for carbon monoxide.” The NCCAB is unclassified/attainment for the CO standard. San Benito County is unclassified, and Monterey County is in attainment.

Response: The following changes have been made to the Affected Environment, Pg. 3-2: “Fresno County is designated as attainment for carbon monoxide (CARB, 2002).”

Comment: Page 3-3; The document states: “For the CCMA FEIS (1995), the BLM in cooperation with the MBUAPCD computer modeled ROG, NO_x, and CO from mobile sources. Etc.”

The District does not have a computer model for modeling the pollutants noted. Perhaps the statement refers to the mobile sources emissions inventory for San Benito County which was prepared by the Air Resources Board. If, in fact, the reference is to the emission inventory, mobile source emissions cannot be directly compared to “Federal and State regulatory thresholds” (State and federal

standards?) Photochemical modeling which addresses ozone is typically done on a regional basis. See the 2000 Air Quality Management Plan for a description of the photochemical ozone model prepared for the NCCAB.

Regarding PM₁₀ the entire NCCAB is nonattainment for the State standard. Emissions from motor vehicles traveling on paved and unpaved roads are estimated to contribute over 50% of directly emitted PM₁₀ emissions within the NCCAB.

Response: The statement reference in the MBUAPCD comments have been removed and replaced with the following: “Photochemical modeling which addresses ozone is typically done on a regional basis. The 2000 Air Quality Management Plan for the NCCAB contains a description of the photochemical ozone model prepared for that air basin.”

Comment: Page 3-3; The DEIS states that all land-use decisions for the CCMA will need to conform to the District’s “1998 Report on Attainment of the California Particulate Matter Standards...”. This report does not include regulations. The statement in the EIS should be clarified, accordingly.

Response: This statement has been removed from the Proposed Plan Amendment and Final EIS.

Comment: Page 3-4; The DEIS states, “The NCCAB can affect the SJVAB by the prevailing winds that transport air pollutants.” Transport from the NCCAB to the SJVAB has not been established by the ARB. Rather, the NCCAB is designated as downwind from the SJVAB.

Response: This statement has been removed from the Proposed Plan Amendment and Final EIS.

Comment: 3-4; OSHA asbestos standards should be identified so that a comparison can be made with the collected samples.

Response: The US Environmental Protection Agency and CA Department of Toxic Substances Control agree that OSHA standards for exposure to asbestos are not a good indicator of public safety, so the reference cited in the MBUAPCD comment letter has been removed from the document.

Comment: 3-14; Reference is made to a risk assessment which concluded that employees and visitors would have a statistical chance of 5 cancer deaths per 100,000. The document should note that the District’s threshold of significance is 1 incident of cancer per 100,000.

Response: All references to the 1992 Human Health Risk Study have been replaced or are superseded by the EPA’s “**Human Health Risk Assessment -Asbestos Air**

Sampling Clear Creek Management Area, California September 15th, 2004”, which is described in Appendix L.

Comment: Page 4-2; The District meets federal particulate matter standards and therefore does not have federal plans addressing those standards. The following statement is not applicable in the context of the District’s attainment status for PM₁₀: “It is assumed that all activities must be conducted in compliance with applicable rules and regulations and attainment plans for ozone and PM₁₀ for the NCCAB and SJVAB.”

Response: The following changes have been made to Pg. 4-2: “It is assumed that all activities must be conducted in compliance with the applicable rules and regulations, and that emissions generated as a result of the proposed action would not be regionally significant.”

Comment: Page 4-3; It should be noted in the impact section that the proposed alternative would generate the highest level of particulate emissions but that the difference among all alternatives is nominal. We suggest that particulate missions for each alternative be included here as well as in Appendix G.

Response: Under the environmental consequences for Alternative A and B (4-2 and 4-3), the Draft EIS states that air quality should improve marginally with reductions in emissions of particulate matter and corresponding declines in PM₁₀ concentrations. Under Alternative C (4-4), the Draft EIS states that air quality should improve moderately with reductions in emissions of particulate matter and corresponding declines in PM₁₀ concentrations. Alternative D (No Action), would result in no changes to current air quality conditions or potential for reduction in particulate matter and asbestos emissions.

Based upon these findings, the proposed action would not generate the highest emissions among the alternatives in the DEIS. This conclusion is also supported by the results of particulate emissions by alternative, which are located in Appendix G.

Comment: The FEIS should include a risk assessment for the public’s exposure to asbestos after mitigation.

Response: BLM is working with EPA to conduct a new health risk assessment in CCMA. Please refer to Section 1.11 and Appendix I for more information.

Comment: Appendix G; VOCs should be listed as a gaseous pollutant emitted by motor vehicles. Most of the particulate emissions associated with motor vehicles is from tire wear, as noted, and travel on unpaved roads. A distinction should be made between engine exhaust emissions and other sources of motor vehicle emissions. Additionally, it is not possible to evaluate particulate matter emissions estimates for each alternative with the data provided. We request that the full report be forwarded to the District for review.

Response: Appendix G of the DEIS identifies gaseous air pollutants from motor vehicle engine exhaust, “including carbon monoxide, oxides of nitrogen, and fine particulate matter”. As noted, these emissions are outweighed by fugitive dust from unpaved road surfaces.

AG-4-R. United States Geological Survey

No comments.

No response necessary.

AG-5-R United States Fish & Wildlife Service

Comment: We have specific comments regarding vernal pools. On pages 3-21 and page 8 of Appendix I, it states that fencing and pipe barriers have been placed to protect the vernal pools from off-highway vehicle recreational activities. How far back is the protective fencing and pipe barriers from the vernal pools in feet? We recommend that any pipe barriers utilized have at least a 250-foot set back distance from any vernal pools, and we also recommend that a hydrological evaluation be conducted to determine if runoff from off-highway vehicle use will adversely affect the vernal pools.

Response: Page 3-21 of the DEIS states, “BLM recognizes that over 90% of vernal pool habitat has been removed from California and considers the protection of remaining pools a high priority.” As a result, BLM installed pipe barriers around vernal pools in Clear Creek Management Area at a minimum of 50-feet, combined with surrounding chaparral successfully eliminated OHV use in these sensitive habitats. Therefore, BLM will continue to monitor the vernal pools in Clear Creek Management Area, and consider the recommendations of the USFWS to increase the fencing and pipe-barrier set back up to 250-feet if monitoring results indicate that vernal pools are being adversely impacted by OHV use.

Section 2.3.4 of the DEIS describes route designation criteria used by BLM to evaluate impacts of OHV use on the proposed route network. These criteria include erosion and soil loss standards to determine if routes may result in concentrated runoff to off-tread locations, including sensitive resources like vernal pools. Therefore, a hydrological evaluation is not necessary because all routes that have the potential to adversely affect vernal pools are proposed to be closed under all alternatives.

OR-1-R Blue Ribbon Coalition

Comment: BLM has not properly complied with scoping requirements in generating the Draft EIS.

Response: A Notice of Intent to Prepare and Environmental Assessment (EA)/CCMA RMP Amendment was published in the Federal Register on April 29, 2003, and also posted on the Hollister Field Office Web Page.

Based on public scoping, BLM decided to prepare an Environmental Impact Statement (EIS) to analyze the potential impacts of route designation and expansion of the San Benito Mountain Research Natural Area. A Notice of Availability for the Draft EIS was published on July 19, 2004 and a 90 day public review period for the Draft EIS began.

Comment: DEIS is seriously flawed. Detailed maps not available, private landowners not involved, dates of designation, and discrepancies in route mileage to be considered.

Response: Detailed maps were available on CD and distributed with each copy of the DEIS. Larger-scale, more detailed maps were made per specific public requests. A limited number of copies of the DEIS with large-scale maps were available for those without access to a computer.

Part of the route designation process included consideration of whether a particularly route crosses private land. In these cases, a landowner would need to concur in order for the route to remain open.

Comment: Many routes were designated on August 23, 2003, a Sunday.

Response: The date of designation does not affect the outcome of the process.

The Final EIS will reflect a change of language to “approximately 440 miles” to clarify the extent of the route network to be designated in the Final EIS. Table 2-1 will be updated in the Final EIS to reflect this.

Comment: Alternatives not available for public review during scoping process.

Response: The scoping process defines what is being analyzed during the NEPA analysis process. The alternatives analyzed in the Draft EIS represented a reasonable range of options for routes within the area, and these alternatives were available for public review and comment for a 120 day period following the release of the DEIS on July 19, 2004.

Comment: Viable and perhaps superior alternatives have been omitted from the Draft EIS.

Routes submitted as the “Alternative E” attached to the comment letter are being analyzed and will be considered for possible designation under the Proposed Action. Provisions for future designation of additional routes as “open” are included within the Draft EIS using the route designation criteria in section 2.3.4 of

the Draft EIS

Response: This process involves only route and area designation, expansion of the Research Natural Area, and possible land tenure adjustments. It does not directly analyze recreation management techniques within CCMA.

Comment: Draft EIS comment period should be extended.

Response: Due to the level of public interest and complexity of issues, the BLM extended the comment period for an extra thirty days from October 15, 2004 to November 15, 2004.

OR-2-R California Native Plant Society

Many of CNPS's comments appear to relate to BLM's management or lack thereof at the CCMA and issues related to the 1997 BO rather than comments on the DEIS itself and therefore are not addressed in entirety.

Comment: CNPS supports adoption of Alternative C.

Response: Comment noted.

Comment: "However we are very concerned that measures to protect species, resources, and habitat will not be implemented..."

Response: BLM has outlined a variety of protection measures and best management practices in Appendix C and D to protect sensitive species and minimize impacts to watershed resources.

Comment: "CNPS recommends that the CCMA be closed to motorized recreation pending completion of this NEPA process..."

Response: BLM has initiated consultation with FWS. In the situation where an agency has initiated consultation, agency action can go forth if its actions do not violate section 7(d) of the ESA. Thus, an action agency is not prohibited from undertaking any and all activity during the consultation period; it may undertake certain activity during the consultation period as long as it does not violate Section 7(d). Continued OHV use would not constitute an irreversible or irretrievable commitment of resources. Furthermore, the continuation of OHV use, as expressly contemplated by FWS in the 1997 BO, would not foreclose the formulation of any reasonable and prudent alternative.

Comment: "despite decades of evidence of ORV damage to CAGE, other imperiled species, and their habitats in the CCMA, the BLM has not met its commitments to protect or restore the species and its habitat." "BLM proposed no measures to reduce ORV damage until the 1998 ROD." Almost none of the

protection proposals have actually been implemented.”

Response: BLM in fact proposed significant management actions in the 1995 FEIS and 1997 BO aimed at protection of CAGE. BLM proposed to implement these procedures through its Implementation Plan, in conjunction with the 1997 BO. Over the past 10 years, BLM has implemented various protective measures including dust suppression activities and implementation of Best Management Practices for route maintenance to reduce sediment transport and delivery in the CCMA. BLM has implemented actions to protect evening-primrose, including constructing miles of fencing and pipe barrier, and a variety of administrative controls, including visitor education, personal contacts, signing, law enforcement, and administrative closures. A combination of regulatory signs, route number signs, directional signs, and fencing is used to direct visitors along the trails identified on the user map. BLM has conducted annual inventories to locate and protect evening-primrose and has discovered additional populations through the annual inventories. BLM has methodically monitored evening-primrose in order to implement its monitoring and enforcement program. BLM has worked to improve road drainage throughout CCMA. BLM has implemented wet season closures, installed gates, erected closure signs, issued warnings, and closed portions of CCMA, to protect evening-primrose.

Comment: “It has only a single law enforcement officer, who although diligent and dedicated, cannot possibly sufficiently patrol the thousands of acres..”
Response CNPS -05: BLM currently employs and utilizes many different personnel to effectively monitor evening-primrose habitat and enforce its various administrative controls. For instance, various BLM staff members, a full time law enforcement ranger, a full time park ranger, the Clear Creek Project Coordinator, staff botanists, and maintenance workers all regularly monitor, patrol, and protect evening-primrose habitat. Seasonal park rangers are regularly hired to perform sign replacement and inventory, compliance patrols, protective fencing inspection, and recreation site maintenance and cleanup.” Two seasonal park rangers were hired in 2005, who are dedicated to field presence within the CCMA. Furthermore, additional field office law enforcement rangers and Sheriffs from the San Benito County Sheriff’s Department also assist with enforcement efforts at CCMA. Numerous volunteers also regularly conduct patrols and monitor evening-primrose habitats. Not only is there sufficient enforcement presence, but significant law enforcement results have been obtained. For example, during the 2004- 2005 field season, BLM recorded 10,000 law enforcement contacts within CCMA, 75 citations, 73 verbal warnings, and 8 warnings issued.

Comment: Since adoption of the ROD and BO, off-roading has greatly proliferated in the CCMA. There has been a 15%, or approximately 7,500 visitor days, increase in off-road vehicle use at Clear Creek over the past three years. Current use exceeds 50,000 visitors....” “Currently 900-1200 miles of off-road routes crisscross the [CCMA]”

Response: Visitation was estimated at approximately 50,000 visitors in the 1995 FEIS. Though there is some variation in the table in the current DEIS for the CCMA, it should be noted that these annual figures are derived from estimation procedures that incorporate actual traffic counter data. Therefore an error rate in the 10-20% range would not be considered uncommon. Consequently it is fair to say that visitation estimates from 1995 to 2004 indicate that the CCMA receives approximately 50,000 visitors per year. The current inventory of routes which have been GPS'ed total 433 miles (this does not include 55 miles of Coalinga and New Idria roads that were included in totals from the 1995 FEIS.) There is no GPS or GIS information to substantiate or confirm speculation on the number of miles of routes beyond the current inventory. In any case the majority of routes existing on the ground have been there for more than 30 years as a result of past mining activity and historical use.

Comment: Conservation Recommendations for the San Benito Evening Primrose; adoption of a "closed unless signed open" policy, adoption of strong, scientifically sound monitoring and adaptive management plans, and implementation of more effective methods than have been used in the past to keep ORV users out of sensitive species habitat.

Response: There is an on-going debate about signing of routes relative to route designations. The two extremes of the debate can be simply stated as "Closed unless signed Open" or "Open unless signed Closed". The BLM's National Management Strategy For Motorized Off-Highway Vehicle Use On Public Lands (2001) does not recommend a default management strategy related to route designations. The BLM's management strategy and guidance, in compliance with the CFR, are that OHV use shall be restricted to open designated routes, and that these open designated routes shall be clearly identified on the ground and on user maps so that the public will be aware of locations where OHV use is authorized. BLM will employ a combination of these signing strategies, and use the best techniques for an area. To a certain degree, there will be experimentation to solve problems and increase visitor compliance. In the CCMA, the BLM will concentrate on signing the open routes and problem closed areas. The route designation remains the same whether it is signed or not. The user is responsible for being aware of which routes are open for OHV use.

Since 1997, BLM and FWS have worked closely to develop and implement a successful monitoring and compliance program. In 2003, FWS formally reviewed BLM's monitoring program, stating that BLM "has done an excellent job of carrying out the monitoring program." BLM monitors both occupied and potential evening-primrose habitat. BLM prepared and implemented an Interim Protection Strategy in November 2003 to "improve protection of all known and potential habitat for evening-primrose within the CCMA while the Plan Amendment process for route designation is ongoing," which included provisions for weekly monitoring of protective measures. A new BO will be issued in conjunction with the FEIS. BLM will also work with FWS in developing a new compliance monitoring plan as

part of this process. Adaptive management has been employed to address OHV trespass in protected habitat and implement protective measures, including fencing, barriers, closure of habitat areas, education, and law enforcement. Annual monitoring reports are regularly submitted to the FWS. Effective methods to control and manage OHV use are described in Appendix C.

Comment: Protection of other rare species and communities.

Response: BLM has as a top priority inventory, monitoring, protection, and management of all special status species.

Comment: “ The...DEIS does not contain a full management plan ...[for] invasive non native plants.”

Response: The DEIS focuses on the specific designation of routes and areas, and delineation of the boundaries of the expanded RNA, and not on the overall public use of the CCMA, and therefore does not contain unrelated management plans. “Weed” management plans are typically a separate planning process and are tiered to the California Vegetation Management EIS.

Comment: FEIS must include a quantitative Cost and workload analysis.

Response: Costs for various management activities are outlined in Appendix C. Management activities are carried with available funding as permits. The BLM also routinely receives additional funding from the California State OHV Commission to assist with management of the CCMA.

Comment: The final EIS should include some estimate of the probable future releases of asbestos and other pollutants under the various alternatives.

Response: Chapter Four and Appendix G and H of the FEIS address environmental consequences related to air and water quality. Closure of the CCMA is not being considered in this environmental analysis.

Comment: Recommendations.

Response: The recommendations have been addressed in the previous responses to comments.

Robert Hale

Comment: Encouraged, Prohibit, Allow.

Response: This is a new plan amendment and Record of Decision which will supersede the 1999 ROD. Encouraged, Prohibit, Allow are not a management strategy that is being considers in the FEIS.

Comment: Wet Season and Dry Season Closure.

Response: These management actions may be referenced in the DEIS, however these issues will not be addressed in this planning process.

Comment: All routes were screened through designation criteria (Chapter Two and Appendix A)

Response: The proposed action in the FEIS will contain language that allows for a certain percentage of routes to be added to the route network after they are screened through the designation criteria.

Comment: RNA boundaries.

Response: Your comments were considered in development of proposed action. The boundaries of the expanded RNA were determined by geographical features and existing roads to the extent possible to facilitate management.

Comment: Jade Mill and camping.

Response: The FEIS is specific to designation of routes, areas, and the boundaries of the RNA and will not address camping issues. Camping and other recreation issues would be addressed in a subsequent planning process.

Comment: Stopping and parking rules.

Response: The 40 foot buffer is intended to restrict motorized use and parking to a reasonable area adjacent to the roadway, rather than allow parking at some greater distance.

Comment: Barrens.

Response: An estimate of the total acreage of barrens smaller than 10 acres is unavailable at this time. The barrens selected as open are those identified in Alt. A and C. Open barrens will be signed as such and identified on user map. All other barrens are closed and may require signing and fencing to preclude use.

Comment: Monitoring and enforcement of designations.

Response: Violations of designations are enforceable in Federal Court. BLM will work with FWS in developing a new compliance monitoring plan as part of the consultation process in development of a new BO, that will address non-compliance in protected habitat areas.

Comment: Carrying capacity and safety.

Response: The FEIS is specific to designation of routes, areas, and the boundaries of the RNA and will not address overall recreation and public use of the CCMA. Carrying capacity, safety and other recreation issues would be addressed in a subsequent planning process. Larious and Upper Clear Creek Canyon will be closed in the proposed action.

Comment: Restoration.

Response: Restoration of closed barrens is a high priority. We recently received \$150,000 from the State OHV commission for this purpose and have applied for a similar amount for 2006.

OR-3-R Gene Cunningham

Since this commenter provided BLM with over 40 pages of comments and other supporting documents, BLM responses were grouped by common themes found though-out his submittal. Many of these comments were editorial opinions and no response from BLM was needed, other substantial comments were responded to and several changes to the text were made that address these concerns. Some comments were beyond the scope of the Proposed Plan Amendment and are not addressed (ie; USFWS 1997 Biological Opinion).

Comment issues addressed are grouped by the following common themes:

1. Water Quality

Erosion, soil loss, transport of asbestos, heavy metals, sediment yield, sediment delivery, background erosion, mercury outcrops, mercury in Hernandez reservoir, road maintenance, 303 Clean Water act, TMDL, non-attainment

2. Asbestos Risk

Dry season closure, decontamination, track-out, fiber size, "short fiber", dust generation and inhalation hazard, dust suppression, OSHA standards, exceeding OSHA limits, asbestos exposure to small children, new EPA risk assessment.

3. Miscellaneous Comments

Each common theme contains several BLM responses to specific comments, which are organized by Cunningham's citation of the Draft CCMA Plan Amendment and DEIS.

1. Water Quality Comments

Comment: Pg. 1-7 "...BLM is in violation of Executive Order 11989 (due to) ...adverse effects, erosion, soil loss, silting of the watershed, transport of asbestos

offsite, transport of heavy metals offsite...”

Response: The Executive Order 11989, refers to the fact that the respective agency head shall determine if the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of public land. BLM has not determined this to be the case, the previous CCMA FEIS (1995) and associated ROD (1999) and the current CCMA DEIS (2004) have not concluded that BLM is in violation of Executive Order 11989.

Comment: Pg. 2-18 “... This (last) paragraph should state and reveal the fact does not meet the standards of the Clean Water Act....due to transport of asbestos and heavy metals.....”

Response: BLM does monitor water quality at the USGS Clear Creek Gauging Station, located near the Oak Flat Campground. The data does indicate that water quality parameters for drinking water are not met due to high levels of asbestos, mercury and other naturally occurring contaminants, due to the mineralogy of the area, and correspondingly high sediment loads found within this watershed. BLM is working with the Central Coast Regional Water Quality Control Board and the EPA to further investigate water quality problems associated with this watershed.

Comment: Pg. 3-5 “...The paragraph omits the fact that OHV use on the barrens destroys the armor resulting in unacceptable erosion and soil loss. Soils being removed in excess of replenishment is irreparable environmental damage.” “Table 1 is meaningless,...this data needs to updated periodically in order to determine if OHV pulverization is increasing the asbestos load.....into Hernandez Reservoir.”

Response: Erosion and sedimentation due to OHV use has been extensively discussed in previous planning documents (FEIS, 1995). Sediment loss from OHV use on barren slopes does occur, but may not be irreparable, since many of these areas have been denuded of topsoil and do not support any vegetation community (DYNAMAC, 1998). We are in the process of a barren area restoration project within the San Benito Mountain Natural Area. This project is slated for completion in 2007 and the sedimentation and erosion rates will be monitored, to determine the success of this project.

Sedimentation rates at the mouth of Clear Creek have been updated annually by the USGS and are published in their latest annual report which can be assessed on the internet (<http://water.usgs.gov/pubs/wdr/wrd-ca-03-2/WRD.CA.03.vol2.pdf>). We have included these annual USGS erosion and sedimentation values in Appendix H.

Comment: Pg. 3-6 “...Logging and mining activity have not been a significant activity at the CCMA.....since 1942.” “This EIS should state some relationship between the amount of erosion and sedimentation generated from road maintenance

and OHV use.”

Response: The extensive road and trail network used by the OHV today, is based primarily the surface disturbing activities conducted in the last 50-60 years. The relationship between erosion and sedimentation from road maintenance and OHV use has been discussed in the 1995 FEIS and again in the DEIS on page 3-11.

Comment: Pg. 3-8 “....There needs to be a definitive statement that the named water bodies are not in conformance with (the) Clean Water Act.”

Response: See response to comments 2-18 and 3-9. Currently Clear Creek does not meet the Central Coast Regional Water Quality Control standards for asbestos and mercury.

Comment: Pg. 3-8 “...One needs to know if OHV routes and trails traverse any areas of low grade mercury ore. Furthermore, the effects of OHV pulverization of such deposits on the deposition of mercury into the watershed needs to be investigated.”

Response: BLM has proposed to fund a study such as you recommend in your comment. If funding for this project is approved the study would be completed by the end of 2006.

Comment: Pg. 3-9 “....it does not state the established number for the TMDL.....it does not definitively state whether the TMDL is being met... This EIS is silent on the April, May, and June 2004 monitoring results.”

Response: The mercury TMDL as adopted by the Central Coast Regional Water Quality Control Board (CCRWQCB) and the EPA was finalized June 3, 2004. The BLM is responsible for water quality sampling on a quarterly basis, to determine if mercury exceeds the 0.05 parts per million standard. BLM has sent in two quarterly sampling reports to the CCRWQCB, for samples taken in December 2004 and March 2005. Due to the unusually high seasonal rainfall and high stream flow, both of these samples failed to meet the water quality numeric objective, and were about 3 times higher than the set standard of 0.05 part per million mercury. The earlier mercury sampling taken in 2003 are part of the USGS published annual report, see response 3-5 for the website address to access this data. The 2004 data results will be published later this summer. In general the mercury monitoring results for all years were higher than anticipated and many samples do not meet the numeric standard set for the TMDL.

Comment: Pg. 3-10 “.....It is questionable that high rates of erosion would exist as a natural consequence.....in the absence of gross soil disturbance by OHV.”

Pg. 3-11 “...A study was completed in 1993....A study was completed in 1993.....the study is old and outdated”

Response: The Clear Creek Management area is long recognized as being an area having high natural erosion and sedimentation rates. Geologically the area is unstable, due to continuing mountain uplift, large landslides are common and the serpentine rock formation is highly sheared and faulted (EPA, 1988). For these reasons, the natural erosion rates (background erosion) are high. Increased erosion and sedimentation can also be high in areas where roads and trails were improperly constructed. BLM is continuing to evaluate and trying to reduce the increased erosion due to OHV and road maintenance activities. Annually BLM prepares a soil loss evaluation and maintenance plan. As roads, trails and open hillclimbs are closed, restoration will be a top priority to stabilize and reduce erosion and sediment transport from these areas.

2. Asbestos Risk

Comment: Pg. 2-4 “.....The dry season closure.....The BLM already has the authority to enforce a dry season closure, yet it never has.” “The BLM should set a standard for the CCMA more severe than the OSHA standard.”

Response: In the summer of 2005, BLM did enact a June 4-October 15, dry season closure. The dry season closure of the CCMA for the public visitors is in response to the EPA’s preliminary risk assessment data recently reviewed by BLM, and is more restrictive than the OSHA occupational worker standard.

Comment: Pg. 2-20 “....The need for a vehicle wash rack upon entry and exit from the CCMA should be first priority”

Response: BLM in 2006 will begin the design and layout for the new proposed decontamination facility.

Comment: Pg. 2-21 “...The Monterey Bay Unified Air Pollution Control District portfolio is only to see that the BLM is in conformance with State Regulations....Do not consider this entry to be protection of users of the CCMA from asbestos exposure risk from OHV activities.”

Response: The Monterey Bay Unified Air Pollution Control District’s rule on the naturally occurring asbestos (NOA) toxic air contaminant requires the use of water or dust suppression to reduce asbestos emissions, during work when soil moisture is low. BLM follows these NOA requirements and therefore the public visitors in the immediate area of this work are not unduly exposed to high asbestos emissions, from these activities.

Comment: Pg. 3-4 “..This EIS is deficient in relaying the true risks of asbestos exposure to the public by choosing words that downplay the actual public health risk that is ongoing at the CCMA”

Pg. 3-5 "...OSHA standards may not be an adequate standard due to the presence of children accompanying OHV users."

Pg. 3-13 "...short fiber type of asbestos, this statement omits the fact that some tremolite forms of asbestos have been detected"

Pg. 3-13 "...The BLM fails to refer to the elevated risk of asbestos exposure to children. Young children are common visitors at the CCMA."

Pg. 3-14 "...The BLM needs to state if they have a contingency plan to abate the public health risk should the asbestos risk be determined by the EPA to be of a higher magnitude."

Response: See response 2-4. In addition, BLM and EPA are cooperating to develop a new fact sheet that would explain and clarify the risks to asbestos exposure in the CCMA. You are correct that children frequent the area, therefore their risk to asbestos disease (latency period 15-30 years) would occur at an earlier age than an adult who may develop much later in their life.

The term "short-fiber" is being replaced due to the new study conducted by EPA, long asbestos fibers have been found, as well as a second mineral type of asbestos, which is an amphibole. The amount of the amphibole asbestos detected by EPA and BLM is very small, found in about 1 percent of all samples taken, but it thought to be more toxic than the chrysotile asbestos.

We have enacted a "dry season" closure while EPA is completing the new Clear Creek Management Area risk assessment, which will include the risks to children and the new amphibole asbestos found in the CCMA. This new risk report will be included in the FEIS. A copy of EPA's preliminary findings can be obtained at our office.

3. Mercury Issues

Comment: Pg. 3-15 "...The BLM should institute a program to educate users of the CCMA to recognize and avoid low grade mercury ores. Additionally, the use of low grade mercury ores in camp fire rings presents a problem not addressed by the BLM in any of their warning literature...this function contributes to the inhalation of mercury vapor."

Response: Your suggestion is a good one, we will revise some of our information bulletin boards to include the risks to mercury.

Comment: Pg. 3-15 "...Mining activity at the CCMA has not been significant for years. This paragraph conveniently omits the effects of OHV on mercury dispersion."

Pg. 3-16 "...A study needs to be carried out on the periodic levels of mercury detected in Hernandez Reservoir. The BLM should request such a study from the Regional Water Board. "

"....cumulative effects of mercury are detrimental to human populations, considering the toxicity of mercury."

Response: See response 3-8. In the mid-1990's, the Regional Water Quality Control Board and California Fish and Game did sample some fish found in the Hernandez Reservoir. The amount of methyl-mercury detected was elevated, at about 1 part per million. The Food and Drug Administration has an advisory health warning for the public at supermarkets that sell fish and seafood which contain mercury. However, BLM has no jurisdiction or authority for the Hernandez Reservoir, or for those persons who may swim, consume fish or otherwise have human contact to mercury in the reservoir.

On the other side of the watershed, the New Idria mercury mine is one of the largest point sources of contaminated sediment. BLM and EPA are working with local country officials to propose a remediation and management plan for this abandoned private land. The approved EPA Brownsfield grant for the New Idria mercury mine can be reviewed on the EPA's Brownsfield website (epa.gov/brownfields/04grants/sanbenito.html).

4. Miscellaneous Comments

Comment: Pg. ES-1 – 1st sentence

Response: The balanced management objective of the Clear Creek Management Area is to provide for a range of opportunities, such as OHV recreation, watershed restoration and scientific research of unique botanical communities, and mineral extraction for commercial and non-commercial rock and mineral collecting.

Comment: Pg. ES-1- 3rd paragraph

Response: Human health risk from exposure to asbestos is an important issue that is being addressed by BLM in cooperation with EPA. Refer to Section 1.11 and Appendix I for more information on the health risks associated with asbestos.

Comment: Pg. ES-1- 5th paragraph

Response: "Human activities" include, but are not limited to OHV use. Natural processes also contribute to erosion and soil loss in CCMA.

Comment: Pg. ES-2

Response: The primary goal of BLM's proposed action is to reduce the impacts of

sediment transport on water quality and special status species habitat. In addition to habitat and species protection, implementation of the proposed action will also improve the rate of soil regeneration in CCMA.

Comment: Pg. ES- 3

Response: The Technical Review Team (TRT) was established during the previous planning effort from 1992 to about 2000, it was meant to be an informal forum for interested stakeholders. However it was discontinued, due to procedural issues regarding the Federal Advisory Committee Act (FACA).

Comment: Pg. ES-3

Response: Asbestos health concerns from offsite transport from persons visiting the area and from their vehicles (track-out) has been addressed in earlier planning efforts (1995 EIS). BLM has for several years provided educational information on the user map in a section entitled “Precautions to take when visiting the CCMA.” BLM is also working with the EPA to revise our 1992 Human Health Risk Assessment for asbestos exposure.

Comment: Pg. ES-4

Response: BLM will strive to improve public outreach prior to any future BLM activities.

Comment: Pg 1-1

Response: See response ES-1 1st sentence (above)

Comment: Pg 1-2

Response: “Human activities” include, but are not limited to OHV use. Other human activities have contributed to accelerated soil erosion “over the years”, such as logging, mining, and road maintenance.

Comment: Pg 1-3

Response: Comment noted. No response necessary.

Comment: Pg 1-7

Response: As stated on pg. 1-6 of the FEIS, “Executive Order 11989 (*Off-Road Vehicles on Public Lands*) strengthened protection of the lands by authorizing agency heads to (1) close areas or trails to OHV’s causing considerable adverse effects and (2) designate lands as closed to OHV’s unless the lands or trails are specifically designated as open to them.”

Pursuant to EO 11989, BLM has the discretionary authority to designate routes and play areas on public lands, as proposed in the CCMA Plan Amendment and FEIS.

Comment: Pg 1-8

Response: The idea of registration of casual users has been discussed in previous planning efforts and would be adopted under the proposed action.

Comment: Pg 1-8 2nd paragraph

Response: Comment noted, BLM does have three law enforcement officers, of which, one is fully dedicated to the CCMA, however we do use the other law enforcement officers in the CCMA on a frequent basis.

Comment: Pg 1-8

Response: See response to ES-3

Comment: Pgs. 1-9, 1-11, 1-12, 2-1, 2-3, 2-6, 2-14, 2-19, 2-22, 2-26, 2-27, 2-28, 3-2, 3-22, 3-34

Response: Comments on the US Fish & Wildlife Service 1997 Biological Opinion are beyond the scope of the Proposed Plan Amendment. In consultation with USFWS, it was determined that the BLM's proposed action would not jeopardize the continued existence of any special status species in CCMA.

Comment: Pg 1-10

Response: Comment noted. No response necessary.

Comment: Pgs.1-12, 2-26

Response: Law Enforcement efforts will continue within the area. Implementation of the proposed action will include enhanced law enforcement and signage strategies, as described on page 2-14 of the FEIS.

Comment: Pg 1-12 2nd & 3rd paragraph

Response: Page 1-12 of the DEIS states, "It would be a formidable task to attempt to sign or physically close all routes or areas within the CCMA where OHV use would not be authorized." The remainder of the section provides a rationale of the proposed CCMA signage policy, including the BLM decision to emphasize what routes are available versus those that are unavailable, the prohibitive cost of signing all closed routes, and the fact that "the user is responsible for being aware of which routes are open for OHV use."

In addition to the rationale provided in the DEIS, the proposed route signage strategy will allow visitors to become familiar with the route network and reduce the likelihood of OHV users becoming disoriented and getting lost on unmarked or unsigned routes. This type of scenario not only has the potential to endanger lost visitors, but professional emergency personnel on search and rescue missions as well.

Comment: Pg 2-1

Response: Comment noted. No response necessary.

Comment: Pg 2-1; 2nd paragraph

Response: Section 2.2 of the FEIS includes the definition of ‘Administrative Use’. In regard to access to private property and road maintenance activities, management actions described in the Proposed Plan Amendment only apply to routes and barrens on public lands.

Comment: Pg 2-2

Response: Please see response to ES-3 (above)

Comment: Pg 2-4

Response: Section 1.11 of the FEIS states, “The U.S. Environmental Protection Agency is currently conducting an asbestos exposure evaluation study in the Clear Creek Management Area. This study will provide further information on the exposure levels from various types of activities in the CCMA. Upon completion of this study, BLM will work with EPA and the public to appropriately respond to the new information. If the information is significantly different than the 1992 risk assessment, BLM will expeditiously initiate a NEPA process to consider the new information and potential management responses at the CCMA in light of any new findings.”

Comment: Pg 2-5

Response: Comment noted. No response necessary.

Comment: Pg 2-8, 2-9

Response: Comment noted. No response necessary.

Comment: Pg 2-11

Response: Route management objectives are a component of route designation

criteria. These objectives may include specific uses of the route, scheduled maintenance of the route, and other considerations that BLM applied to the selection of routes for OHV use. This criterion is described in detail on page 2-11 of the DEIS.

Comment: Pg 2-13

Response: Comment noted. No response necessary.

Comment: 2-14

Response: Section 2.3.5 of the DEIS presents 'Barren Designation Criteria' that BLM used for selection of open play areas. In the FEIS, Chapter 4, Environmental Consequences, addresses potential impacts to private property owners and the California condor.

Comment: Pg 2-19

Response: User registration is included in the proposed action. However, human health risks from exposure to asbestos in CCMA is an extremely important issue that is being managed by BLM and EPA with a new human health risk study to collect data on exposure to asbestos in CCMA. More information on the study can be found in Section 1.11 and Appendix I.

Comment: Pg 2-20

Response: See response to 2-4. Section 2.3 of the FEIS states, "The following are existing policies and management guidance that will be followed: The dry season closure is implemented to reduce air emissions and protect the public from these airborne emissions."

Comment: Pg 2-22

Response: The use of aerial imagery and geographic information systems as a land use planning tool are a profound improvement for natural resource managers that have been developing rapidly into the 21st century. At the same time, resource management strategies and environmental issues are changing and developing. Federal laws mandate that BLM use information available to make land use decisions, and CCMA has experienced intensive human use throughout history, including OHV use. As a result, management strategies are developing and improving. Route designation and aerial imagery will greatly contribute to this effort.

Comment: Pg 2-23

Response: Comment noted.

Comment: Pg 2-24

Response: See response to 2-20.

Comment: Pg 2-25

Response: Comment noted.

Comment: Pg 2-26

Response: The proposed action allows for BLM to manage and maintain up to 270 miles of open designated routes in conformance with the USFWS BO (1997 & 2005).

Comment: Pg 2-26 last paragraph

Response: See response 1-18 2nd paragraph

Comment: Pg 2-27

Response: Comments noted, see response to ES-4. BLM's implementation plan (Appendix C) identifies timelines for the proposed action, which were agreed upon in consultation with the USFWS.

Comment: Pg 2-28

Response: Comments noted. See response 2-14

Comment: Pg 2-29

Response: See response ES-4

Comment: Pg 2-30

Response: Comments noted. See response to 1-12, 2-26

Comment: Pg 3-1

Response: The text has been changed to reflect your comment.

Comment: Pg 3-4

Response: Comments noted. The text has been changed to reflect your comments.

Comment: Pg 3-7, 3-20, 3-43

Response: “Human disturbance” includes, but is not limited to OHV use.

Comment: Pg. 4-3

Response: Comment noted. No response necessary.

Comment: Pg. 4-6

Response: Comment noted. No response necessary.

Comment: Pg. 4-7

Response: Comments noted. No response necessary.

Comment: Pg. 4-13

Response: See response 2-20, Asbestos Risk.

Comment: Pg. 4-16

Response: Comments noted. No response necessary.

Comment: Pg.4-17

Response: BLM’s implementation plan (Appendix C) includes a description of fencing and public education efforts to improve compliance in CCMA.

Comment: Pg. 4-18

Response: Comments noted. No response necessary.

Comment: Pg. 4-20

Response: Comments noted. No response necessary.

Comment: Pg. 4-21

Response: Comments noted, see response to ES-4. BLM’s implementation plan (Appendix C) identifies timelines for the proposed action, which were agreed upon in consultation with the USFWS.

Comment: Pg. 4-22, 4-24, 4-28, 4-29,

Response: Comments noted. No response necessary.

Comment: Pg. 4-30

Response: The No Action alternative is a required component of all environmental impact statements pursuant to the National Environmental Policy Act (NEPA).

Comment: Pg. 4-31, 4-32, 4-33

Response: Comments noted. No response necessary.

Comment: Pg. 4-34

Response: Although the mountain lion is protected under California law, BLM has determined that the survival of this species will not be adversely impacted by the proposed action.

Comment: Pg.4-35, 4-36

Response: Comments noted. No response necessary.

Comment: Pg. 4-36, 4-37

Response: See response 2-20, Asbestos Risk.

Comment: Pg. 4-37 5th paragraph

Response: Comments noted. Clear Creek Canyon is a no shooting zone. Target shooting and hunting are allowed outside of this area and law enforcement will continue to enforce BLM policy.

Comment: Pg. 4-39

Response: Comments noted. See response 2-19.

Comment: Pg. 4-40

Response: Comments noted. See response 2-22.

Comment: Pg. 4-41, 4-42

Response: Comments noted. See response 4-30.

Comment: Pg. 4-43, 4-44, 4-45

Response: Comments noted. See response 1-8 and 4-30.

Comment: Pg. 4-46, 4-47

Response: Comments noted. No response necessary.

Comment: Pg. 4-49

Response: Comments noted. See response 1-8, 1-12, 4-17, and 4-21

Comment: Pg. 4-50

Response: Comments noted. No response necessary.

Comment: Pg. 4-51

Response: Comments noted. See response 1-8 and 4-30.

Comment: Pg.4-52

Response: Comments noted. See response ES-4.

Comment: Pg. 4-53, 4-54, 4-55, 4-56

Response: Comments noted. No response necessary

Comment: Pg. 5-1

Response: Comments noted. See response 2-20 (Asbestos Risk). Reduced track-out would be a beneficial impact of the proposed action.

Comment: Pg. 5-2

Response: Comments noted. See response 3-7, 3-20, 3-43, and 4-30.

Comment: Pg. 5-3

Response: Comments noted. No response necessary.

Comment: Pg.5-5

Response: Comments noted. See response 4-17 and 4-30. Route selection criteria, as identified in Appendix A of the FEIS, preclude the location of OHV trails in creek beds.

Comment: Pg.5-6

Response: Comments noted. See response 2-20 (Asbestos Risk) and 4-30.

Comment: Pg.5-9, 5-10

Response: Comments noted. No response necessary.

Comment: Appendix A, Pg. 32

Response: Comments noted. No response necessary.

Comment: Appendix C, Pg. 2

Response: Comments noted. See responses under **1. Asbestos Risk.**

Comment: Appendix C, Pg. 3

Response: BLM is working with USFWS and EPA to address adaptive management techniques for implementation of the proposed action, compliance monitoring, and the appropriate management response to human health risks from exposure to asbestos in CCMA.

Comment: Appendix C, Pg. 5

Response: Comments noted. See response 1-12 2nd & 3rd paragraph.

Comment: Appendix C, Pg. 6 & 7

Response: Comments noted. See response 2-20 and 4-17.

Comment: Appendix D, Pg. 1 and 2

Response: Comments noted. See response 4-21 and 5-5.

Comment: Appendix E, Pg. 3, 4, 6, and 13.

Response: Comments noted. No response necessary.

Comment: Appendix F, pg. 15

Response: Comments noted. No response necessary.

OR-4-R Off Road Business Association

Comment:

A. San Benito Mountain RNA

According to the Plan Amendment, the SBMRNA was designated as a RNA “due to its unique vegetative communities associated with the serpentine soils (and to provide) research opportunities while maintaining and protecting a unique assemblage of vegetation in as natural a condition as possible.”

Although the Plan Amendment states that the expanded area of the ACEC should have been designated as an ACEC upon approval of the previous CCMA Plan Amendment and 1999 ROD”, we do not believe the reasons stated for designation of the SBMRNA as an ACEC fit within the criteria for what could properly be classified as an ACEC. (Ref; CFR 43 Section 1601.0-5(a).

The presence of “unique vegetative communities” and “research and educational opportunities” at SBMRNA does not satisfy any of the criteria under the CFR to be properly categorized as an ACEC. For this reason, we believe it is improper to designate the SBMRNA as an ACEC.

The proposed expanded area of the SBMRA likewise does not fit within the definition of an RNA. The criteria for determining whether an area should properly be designated as a RNA is set forth in 43 CFR 8223.0-5.

With the exception of the possible existence of T&E species, *none* of the reasons cited for expansion of the RNA given by the BLM falls into the definition of what an RNA should be. We are left to conclude that the only reason for the proposed expansion is simply to “protect it.” The BLM has not identified any research and educational opportunities that could not already be studied in the existing area. The BLM here is clearly exceeding its legal authority to designate RNAs with respect to the SBMRNA designation.

Response:

As noted in the comment letter from the ORBA, 43 CFR Section 1601.0-5(a) defines an ACEC as:

“areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.”

Pursuant to this definition, the “unique plant assemblage” within the SBMRNA does satisfy the “important natural systems” criteria. Page 3-19 of the DEIS further supports this claim by identifying the conifer species in the southern ultramafic Jefferey pine forest “only known to co-occur in the area of San Benito Mountain in San Benito County.” Therefore, the SBMRNA designation is appropriate and no further response is necessary.

In regard to the proposed expansion of the SBMRNA, the criteria set forth in 43

CFR 8223.0-5 identifies characteristics of lands appropriate for RNA designation, including “an unusual plant or animal association” and the presence of “a threatened or endangered plant or animal species.” In addition to the unusual plant association in the southern ultramafic Jefferey pine forest, the proposed RNA expansion area also includes habitat for the federally threatened San Benito evening primrose (*Camissonia benetensis*). Therefore, the SBMRNA expansion area designation is appropriate and no further response is necessary.

Comment:

B. Continuation of the “Limited Use” Designation

Although the Plan Amendment acknowledges that the CCMA is subject to ever increasing recreational demands, it is apparent that the BLM never once considered revisiting the issue of whether to reclassify some areas of the CCMA as “open areas” under 43 CFR 8340.0-5(f).

BLM should have considered redesignating limited use areas under the interim plan as open areas under the present plan to satisfy its obligations under FLPMA, which establishes an explicit policy in favor of retaining public lands for multiple use management.

Response:

Sections 1.4 and 1.5 (pp; 1-5 thru 1-8) of the Draft RMP/EIS for CCMA explain the purpose and need for the current CCMA Plan Amendment and the relationship to statutes, regulations, and other land use plans. As noted in the comment letter from the ORBA, the current CCMA Plan Amendment implements an existing land use planning decision (adopted in the 1995 CCMA Plan Amendment and 1999 ROD) that is not being reconsidered in the CCMA route designation EIS. In accordance with the National Environmental Policy Act (NEPA), the 1995 Plan Amendment and 1999 ROD analyzed a reasonable range of alternatives to provide public access into CCMA for a variety of recreational users, and included public involvement in the decision-making process.

Although BLM acknowledges that the CCMA is subject to increasing recreational demands, the 1995 Plan Amendment and the current Plan Amendment for route designation and RNA expansion are designed to satisfy BLM’s obligations under FLPMA to accommodate multiple use and sustained yield “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in the natural condition; and that will provide for outdoor recreation and human occupancy and use” (FLPMA Section 102 (a)(8)). Therefore, the range of alternatives in the current Plan Amendment is appropriate and no further response is necessary.

Comment:

C. Route Signage

We agree with the Plan Amendment that it would be difficult, if not impossible, to designate all trails as closed unless open. Thus, ORBA supports an “open unless closed” signage policy within the CCMA, and feel that a closed unless open policy would lead to the improper citation of innocent individuals who simply had no idea they were riding in a closed area. Unless the entire CCMA has been inventoried in order to identify all existing routes and areas, the decisions to list all areas as “closed unless posted open” will result in improper closure of routes which should otherwise be available for OHV use.

Response:

Page 1-12 of the DEIS states, “It would be a formidable task to attempt to sign or physically close all routes or areas within the CCMA where OHV use would not be authorized.” The remainder of the section provides a rationale of the proposed CCMA signage policy, including the BLM decision to emphasize what routes are available versus those that are unavailable, the prohibitive cost of signing all closed routes, and the fact that “the user is responsible for being aware of which routes are open for OHV use.”

In addition to the rationale provided in the DEIS, the proposed route signage strategy will allow visitors to become familiar with the route network and reduce the likelihood of OHV users becoming disoriented and getting lost on unmarked or unsigned routes. This type of scenario, not only has the potential to endanger lost visitors, but professional emergency personnel on search and rescue missions as well.

Comment:

D. Temporary Closures to Implement Future OHV Designations

The Plan Amendment improperly asserts that the BLM has the authority to “temporarily close” OHV routes until such time as routes are redesignated. Closures for this purpose are not authorized by the CFR, and any reference to the contrary should be removed from the DEIS. Specifically, the BLM’s authority to temporarily close trails or areas is set forth in 43 CFR 8341.2 (the “emergency closure” regulation).

The above regulation was promulgated pursuant to FLPMA and applies to temporary emergency situations. (Ref; Humboldt County v. USDI, 684 F.2d 1276 (10th Cir. 1982). Even where BLM orders a temporary closure, it may only do so after there has been an explicit finding that off-road vehicles are causing the or will

cause considerable adverse effects upon soil, vegetation, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources.

Nothing in the above regulation authorizes the BLM to close a route for the simple reason that it wants to redesignate an area or route. Instead, the BLM must undertake the formal process of route designation consistent with FLPMA regulations. Any emergency closures must be lifted once the adverse effects have been remedied.

Response:

The Off Road Business Association's (ORBA) assertion that "BLM must undertake the formal process of route designation consistent with FLPMA regulations" is consistent with 43 CFR Section 8342.2(a), which explicitly states "the designation and redesignation of trails is accomplished through the resource management planning process described in part 1600 of this title." However, the above regulation does not restrict the authority of the BLM to temporarily close routes, as stated in the CCMA Draft RMP and Draft EIS.

Specifically, under Actions Common to All Alternatives, Page 2-4 of the DEIS states that "Open or limited routes may be closed temporarily if necessary according to soil loss assessments, resource impacts, or required maintenance. Emergency limitations or closures are not OHV designations, but remain in effect until the adverse effects are eliminated, measures are in place to prevent their reoccurrence, or revised OHV designations are adopted."

43 CFR 8341.2(a), also known as the "Special rules" regulation, states "Notwithstanding the consultation provisions in § 8342.2(a), where the authorized officer determines that offroad vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the authorized officer shall immediately close the areas affected to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence. Such closures will not prevent designation in accordance with procedures in subpart 8342 of this part, but these lands shall not be opened to the type(s) of off-road vehicle to which it was closed unless the authorized officer determines that the adverse effects have been eliminated and measures implemented to prevent recurrence."

Pursuant to this regulation, BLM does have the authority to temporarily close routes for the reasons stated on Page 2-4 of the DEIS, and the temporary closure shall not be lifted "unless the authorized officer determines that the adverse effects have been eliminated and measures implemented to prevent recurrence."

The “measures implemented to prevent recurrence” can include redesignation of a route, as set forth in the 43 CFR Section 8342.3, titled Designation Changes, which states “the authorized officer shall monitor effects of the use of off-road vehicles. On the basis of information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of this part, designations may be amended, revised, revoked, or other actions taken pursuant to the regulations in this part.” Therefore, BLM has determined that the references to temporary closure in the DEIS are consistent with the above rules and regulations and no further response is necessary.

Comment:

E. Route Designations

The Plan Amendment relies exclusively on the presence of existing routes, which were inventoried during field studies from July 2001 through August 2003. The Plan states that an inventory of approximately 440 miles of OHV routes *were completed* during these field studies. It is unclear whether the *entire* CCMA was inventoried and the existing routes were identified. If the entire CCMA has not been inventoried and all the existing routes identified, we feel preparation of the Plan at this time is premature. This is particularly true in light of the statement that data from the aerial over flights conducted in 2004 has not been received or compared with on the ground surveys.

No explanation as to why all the barrens less than 10 acres in size would be unilaterally closed unless designated open, other than to say that this decision is based on the 1999 ROD. If a barren would otherwise be suitable for OHV recreation but for the fact it is less than 10 acres in size, there is no logical reason why the area should arbitrarily be closed.

With respect to route proliferation, the Plan states that “route proliferation is clearly prohibited by the 1999 ROD” (Pg. 2-12). We believe that the BLM in this instance is artificially placing limits on its ability to designate future routes for OHV use by adhering to the 1999 ROD, which by the BLM’s own admission, will no longer be binding on the BLM with the adoption of the Plan Amendment (pg 1-5). The BLM provides no explanation as to why future routes, and route proliferation in general, should be prohibited under the Plan Amendment. Clearly, the BLM is free at any time to redesignate routes under the Code of Federal Regulations based on monitoring use. [43 CFR 8342.3].

Response:

Page 1-5 of the DEIS states, “the Interim designations established with the ROD (1999), allowing vehicle use on existing routes unless signed or physically closed, will no longer be in effect upon approval of this plan”. Therefore, all other land use planning decisions from the 1999 ROD will remain in effect.

As outlined on page 1-4 of the DEIS, the purpose and need for the Draft CCMA Plan Amendment is to implement the Limited Use designation approved in the 1999 ROD, which requires that vehicle travel be restricted to designated routes and areas. The 1999 ROD also identified approximately 440 miles of existing routes, which BLM determined to be “the best science and data reasonably available at this time”, as described on Page 1-11 of the DEIS.

40 CFR Section 1502.20 states, “Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (Sec. 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action.”

Page 1-1 of the DEIS clearly states “this Draft Plan Amendment and DEIS are tiered to the environmental analysis conducted in the CCMA Plan Amendment and FEIS (1995)”. Therefore, no further response is necessary.

Comment:

F. “Special Status Species” and Its Habitat

We have seen an alarming trend at both the federal and state level for land managers to affirmatively close down areas and trails based on the presence of so called “sensitive species” or in this case, “special status” species or Species of Concern. A Special Status species is defined as (1) Federally listed as Threatened or Endangered, (2) Federally proposed as Threatened or Endangered, (3) Federal candidates for listing as Threatened or Endangered, (4) State listed species, or (5) “designated as sensitive by the BLM California state Director” [Plan Amendment pg 3-22].

Here, the Plan Amendment states that “BLM policy requires protection of sensitive resources such as threatened and endangered species and their habitat, other special status species and habitat, and cultural resources...these types of resources are best protected by not having routes bisect occupied or moderate-to-high potential habitat” [Plan Amendment pg 2-7]. Expansion of the SBMRNA is also based, in part, for the need to protect sensitive species.

We are aware of no state or federal statute or guideline that gives the BLM or any other agency the authority to provide “unlisted” species the same protection

afforded “listed” species. Neither the California Endangered Species Act nor the Federal Endangered Species Act grants to BLM the right to determine whether a given “unlisted” species nevertheless meets the criteria for listing. Indeed, for a plant, animal, or insect to make the list of threatened or endangered species, a data-intensive process must be followed. During this process, the appropriate listing agency collects information, solicits comments from scientists in the field, and ultimately makes a listing determination based on the best available technical data. And even then, the determination is subject to challenge and judicial review. According to the Plan Amendment, however, BLM would skirt all of these processes – processes that are intended to protect the integrity of the list and ensure that it contains only those species that truly need the full protection of the ESA and California ESA. What the BLM has proposed violates the checks and balances built into the state and federal schemes, resulting in unnecessary restrictions on public use and a waste of management resources.

Obviously much of the route designations were made based on what BLM staff felt may be potential habitat for species that in turn, may at some time in the future qualify as a Threatened or Endangered species under the ESA. To this extent, we believe that the Plan Amendment and associated DEIS are defective, and the BLM has exceeded the scope of its discretionary authority by placing areas and routes off-limits for the benefit of species that do not qualify for protection under the ESA. All route and area designations should be revised accordingly to delete closures or restrictions that are based on the protection of so-called “Special Status” species, “Species of Concern”, or areas that are analyzed for the “potential for occurrence” of these species.

Along the same line, we note that particular attention is placed on the preservation of “unique vegetation” [Plan Amendment pg. 2-14]. Is this vegetation listed as Threatened or Endangered under the ESA, or is it part of a recognized critical habitat for a listed species? If not, it is improper for the BLM to treat “unique vegetation” as if it were entitled to protection under the ESA.

Response:

BLM Manual 6840.01 states, “[Special status species] are species which are proposed for listing, officially listed (T/E), or candidates for listing as threatened or endangered by the Secretary of the Interior under the provisions of the Endangered Species Act (ESA); those listed or proposed for listing by a State in a category implying potential endangerment or extinction; and those designated by each State Director as sensitive”.

Page 3-22 states, “Seven different special status plant species occur within the CCMA”, which are described in detail in Appendix F of the DEIS. These plant species and their status are as follows:

1. San Benito Evening-primrose (*Camissonia benitensis*): Federally

Threatened

2. Rayless layia (*Layia discoidea*): BLM Special Status
3. Mt. Diablo Phacelia (*Phacelia phaceliodes*): BLM Special Status
4. San Benito Fritillary (*Fritillaria viridea*): BLM Special Status
5. San Benito Spineflower (*Chorizanthe biloba varimmemora*): BLM Special Status
6. Slender pentachaeta (*Pentatchaeta exilis*): BLM Special Status
7. Talus Fritillary (*Fritillaria falcate*): BLM Special Status

The species described above are also listed by the California Native Plant Society as List 1B. All of the plants that make up List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing.

Section 7 of the Endangered Species Act (ESA), of 1973, as amended directs Federal departments and agencies to ensure that actions authorized, funded or carried out by them are not likely to jeopardize the continued existence of any species proposed for listing as threatened or endangered, or whenever an action might result in adverse modification of critical habitat proposed for listing (50 CFR 402).

The reference to “unique vegetation” on page 2-14 of the DEIS does not convey any type of special status, but rather describes “Barren Area Designation Criteria”, which include the presence of special status species “unique to the barren areas”. Therefore, no further response is necessary.

Comment:

G. Pristine/Natural Condition Category

The RMPA creates a new category of areas to be protected labeled “pristine” areas *in addition to* the legally recognized “off-limits” areas designated as Research Natural Areas, ACEC’s, and Wilderness Areas [pg. 2-15]. We are aware of no legal authority for the BLM’s ability to arbitrarily create additional wilderness areas or ACEC’s simply by calling these areas “pristine”. The motivation for placing these pristine barrens (because it meets the Resource Condition Objective of the 1999 ROD, and for the purposes of contrasting OHV accessible barrens with pristine barrens) is not a legally recognized basis for closing these areas to OHV use.

Response:

40 CFR Section 1502.20 states, “Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of

environmental review (Sec. 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action.”

The 1995 CCMA Plan Amendment and the associated Record of Decision (ROD 1999) are legally recognized documents that approved Resource Condition Objectives for CCMA. The 1999 ROD states, “BLM recognizes both the inherent biological uniqueness of the barrens and the conflicting yet valuable recreational experience that the barren areas provide in the CCMA. By excluding vehicle use from two-thirds of the barren areas, and allowing use on those barrens located outside of the most ecologically sensitive areas, the BLM will achieve some measure of balanced use which can be evaluated for success in meeting resource condition objectives.”

The reference to “pristine” areas on page 2-15 of the DEIS does not convey any type of special designation such as ACEC or wilderness, but rather describes “Barren Area Designation Criteria” which include the “Pristine/Natural Condition” of an area. “In protecting these areas, the Bureau is fulfilling a Resource Condition Objective stated in the 1999 ROD of maintaining intact portions of the ecosystem for proper function and comparison monitoring.”

Page 1-1 of the DEIS clearly states “this Draft Plan Amendment and DEIS are tiered to the environmental analysis conducted in the CCMA Plan Amendment and FEIS (1995)”. Therefore, no further response is necessary.

II. Alternatives

Comment:

A. Planning Criteria

This section of Chapter one states that the BLM planning team set forth to evaluate what *existing* routes and areas should be designated as open, limited use, or closed. Again, we believe that the RMPA artificially restricted its scope to existing routes and areas instead of approaching the planning process from an objective “needs based” viewpoint based on increased public recreation demand and available land resources. With nearly 75,000 acres available, what areas are available for potential OHV recreation that are not already existing areas or routes? The scope of the RMPA and DEIR should be expanded to include such an assessment.

We also believe that the failure to include the Recreational Opportunity Spectrum

(ROS) process as part of the DEIS at this juncture severely undermines the credibility of the DEIR. Under NEPA, an agency is required to provide an Environmental Impact Statement if it will be undertaking a “major Federal action, which “significantly affects the quality of the human environment.” [42 USC Sec 4332(2)(C)].

In turn, the “human environment” includes the natural and physical environment *and the relationship of people with that environment*. [40 CFR 1508.14]. The word “significantly” in the context of NEPA requires an analysis of the context, in terms of society as a whole, the affected region, the affected interests, the locality and intensity of the proposed action, including the degree to which the effects on the quality of the human environment are likely to be highly controversial, or the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. [40 CFR 1508.27].

The failure to include an evaluation of the different classes of outdoor recreation, activities, and experience opportunities as part of the DEIR is nothing short of a failure to account for the impact the proposed alternative will have on the human environment. Simply put, how can one properly evaluate the needs of the public without a clear understanding of the various types of users that frequent the CCMA? It does not suffice for purposes of NEPA to state that such an evaluation will be done “in the future” after the EIS and RMPA are set in stone. We have no doubt that, should the BLM undertake the ROS process in this instance, it would find a strong need for additional OHV areas at CCMA due to the majority of park visitors being OHV enthusiasts, and thus become one of its highest priority management objectives.

Response:

Refer to BLM’s response to comment “E. Route Designation” for a rationale of the existing routes and areas that are analyzed in the DEIS.

Pursuant to NEPA, BLM did prepare a draft environmental impact statement (DEIS) when it was determined that route designation and expansion of the San Benito Mountain Research Natural Area was a “major Federal action, which “significantly affects the quality of the human environment.” [42 USC Sec 4332(2)(C)].

In accordance with 40 CFR 1508.27, the DEIS includes a thorough analysis of the natural and physical environment and the relationship of people with that environment. In particular, Chapter 3 (pg. 3-46) describes the Affected Environment, in terms of society as a whole, the affected region, the affected interests, and the locality and intensity of the proposed action. Chapter 4 (pg. 4-51) analyzes the impacts to the human environment, including the degree to which the effects on the quality of the human environment are likely to be highly

controversial, or the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

Pursuant to the BLM Land Use Planning Handbook (H-1601-1), the recreation opportunity spectrum is “one of the existing tools for classifying recreation environments (existing and desired) along a continuum ranging from primitive, low-use, and inconspicuous administration to urban, high-use, and a highly visible administrative presence. This continuum recognizes variation among various components of any landscape’s physical, social and administrative attributes; and resulting descriptions (of existing conditions) and prescriptions (of desired future conditions) define recreation setting character.”

The recreation opportunity spectrum provides guidelines to managers, and although implementation of these guidelines is not required for the preparation of an environmental impact statement, Chapters 3 and 4 of the CCMA Plan Amendment contain a thorough analysis of the supply of recreation opportunities (pg. 3-32), and the effects of other activities on the supply of recreation activities (pg. 4-37), linking user demand with available opportunities and identifying complementary roles for regional recreation suppliers (3-33 and 4-53).

Comment:

B. Alternative A – Proposed Action

The RMPA states that a barrens inventory was based on a study performed in 1998 that had a minimum mapping unit size of 10 acres, and because of this minimum mapping size and input from recreation users, areas less than 10 acres units would be closed under this alternative.

The BLM, like any administrative agency, is required to provide “a rational connection between the facts found and the choice made.” Natural Resources Defense Council v. USDI, 113 F.3d 1121, 1124 (9th Cir. 1997). This duty is not lessened when information is lacking. The BLM must still explain the reasons for its decisions. Thus, if the scientific data that is available is not sufficient to permit the BLM to draw rational conclusions about critical habitat for example, the BLM may decline to designate such areas as closed to OHV use. Here, the fact that no information is available is not a rationale basis upon which to designate an area as “closed”. This approach completely side steps the requirement that the BLM apply the criteria as set forth in 43 CFR 8342.1.

Alternative A seeks to limit OHV use to the Clear Creek area primarily due to the desire to facilitate management of OHV’s in a smaller, confined area. Supposedly (according to the RMPA) this would make the job easier for law enforcement. While this may make sense from a logistical standpoint, we feel it is contrary to the stated objectives of the FLPMA to promote multiple use and maximize resource

values.

Response:

BLM provides the rationale for the decision to exclude areas less than 10 acres in size on page 2-17 of the DEIS. The DEIS states “the barrens inventory is based on a soil survey conducted by Dynamac (1998) that had a minimum mapping unit size of 10 acres. Because of this minimum mapping size and input from recreation users, ten acres is also considered a minimum size for OHV use.”

The minimum mapping unit size of 10 acres used in the soil survey by Dynamac Corp (1998) was actually based on a Class III Soil Survey completed in 1989. Third order soil surveys have map scales from 1:24,000 up to 1:250,000 and provide for extensive land use activities such as woodland and watershed management.

The purpose of the 1988 soil survey was to provide a descriptive legend and soils map of the project area that would be used by the Government in developing data themes for the Clear Creek Management Area geographic information system (GIS). The Class III Soil Survey was prepared in accordance with the National Cooperative Soil Survey (NCSS) standards as outlined in the National Soil Handbook.

Pursuant to the Standard and Specifications outlined in the National Soil Handbook, “the maximum size contrasting inclusion that is limiting shall not exceed 10 acres in any one delineation.” Therefore, the unit size of 10 acres actually represents the best science and available data that is acceptable for soils related studies. Therefore, the scientific data that is contained in the Dynamc report (1998) is sufficient to permit BLM to draw a rational conclusion in regard to OHV use on barrens less than 10 acres in size.

Pursuant to the Federal Land Policy and Management Act, the CCMA Plan Amendment is designed to accommodate multiple use and adheres to route designation criteria as set forth in 43 CFR 8342.1

Comment:

C. Alternative B – Enhanced Recreation Opportunities

Although this Alternative does provide for additional OHV recreational opportunity not found in others, we still note that the total route miles designated for that purpose are only 398 miles within a total of 75,000 acres available. At the beginning of these comments we discussed the ever increasing demand our federal parks are experiencing for quality OHV recreation. We do not believe that 398 miles of trails and 813 acres of open barrens to ride on will accommodate the hundreds of thousands of OHV recreationists that will visit the CCMA in the years to come. Even under Alternative B, the RMPA states that there will be some

closures of popular riding areas, such as Larious Canyon, San Carlos Peak, and Cantua watershed. Continued closures will not address the needs of OHV recreationists. We are pleased, however, to see that the BLM would entertain the issuance of Special Recreation Permits for OHV related events under this alternative.

Response:

DEIS does recognize the increased demand for quality OHV and non-OHV recreation.

The selected network is where a majority of OHV use occurs.

In order to meet the mandate set forth in FLPMA for multiple use and sustained yield, BLM must consider the needs of OHV recreationists and other public interests in CCMA decision-making. (BLM must also meet other legal requirements, like those set forth in the Endangered Species Act, to ensure that decisions made by federal agencies do not jeopardize the existence of any plant or animal species.) Thus, by setting aside areas for the protection of special status species, BLM can effectively manage natural resources and accommodate the needs of OHV recreationists in perpetuity.

Comment:

D. Alternative C – Enhanced Resource Protection

This alternative all but closes the CCMA to OHV's. Only 203 miles of trails and 466 acres of barrens (less than 1% of the entire CCMA) would be open to OHV use. Perhaps it is time for the BLM to review its visitor information studies and ask itself whether less than one percent of park visitors are OHV users, while the rest are hikers and campers. TO even consider this alternative, the BLM would have to completely ignore historical visitor data and future demands from the OHV recreation community at the CCMA.

Response:

The National Environmental Policy Act of 1970 (NEPA) requires federal agencies to analyze a reasonable range of alternatives to address the purpose and need for the CCMA Plan Amendment and environmental impact statement. Alternative C, Enhanced Resource Protection, is considered a viable alternative to address the issues identified in Clear Creek Management Area, by directing OHV use to routes and trails away from sensitive habitat and minimizing OHV use on the "barrens" to reduce soil erosion and improve water quality in CCMA rivers and streams.

Visitor use studies are a tool that allows managers to allocate resources on public lands for the use and enjoyment of current and future generations. There is no

correlation between visitor use studies and the percentage of the land base available for designated uses. On the other hand, BLM recognizes that a majority of the visitors to CCMA are OHV enthusiasts. As stated on page 4-37 of the Draft Environmental Impact Statement, “full implementation of any of the alternatives is not expected to result in any changes in the number or type of recreation user” and “visitation trends are expected to remain fairly constant with moderate yearly increases.”

Comment:

E. Mitigation Measures

The RMPA acknowledges that Clear Creek is among the top five most popular areas for central California OHV users, topping 50,000 per year. San Benito County has seen a 45% population increase and a 113% increase in OHV registrations. [RMPA pg. 3-33]. Despite this, the RMPA states that “visitation trends are expected to remain fairly constant with moderate yearly increases.” To the contrary, the BLM’s own facts suggest that the demands of the OHV recreating public will continue to expand exponentially at the CCMA, yet the RMPA fails to address this issue. Should visitation increase over the expected nominal estimates, the RMPA then states that even more restrictions to visitor access will be considered. [RMPA pg. 4-53]. This is completely at odds with the FLPMA, which states an explicit policy in favor of retaining public lands for multiple use management.

The BLM also omitted any discussion of what mitigation measures it proposes to offset the dramatic loss of OHV recreation opportunities implementation of any of the Alternatives would have on the recreating public. NEPA requires an assessment of the impact the proposals will have on the quality of the human environment – specifically *the relationship of people with that environment*. Under Alternative B, the RMPA states that “an increased emphasis on providing additional recreation facilities (for OHV’s) could contribute to meeting growth in recreation demand for the area”, although there is no discussion as to how the BLM will accomplish this, or whether it ever intends to. The DEIR is inadequate because no mitigation measures are provided to address the cumulative impact the loss of OHV recreating opportunities will have on the recreating public.

Under its evaluation of social and economic conditions, it appears that the sole consideration of the BLM under the RMPA is to “contribute and maintain open space for the American people”. It proposes to do this by “promoting nature resource stewardship that conserves landscapes and ecosystems that [sic] American people wish to spend time”. [RMPA pg 4-52]. Again, this flies in the face of objectives of the FLPMA. With all of the lockouts and closures proposed under each of the Alternatives, one wonders how a large and ever increasing segment of the visitors to CCMA (in this case OHV recreationists) will be able to spend time there. Here, the RMPA/DEIR social and economic impact analysis is fatally flawed. No explanation is given as to how or why the BLM arrived at its conclusion that

CCMA visitors want more open space preserved as opposed to more areas for OHV use.

Response:

As noted in the comment letter ORBA, BLM does take into account the increase in population and OHV registrations on page 3-33 of the RMPA. In fact, the upward trend of population growth and OHV use in CCMA are contributing factors to the purpose and need for the RMPA. Furthermore, the goals of the RMPA, as defined on page 1-8 are “to provide a wide range of recreation opportunities and experiences, to manage recreation use to minimize user impacts to the environment, to emphasize the use of public outreach to increase public awareness and sensitivity to resources; and to adaptively manage changing visitor use patterns.” Although the scope of the RMPA is limited to route designation and expansion of the San Benito Mountain Research Natural Area (RNA), page 4-53 addresses the potential for additional management tools, like recreation fees or establishment of a carrying capacity at CCMA “to provide the best services to a growing population.”

Page 4-53 of the DEIS clearly states that “full implementation of any of the alternatives is not expected to result in any changes in the number or type or recreation user.” Therefore, no mitigation measures are necessary to offset the closure of routes, trails, and barrens, because the proposed action would not dramatically change the relationship of people with the environment at CCMA.

"Cumulative impact" is defined in the Council on Environmental Quality's NEPA regulations as the "impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" 40 CFR 1508.7. CEQ interprets this regulation as referring only to the cumulative impact of the direct and indirect effects of the proposed action and its alternatives when added to the aggregate effects of past, present, and reasonably foreseeable future actions.

The cumulative impacts of the proposed action are addressed on pages 5-6 to 5-8 of the DEIS. These impacts include local, regional, and statewide loss of OHV opportunities, and the displacement of OHV users at CCMA.

In regard to the “emphasis on providing additional recreation facilities” under Alternative B, page 2-23 of the RMPA states that BLM would “Develop the lower Jade Mill as a non-OHV camping area with designated campsites, improved access and road network, and restroom facilities. Develop the upper Jade Mill area as an OHV camping/staging area with facility improvements, designated areas, and a phased implementation to expand the capacity to accommodate up to 100 vehicles. Develop additional camping facilities outside the Hazardous Asbestos Area along lower Clear Creek or other suitable areas.” However, the RMPA goes on to say “This management action is beyond the scope of this amendment and would be analyzed under a separate environmental analysis.” Therefore no further response is

necessary.

Under the analysis of social and economic conditions, BLM must consider that effects of the proposed action and alternatives on social well-being. As stated on page 4-51 and 4-52, “types of impacts that affect social well-being include the types and quantities of the recreation experience that is available. It may also include the perception of conflict concerning resource use.” In order to analyze the effects of these impacts, BLM must also make assumptions about social and economic conditions. These assumptions are presented in the Clear Creek RMPA in terms of population growth and recreation demand. Specifically, BLM states that “popular demand for open space in which to recreate and to relax will grow as the populations in adjacent counties grow.”

Following this rationale, for the proposed action, BLM determined that “Even though the designated open route system is less than the entire inventoried network, [OHV] recreation users would still be able to experience solitude, the wildlands character, and a sense of exploration, due to the size of the area and the extensive open route network that would be provided. This reduction of routes would benefit the non-motorized recreation experience and reduce user conflicts between motorized and non-motorized recreation use” (RMPA pg 4-54). Therefore, the evaluation of social and economic effects in the DEIS is adequate, and the proposed action actually promotes the objectives set forth in FLPMA for multiple use of public lands.

Comment:

F. Economic Impacts

The RMPA/DEIR admits that it has not estimated the economic benefits generated from recreation related expenditures by visitors to the CCMA. [RMPA pg. 3-48]. We believe it is entirely improper to consider any of the proposed alternatives without a comprehensive analysis (not simply “estimates”) of the economic impact of each of the alternatives would have on the nearby affected communities.

In conclusion, we respectfully request that the BLM withdraw the RMPA/DEIR and redesign it to adequately address the needs of the OHV recreating public, including a full study of the economic impacts each alternative would have, as well as sufficient mitigation measures proposed to offset the loss of OHV accessible lands in the CCMA. Such a revised plan should not include protective measures and/or closures based on so-called “special status” species that the BLM is currently extending protection to as though such species were federally listed under the ESA, but are not.

We appreciate the opportunity to comment on this most important issue.

Response:

40 CFR 1502.22 states, “When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.” 40 CFR 1502.22(b) continues, “If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement:

(1) A statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.”

Page 3-48 clearly states: (1) “No studies have been conducted to determine local expenditures by Clear Creek recreation users;” (2) “OHV recreation users spend considerable sums purchasing the specialized vehicles and support equipment needed to participate in this recreation activity;” and “A portion of these expenditures contributes to the regional economy in the form of purchases for off-highway vehicles; parts, repairs, accessories, and equipment; fuel; and groceries and restaurants;” (3) “Studies have been conducted by the State Off-Highway Vehicle Commission California State Parks to determine if expenditures by visitors to OHV recreation areas. These studies indicated that the average OHV recreation user expended about \$50 per visitor day;” and “Applying these figures to Clear Creek users would indicate that off-road recreation use in the area could contribute up to \$2.5 million annually to the regional economy.” In conclusion, page 4-54 presents an evaluation of the impacts to social and economic conditions as required by 40 CFR 1502.22. (b)(4), “With visitor use levels remaining fairly constant or experiencing slight increases, economic impacts are not expected to negatively affect current local or regional sales and purchases of OHV equipment or related supplies.” Therefore, no further response is necessary.

Please refer to Response I-F for a discussion of “special status species”, Response II-A for a discussion of “the needs of the OHV recreating public”, and Response II-E for “mitigation measures proposed to offset the loss of OHV accessible lands in the CCMA.

OR-5-R Santa Clara Valley Gem and Mineral Society

Comment: Chapter 1, Section 1.1, Overview; This section classes hobby gem and mineral collection with other planning issues in the CCMA. The introduction overview indicates that our primary interests will be addressed in subsequent

amendments to the plan.

Response: Comment noted. No further response is necessary.

Comment: Chapter 3, Section 3.5.3; Non-OHV Recreation Opportunities, provides a good description of gem and mineral collecting hobby. In pursuit of this hobby, we often have planned field trips to the Clear Creek area, with field trip attendees occasionally camping one or more nights. These field trips may be spur of the moment decisions by one or more rock hounds, and up to and including organized field trips sponsored by the CFMS.

Response: Comment noted. No further response is necessary.

Comment: Chapter 4, Section 4.6.3; Non-OHV recreational opportunities include camping, hobby/gem and mineral collecting, hunting, hiking/backpacking, wildflower hikes, hang gliding, geocaching, and sightseeing. The CCMA states that these users are all adequately provided for in all alternatives proposed.

Response: Comment noted. No further response is necessary.

Comment: Appendix I: Section 4.6, Recreation Resources. Alternative A, Proposed Action, under Item 4.6.3 Non-OHV recreation opportunities states the majority of Non-OHV activities occur on foot (including hobby gem and mineral collecting) throughout the CCMA and are reached using major routes which would remain open.

Alternatives B and D, with more open road miles than Alternative A, should provide better access to some of the rock and mineral collecting areas. Access can be very important to some of the gem and mineral collectors that are senior citizens.

Response: Based on the current levels of use for motorized and non-motorized recreational activities, BLM has determined that all the alternatives provide a reasonable route network for the public to access Clear Creek Management Area.

OR-6-R Ventana Wilderness Alliance

Comment: The VWA makes the following recommendations regarding the DEIS and implementation of the FEIS:

The CCMA should be immediately closed to all dirt motorcycles until such time as the HFO senior management is replaced with competent managers who are committed to preserving the public's resources ahead of the interests of one specific group of recreational users.

CCMA should only be reopened to dirt motorcycle use when adequate law enforcement capabilities are in place.

CCMA should only be reopened to dirt motorcycle use when a “closed unless signed open” trail management policy is adopted and implemented in the field with all necessary signage and enforcement personnel in place.

Response: BLM human resource management issues are not in the scope of the CCMA Plan Amendment.

Law Enforcement efforts will continue within the area. Implementation of the proposed action will include enhanced law enforcement and signage strategies, as described on page 2-14 of the FEIS.

Page 1-9 of the FEIS states “The BLM’s management strategy and guidance, in compliance with the CFR, are that OHV use shall be restricted to open designated routes, and that these open designated routes shall be clearly identified so that the public will be aware of locations where OHV use is authorized.

Table J-4; Legend of Acronyms & Comment Code

Source:

H - Comments received by the Hollister Field Office

PM - Speakers at public meetings

WC - Written Comments or Letters

FO - Comments received by phone

EM - Comments received by e-mail

Comment Code Format:

(Source)-(Public meeting date, *if applicable*)-(Order comment received)

Example:

The third written comment received at public meeting on September 15 = WC-15-03

The third written comment received by the Hollister Field Office = H-WC-03

Affiliation:

AFM - American Federation of Motorcyclists

AMA - American Motorcyclist Association

CERA - California Enduro Riders Association

CFW - California Four Wheel

CNPS - California Native Plant Society

COHVS - California Off-highway Vehicle Stakeholders

CORVA - California Off-Road Vehicle Association

DD - Dirt Dog Group

GR - Ghost Riders
HP - Honda Peninsula
LADB - Los Altos Dirt Bikers
MBUAPCD - Monterey Bay Unified Air Pollution Control District
LGMC - Los Gatos Motorcycle Club
PEER - Public Employees for Environmental Responsibility
PO - Adjacent Property Owner/Private Land Owner
SC - Sierra Club
SCRU - Santa Clara Riders Unlimited
SCC - Save Clear Creek
SCVGMS - Santa Clara Valley Gem and Mineral Society
SR - Salinas Ramblers Motorcycle Club
TK - Time Keepers
WRCD - Westside Resource Conservation District
VWA - Ventana Wilderness Alliance

APPENDIX K PUBLIC COMMENTS ON CCMA DRAFT RMP AMENDMENT AND DRAFT EIS & BLM RESPONSES

This appendix contains a summary of public comments gathered at three meetings held for the project, and written comments and electronic mail (e-mail) letters received by the Hollister Field Office on the Clear Creek Management Area Draft RMP Amendment and Draft EIS. Comment letters from agencies and organizations are located in Appendix K.

Tables K-1 and K-2 list the individual commenters at public meetings, and authors of comment letters received by the Hollister Field Office, respectively.

Tables K-1 and K-2 also identify the affiliation of commenters, and a numerical value in the “Comment/Response” column to direct the reader to the location of the comment summary and responses to comments in Table K-3. The comment summary and responses were prepared by BLM in accordance with 40 CFR 1504.3.

Table K-4 is a legend of acronyms and “Comment Codes” used to track comments on the CCMA Draft RMP Amendment and Draft EIS.

Many comment received by BLM were beyond the scope of the Proposed CCMA Plan Amendment and Final EIS. These comments and other comments that represent opinions are acknowledged by BLM with the following response: “Comment noted. No response necessary” or “NA” (Not Applicable).

Table K-1; Individual Commenters at Public Meetings

Comment Code	Commenter	Affiliation	Comment/Response
PM-14-01	Adam, Robert		2,3,9
PM-14-02	Wakelee, R. Heath	COHVS	22,30,42,43,44
PM-14-03	Waltrip, Billy	SR	12,15,54
PM-15-01	Peterson, Dan	CORVA	5,51,54,56,57,63
PM-15-02	Millhollan, Monty	PO	74
PM-15-03	LeNese, Brian	CNPS	6,18,22,44,54,74,81,96
PM-15-04	Hale, Robert	CNPS	17,22,35,37,44,46,95, & OR-2-R; App. J: pp. 75-79
PM-15-05	Kimble, Todd		9,15,21,73
PM-15-06	Simoskevitz, Sean		15,51
PM-15-07	Cisneros, Jason	DD	16,56
PM-15-08	Avery, Dave	CFW	15,55,74
PM-15-09	Tobin, Ed	SR	1,4,9,11,12,15,29,73
PM-15-10	Deshager, Ron	SR	51,56,57,60,69,79,88
PM-15-11	Starkweather, John		3,15,16,51
PM-15-12	Starkweather, Joshua		15,56,60,73
PM-15-13	Ponton, Joyce L.	SR	15,44,60,73

Comment Code	Commenter	Affiliation	Comment/Response
PM-15-14	Rowell, Tami		15,60,73
PM-15-15	Starkweather, Jeremiah		9,15,21,47,54,74
PM-15-16	Gilovich, Andrew		58,59,92
PM-15-17	Vargas, Lupe		75
PM-15-18	Pitts, Robert	SR	60
PM-15-19	Gaines, Gregg	LGMC	46
PM-15-20	Murphy, Dee		12,15,60,75
PM-15-21	Gonzales, C. R.		54
PM-15-22	Baudon, Danny		88
PM-16-01	Tobin, Ed		73
PM-16-02	Hoover, Vicky	SC	66,98
PM-16-03	Ellis, Bob		6,38,44,54
PM-16-04	Kirkpatrick, William	SC	44,66,75
PM-16-05	Soldano, Dustin		21,46,63,73,74
PM-16-06	Edwards, Tim		32,44,50,55,73
PM-16-07	Rooney, Rick		15,29,50,73,74,75
PM-16-08	Webb, Lowell		12,29,54,60
PM-16-09	Clausen, Brad		15,54,57,60,79,88
PM-16-10	Bailey, Phil		15,54,60,73,88
PM-16-11	Sproat, Darryl		32,73
PM-16-12	Bohnhoff, Mike		21,29,44
PM-16-13	Golden, Josh		9,29
PM-16-14	Picket, Dave	AMA	29,88
PM-16-15	Schambach, Karen	PEER/COHVS	44,56
PM-16-16	Masarchik, Dana		12,29,32,66,69,73
PM-16-17	Mattila, Charles		32,54
PM-16-18	Napoli, Kathy		9,10,54
PM-16-19	Gaines, Greg		3,9,16,29,51,54
PM-16-20	Peaterson, Dan	CORVA	15,20,56,69,79
PM-16-21	Simoskevitz, Sean		12,49,51,69
PM-16-22	Beggs, Russ		9,12,16,21
PM-16-23	Carter, Chris		29,32,54
PM-16-24	Baudin, Danielle		54,56,57,60,73
PM-16-25	Norris, Jim		32,49,54
PM-16-26	Tobin, Ed	SR	1,2,9,11,44,54,67
PM-16-27	Beggs, Anne		16,51
PM-16-28	Baxter, Michael		15,47,73
PM-16-29	Lucas, Mark	LADB	16,54
PM-16-30	Murray, Jerry		9,51,54
PM-16-31	Mack, Chris		16
PM-16-32	Stredfel (sp?), Jim		16,54
WC-14-01	Korettoff, Steve	SCC/AMA	15,44,54,60,93,94
WC-15-01	Moore, Russell		12
WC-15-02	Flores, Steven		6,16,21,51,60,69,79
WC-15-03	Rowell, Tami		15,16,21,60,73,88
WC-15-04	Kimble, Todd		5,29
WC-15-05	MacDonald, Kevin	LGMC	60
WC-15-06	Rank, Bob	SR	16,51
WC-15-07	Burritt, Renee		51,79

Comment Code	Commenter	Affiliation	Comment/Response
WC-15-08	Elvin, Eric		15,73
WC-15-09	Nealon, Jeff		15,54
WC-15-10	Jansen, Brian		23,51,68
WC-15-11	Deshazer, Ron	SR	16,49
WC-15-12	Edwards, Tim	LGMC	12,19,29,51
WC-15-13	Soldano, Dustin		29
WC-15-14	Perreira, Jim		57,60, 73
WC-15-15	Ireland, LaVerne		18,44,54,80
WC-15-16	Anonymous		12,65
WC-15-17	Anonymous		49,73
WC-15-18	Anonymous		15,16
WC-15-19	Anonymous		10
WC-15-20	Anonymous		NA
WC-15-21	Anonymous		60,79
WC-16-01	Rooney, Jeff		12,29
WC-16-02	Rooney, Richard	GR	12
WC-16-03	Kluge, Kenyon	AMA/AFM	29,30
WC-16-04	Balbas, Frank	PO	4,9
WC-16-05	Ouellette, Mitch	GR	15,60
WC-16-06	Brekke, Les	CERA	5,15,19,32,57,73,74,75
WC-16-07	Muldon, Mike		5,10,15,19
WC-16-08	Levingston, Kevin	GR	15
WC-16-09	Bihler, Wayne	GR	21
WC-16-10	Lkirkpatrick, William	SC	66
WC-16-11	Pinsky, James	LADB	12,68,73
WC-16-12	Cox, Michael R.	GR	11,12,29,57,73,97
WC-16-13	Golden, James H.		21,60,73
WC-16-14	Clausen, Brad	HP	32
WC-16-15	Bailey, Phil	GR	57
WC-16-16	Ellis, Ben	LADB	12,48
WC-16-17	Anderson, Carl	TK	9,15,51,57,73
WC-16-18	Groo, Eric		15,29,54
WC-16-19	Schockmel, Jerry	LADB	5,15
WC-16-20	Silvestro, Steve	LADB	57,73
WC-16-21	Pinsky, David		29,54,60,73
WC-16-22	Flores, Rick		15,29
WC-16-23	Ross, Ross		9,12,16,21
WC-16-24	Mesarchik, Dana	LADB	44,54,60

Table K-2; Public Comment Letters (Written and e-mail)

Comment Code	Commenter	Affiliation	Comment/Response
H-WC-01	John Wilkinson		44
H-WC-02	Jane F. Collier		24
H-WC-03	Andrea Gilovich		58
H-EM-04	Ed Tobin		9
H-WC-05	Ron Cash		99
H-EM-06	Ed Tobin		28
H-WC-07	Gene Cunningham		10

Comment Code	Commenter	Affiliation	Comment/Response
H-WC-08		SCRU	36,76,80
H-EM-09	Don Allen		NA
H-EM-10	Jim Garey		13
H-EM-11	David & Jenny Rives		12,13,30,59,84,88
H-EM-12	Fredric A. Amerson		13,73,88
H-EM-13	Peter Cochran		13
H-EM-14	Jimmy Nylund		13,55,75
H-EM-15	Margaret Ghione		1,2,9
H-WC-16	June A. Beggs		34
H-WC-17	Kory M. Webb		34
H-WC-18	Janet Brenan	MBUAPCD	82,83
H-WC-19	George & Geormaine Beggs		34
H-WC-20	Stephen A. Kusanovich		34
H-WC-21	David Morrison		34
H-WC-22	Ed Kaping		34
H-EM-23	Brian Centeno		34
H-WC-24	Charles Lozier		34
H-WC-25	Allen & Kay Martins		26
H-WC-26	Sarge Green	WRCD	52
H-WC-27	Dean & Carolyn Henningsen	PO	26
H-WC-28	Andy & Kay Allen	PO	26
H-WC-29	Ronnie Simpson	PO	26
H-EM-30	James Ruggieri		13,73,88
H-WC-31	Frank M. Balbas	PO	26
H-EM-32	Steve Koretoff		34
H-EM-33	Anthony Gonzalez		34,70
H-EM-34	Chuck Wages		34
H-EM-35	John Wilkinson		35,55,66
H-WC-36	Paul A. Turke	BRC	1,2
H-WC-37	Peter Urfer	AMA, DD, SR	APPENDIX J
H-WC-38	Lisa Hoivik		35,51
H-EM-39	Myles Pekelsma		55,84
H-WC-40	Gordon H. Williams		18,95
H-WC-41	Susan Harrison		24,77
H-WC-42	Illegible		18,42,46,66,98
H-WC-43	Jack Robbins		18,44,66
H-WC-44	Mark Anderson		18,46,66
H-WC-45	Cassie Beals		18,95
H-EM-46	Eron Flory		1,9,34,73
H-WC-47	Harrison Hilbert		35
H-WC-48	Kevin Longley		1,9,34,73
H-WC-49	Todd Kimble	BRC	1,9,34,73
H-EM-50	Alan Cezar		1,9,34,73
H-WC-51	Ernest Lee Morales	PO	26
H-WC-52	Michael Cezar	BRC	1,9,34,73

Comment Code	Commenter	Affiliation	Comment/Response
H-WC-53	Vern Yadong		35
H-WC-54	Jennifer Bettencourt		1,9,34,73
H-EM-55	Steve Koretoff		46
H-WC-56	Duane Hughes		13,16,29
H-EM-57	Andrew Band		13
H-EM-58	Ladd Johnson		13
H-WC-59	Frank Monez		APPENDIX J
H-WC-60	John Wilkinson		70,75
H-WC-61	Russell J. Beggs		34
H-WC-62	Harry E. Koue		34
H-WC-63	David Ow		34
H-WC-64	Darryl Johnson		34
H-WC-65	Aaron Johnson		34
H-WC-66	Clive Belvoir		34
H-WC-67	John Moore JR.		34
H-WC-68	Jeff Taylor		34
H-WC-69	Illegible		34
H-EM-70	Steve Koretoff		13
H-EM-71	Elizabeth Brown	PO	26
H-WC-72	Curtis Kimble		12
H-WC-73	Mark I. Ward & Sons	PO	26
H-WC-74	John Bruzzone		74
H-WC-75	Ben L. Burkett	PO	26
H-WC-76	Dieter H. Wilken		35
H-WC-77	Charles Stembridge		5
H-WC-78	Robert Tomlinson		13
H-WC-79	Michael Zesiger		39
H-WC-80	Joseph S. Nufer		32
H-WC-81	Kevin Scott MacDonald		73
H-WC-82	Vanessa MacDonald		60
H-WC-83	Robert H. Leighton 11		NA
H-WC-84	W. David Crosby		NA
H-WC-85	Christopher Mack		32
H-WC-86	Marty Weisler		32
H-WC-87	Dale Barkhoff		32
H-WC-88	Ron Cash		13
H-WC-89	Cameron Chabre		35
H-WC-90	John Schoenfeld		45
H-WC-91	Steve Craig		NA
H-WC-92	Gene Cunningham		APPENDIX J
H-EM-93	Greg Willis		61,73
H-EM-94	Jim Kennedy		73,84
H-EM-95	Sue Lovas		73,84
H-EM-96	Patrick Gallagher		70
H-EM-97	David Milazzo		21,73
H-EM-98	Tony Branham		13
H-EM-99	Jeff Steiner		29
H-EM-100	Nicholas Harris		71
H-EM-101	Dave & Kathy Avery		13

Comment Code	Commenter	Affiliation	Comment/Response
H-EM-102	Robert & Kim Auernheimer		32
H-EM-103	Jay Jacobson		34
H-WC-104	Daniel Allen		13,70
H-WC-105	Curtis Kimble		29,32
H-WC-106	Mark L. Ward		40
H-WC-107	John Bruzzone		73
H-EM-108	Kent Parker		15
H-WC-109	Nick Alafouzios		13
H-WC-110	Ed Vitousek		12,13,73
H-WC-111	Dean Pelegrini		14
H-EM-112	Ryan Hollowell		13
H-EM-113	James Keeler		71
H-EM-114	Ron & Theresa Dunton		28
H-EM-115	Ron Aikins		13
H-WC-116	Jerry Stoodley		62
H-WC-117	Todd Slattery		84
H-WC-118	Lynn Overtree		35
H-WC-119	Brian LeNeve	CNPS	73
H-WC-120	John F. Moore Jr		13
H-WC-121	John F. Moore		23
H-WC-122	Robert Jump		13
H-WC-123	Jay House		NA
H-WC-124	Julia Adams		NA
H-EM-125	Joshua d. Mackenroth	ORBA	APPENDIX J
H-WC-126	Jim Strenfel		13,62
H-WC-127	Kurt Marriner		NA
H-WC-128	Joseph Wilkiemeyer		11
H-WC-129	Alan Viarengo		23
H-WC-130	Terry Pederson		34
H-WC-131	Cindy Lieurance		38
H-WC-132	Alex Lehr		NA
H-WC-133	Kyle Newman		NA
H-WC-134	Nelson J. Parrish		59
H-WC-135	Kent Parker		NA
H-WC-136	Michael Grundy		14
H-WC-137	Jim Boardman		45
H-WC-138	David Peel		21
H-WC-139	Steve S. Hall		13
H-WC-140	Eric Schellenberger		NA
H-WC-141	Mark R. Stromberg		35
H-WC-142	Ben Porschett		
H-WC-143	Leo Oliver	PO	26
H-WC-144	Jeffrey Shannon		73
H-WC-145	Richard Garisto		13,57
H-WC-146	Ora Russell Anders		61
H-WC-147	Joe Wytman		31
H-EM-148	Jay Jacobson		34
H-EM-149	B. Sachau		NA

Comment Code	Commenter	Affiliation	Comment/Response
H-EM-150	Richard Comer		NA
H-EM-151	Christopher Andrade		73
H-WC-152	Giorgio Pellegrini		57
H-WC-153	Zane Amaro		47
H-WC-154	Giorgio Pellegrini		13
H-WC-155	Art Taylor		84
H-WC-156	Robin Woolsey		33
H-WC-157	Chris Vargas		33
H-WC-158	John Foulke		13
H-WC-159	Todd Winslow		NA
H-WC-160	Art Crofts		13
H-WC-161	Fred Dean		64
H-WC-162	Steve Christensen		1
H-WC-163	Garrett Gesselman		13
H-WC-164	Bob Holmes		NA
H-WC-165	Mark Foster		6
H-WC-166	Ryan Schaffler		14
H-WC-167	Eric Grass		14
H-WC-168	Jim Bergen		13
H-WC-169	Brian Schweltz		NA
H-WC-170	John McCoy		14
H-WC-171	John Jarman		62
H-WC-172	Mark Gallardo		14
H-WC-173	David Wolden		1
H-WC-174	Michael Parsons		61
H-WC-175	Philip Rice		NA
H-WC-176	Mark Weaver		31,33
H-WC-177	John Aveggio		NA
H-WC-178	Philip Guerrero		13
H-WC-179	Nick Rizzi		13
H-WC-180	Bruce Saxton		NA
H-WC-181	Armando Miranda		13
H-WC-182	Stephen Morris		13
H-WC-183	Mike Little & Family		62
H-WC-184	Steve Hay		13
H-WC-185	Albert Gonzales		60
H-WC-186	Derek Taaning		13,62
H-WC-187	Dan Kulustian		73
H-EM-188	John Alafouzos		7
H-EM-189	Tor Anderson		33
H-EM-190	Peter Cassidy		33
H-EM-191	Matthew Cassle		13,50
H-EM-192	Timothy Campbell		33
H-EM-193	Corey Cleland		33
H-EM-194	Craig Couture		33
H-EM-195	Ca.Finance		57,76
H-EM-196	Richard Fanning		33
H-EM-197	Denis Van Gundy		33
H-EM-198	Jason Giubbini		33

Comment Code	Commenter	Affiliation	Comment/Response
H-EM-199	Kenneth Gabel		33
H-EM-201	Joseph Garrett		33
H-EM-202	John Ferro		33
H-EM-203	Tom Farkas		33
H-EM-204	Richard Filkins		33
H-EM-205	Richard Reyes		33
H-EM-206	Steve Ross		85
H-EM-207	Chase Jiannalone		33
H-EM-208	Eric Locke		33
H-EM-209	Mike Mondloch		33
H-EM-210	Kurt Morris		33
H-EM-211	Brion McHale		33
H-EM-212	Ross Liberty		33
H-EM-213	Steven Perkio		33
H-EM-214	Jack Patterson		33
H-EM-215	Tim Pilg		33
H-EM-216	Gregg Palmer		33
H-EM-217	Robert Neithart		33
H-EM-218	Jim Norris		NA
H-EM-219	Michael b. Napoli		33
H-EM-220	Chris Toman		33
H-EM-221	Michael Scott		33
H-EM-222	Scott Sinclair		33
H-EM-223	Bradley Richmond		NA
H-EM-224	Mike Raab		33
H-EM-225	David Wheeler		33
H-EM-226	Joseph Wernex		33
H-EM-227	William White		33
H-EM-228	Kevin Udy		33
H-EM-229	Mike Thompson		33
H-EM-230	Mike Naps		33
H-EM-231	Joseph Abrams		33
H-EM-232	Jon Aichele		33
H-EM-233	Don Amador		33
H-EM-234	Scott Atchison		33
H-EM-235	Paul Bahr		NA
H-EM-236	David Bowman		33
H-EM-237	Dale Brose		33
H-EM-238	Michael Bell		33
H-EM-239	Lisa Brazieal		33
H-EM-240	Michael Barber		33
H-EM-241	Les Brekke		33
H-EM-242	George Biddlecombe IV		33
H-EM-243	Roy Cloude		33
H-EM-244	Steve Christensen		33
H-EM-245	Joe Cook		33
H-EM-246	Kurt Chaffin		33
H-EM-247	Jerry Adams		33
H-EM-248	Richard Key		33

Comment Code	Commenter	Affiliation	Comment/Response
H-EM-249	Tom Evans		33
H-EM-250	Stuart Chappell		33
H-EM-251	Clark Frentzen		33
H-EM-252	Shane Felker		33
H-EM-253	Patrick Garrett		33
H-EM-254	Mike Gibbel		33
H-EM-255	Albert Gonzales		13
H-EM-256	Chad Gilzean		33
H-EM-257	David Goddard		14
H-EM-258	Bruce Hendrickson		33
H-EM-259	David Hurst		33
H-EM-260	Jerry Hobbs		33
H-EM-261	N. Hacker		33
H-EM-262	William Hughes		33
H-EM-263	Chris Horgan		33
H-EM-264	Victor Inouye		33
H-EM-265	Ben Johnson		13
H-EM-266	Rod Jones		33
H-EM-267	Dean Kramer		33
H-EM-268	Dan Kalustian		14
H-EM-269	Kent Koistinen		33
H-EM-270	George Lowery		33
H-EM-271	Tom Maguire		33
H-EM-272	Jim McConnell		33
H-EM-273	Jay Peterson		33
H-EM-274	Steve Payne		33
H-EM-275	Tracy Payne		33
H-EM-276	Bill Pitts		33
H-EM-278	Terrence Packer		33
H-EM-279	Mike Miller		33
H-EM-280	Dana Mesarchik		33
H-EM-281	Al McCutchan		33
H-EM-282	Lance Maddux		33
H-EM-283	Mark Weaver		33
H-EM-284	Glenn Warner		33
H-EM-285	Neil Netzer		33
H-EM-286	Rick Oldham		33
H-EM-287	Dave Rorvik		NA
H-EM-288	Allen Silhanek		33
H-EM-289	Erik Schaffer		33
H-EM-290	Brad Standley		33
H-EM-291	Jerry Sherfy		33
H-EM-292	Jim Suty		33
H-EM-293	David Tice		33
H-WC-294	Dave Anderson		13
H-WC-295	Kirt Anderson		13
H-WC-296	Fuzzy D. Beeching		61
H-WC-297	Barry Ballew		13
H-WC-298	Patrick H. Ballew		16

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H-WC-299	Peter Callies		21,84
H-WC-300	Gregory D. Campbell		70
H-WC-301	Chris Darman		13
H-WC-302	Tracie Divers		47
H-WC-303	Don Dotson		14
H-WC-304	Paul Frank		13
H-WC-305	Mike Grasshof		NA
H-WC-306	Chad Gregerson		14
H-WC-307	Rick Lind		62
H-WC-308	Tom Maguire		7
H-WC-309	John Metrogen		13
H-WC-310	Dan McManus		NA
H-WC-311	David Mineely		61
H-WC-312	Ken Netto		13
H-WC-313	Mark Olsen		NA
H-WC-314	Ron Plowman		NA
H-WC-315	Greg Pritchard		70
H-WC-316	Dave Rosenquist		13
H-WC-317	Ron Schiltz		13,62
H-WC-318	Elise Sperber		13,62
H-WC-319	Bob Sackett		33
H-WC-320	Fred Sumrall		62
H-WC-321	Jerry Talbot		13
H-WC-322	Steve Wherry		NA
H-WC-323	Wes Wenger		NA
H-WC-324	Garrett Weygandt		62
H-WC-325	Bill Willis		3
H-WC-326	Jim Willis		NA
H-WC-327	Mark Wilcox		14
H-WC-328	Brent Wilcox		13
H-WC-329	Fred Wilcox		14
H-WC-330	David C. Wood		33
H-WC-331	Vernon A. Wood		33
H-WC-332	John Alafouzos		7
H-WC-333	Steve Anderson		71
H-WC-334	Rick Araujo		1
H-WC-335	Mark Berkner		29
H-WC-336	Cuamy Chabre		35
H-WC-337	Kevin Coelho		NA
H-WC-338	Ray Feldman Jr.		91
H-WC-339	Prentice Fish		15,21,59,91
H-WC-340	Christie Fish		91
H-WC-341	Joe Floyd		14
H-WC-342	Mathew Higgins		NA
H-WC-343	Louis Higgins		NA
H-WC-344	Chris Hintz		32
H-WC-345	Jeff Kleven		33
H-WC-346	Sam Huffman		13
H-WC-347	Karl Jacobson		13

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H-WC-348	Ken Gray		13
H-WC-349	Mark Kaiser		1
H-WC-350	Steve Koretoff		60
H-WC-351	Dennis Kritzer		14
H-WC-352	Robert Jump		12,21
H-WC-353	Tim Lewis		62
H-WC-354	Adrian Montalo		32
H-WC-355	Nick Madronio		33
H-WC-356	Dianna McCoun		33
H-WC-357	Ken Nelson	CORVA	13
H-WC-358	Kelly O'Brien		73
H-WC-359	Dan Peterson	CORVA	33
H-WC-360	Kevin Pinto		NA
H-WC-361	Moises Ramirez		32
H-WC-362	Jay Sparks		NA
H-WC-363	David Schreiber		3
H-WC-364	Rudy Valdez		70
H-WC-365	Casey Vermette		13
H-WC-366	Bennet White		NA
H-WC-367	Kim Witcher		33
H-WC-368	Brian Willett		NA
H-WC-369	David Wray		1
H-WC-370	Marv Ziemer		13
H-EM-371	Larie Trippet		33
H-EM-372	Steve Thompson		33
H-EM-373	Robin Woolsey		33
H-EM-374	Patrick Waite		33
H-EM-375	Barry Wicklund		33
H-EM-376	Kirk Wheeler		33
H-EM-377	Paul Winters		33
H-EM-378	Kimberly Warner		33
H-EM-379	Josh Wilson		33
H-EM-380	Walt Koch		33
H-EM-381	Jim Colln		1
H-EM-382	Nick Madronio		33
H-EM-383	Prentice Fish		15,21,59,91
H-EM-384	Amy Conger		73
H-EM-385	John Haaker		NA
H-EM-386	Ikie Moore		33
H-EM-387	Ed Tobin		90
H-EM-388	Terrance Sisco		33
H-EM-389	Todd Carey		33
H-EM-390	Ikie Moore		33
H-EM-391	Todd Kamphaus		33
H-EM-392	Paul Sims		33
H-EM-393	Dean Welder		33
H-EM-394	Zachary Remington		33
H-EM-395	James Lewis		33
H-EM-396	Robert Kramer		33

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H-EM-397	Ross Gammill		33
H-EM-398	Johnny Cox		33
H-EM-399	T. Williams		33
H-EM-400	Bob Lakes		33
H-EM-401	Andre Rico		NA
H-EM-402	Kyle Laudner		33
H-EM-403	Chris Cameron		33
H-EM-404	Mike Peterson		33
H-EM-405	Adam Hugues		62
H-EM-406	Ray Dawson		33
H-EM-407	Peter Keresztes		33
H-EM-408	Sarah Thorvund		33
H-EM-409	Dean Waters		33
H-EM-410	Chris Darman		33
H-EM-411	Adam Thissen		33
H-EM-412	Robert Hinsch		33
H-EM-413	Harold Sprayberry		33
H-EM-414	Ken Costa		33
H-EM-415	Tyler Carmichael		33
H-EM-416	Jeff Carmichael		33
H-EM-417	Scott Atchsion & Family		33
H-EM-418	Gerry Fogel		33
H-EM-419	Stuart Erskine		33
H-EM-420	Ed West		33
H-EM-421	Jon Delagnes		33
H-EM-422	Ron Honea		33
H-EM-423	Vernon Young		33
H-EM-424	Peter Callies		21
H-EM-425	Scott Mckay		33
H-EM-426	Billy Ray		NA
H-EM-427	Roger Woodfill		32
H-EM-428	Francis Arnoult		33
H-EM-429	Caren Barker		33
H-EM-430	Jeremy Briggs		33
H-EM-431	Jenny Boakes		33
H-EM-432	Geoffrey Burton		33
H-EM-433	Jeff Clements		33
H-EM-434	James Culver		33
H-EM-435	Don Cummings		33
H-EM-436	Jim Cook		33
H-EM-437	Dan Cabral		33
H-EM-438	Kevin Cotta		33
H-EM-439	Darrell Coleman		33
H-EM-440	Nick Champion		33
H-EM-441	Jim Cyran		33
H-EM-442	Ron Davis		33
H-EM-443	Ron Daily Jr.		33
H-EM-444	Robin Down		33
H-EM-445	Ben Ellis		14

Comment Code	Commenter	Affiliation	Comment/Response
H-EM-446	Jim Fulling		33
H-EM-447	David Froman		33
H-EM-448	Philip Fulton		33
H-EM-449	Alana Gentry		33
H-EM-450	Steve Heinemann		33
H-EM-451	Eric Henry		33
H-EM-452	Charlie Hoyle		33
H-EM-453	Randy Jackson		33
H-EM-454	Dan Johnston		33
H-EM-455	Taad Janson		33
H-EM-456	Thomas James		33
H-EM-457	Tom Liddicoet		33
H-EM-458	Donald Lewis		33
H-EM-459	Jason Lulis		33
H-EM-460	Tom Keith		33
H-EM-461	Wayne Marshall		33
H-EM-462	Jess B. McKinley		33
H-EM-463	John Malcolm		33
H-EM-464	Steve Morgan		33
H-EM-465	Mike McWilliams		33
H-EM-466	Jackie Monnin		33
H-EM-467	Douglas Monnin		33
H-EM-468	Sean MacDonald		33
H-EM-469	Michael Powell		33
H-EM-470	Christine Rogers		33
H-EM-471	David Rives		33
H-EM-472	John Roberts		33
H-EM-473	Matthew Ruiz		33
H-EM-474	Pierre Reynes		33
H-EM-475	Jeff Robeson		33
H-EM-476	Tim Simmons		33
H-EM-477	Dave Smith		33
H-EM-478	Chris Sackett		33
H-EM-479	Shawn Stenmark		33
H-EM-480	Steve Simacek		33
H-EM-481	Wade Stevenson		33
H-EM-482	Ed Silva		33
H-EM-483	Peter Sakai		33
H-EM-484	Dave Schulze		33
H-EM-485	Brian Tripp		33
H-EM-486	Rebecca Turner		33
H-EM-487	Mike Tyree		33
H-EM-488	Scott Taylor		33
H-EM-489	John Velcamp		33
H-EM-490	Julie Velcamp		33
H-EM-491	Lee Woolfork		33
H-EM-492	Tim Woods		33
H-EM-493	Ted Gittings		NA
H-EM-494	Croft Long		33

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H-EM-495	Trevor Moore		33
H-EM-496	Mark Bader		33
H-EM-497	James Rushforth		33
H-EM-498	Sean Swift		33
H-EM-499	Mark Meulpolder		33
H-EM-500	Judy Lahay		33
H-EM-501	Will Carrillo		33
H-EM-502	Troy Bartle		33
H-EM-503	Donald Rhoades		33
H-EM-504	Daniel Hubbard		33
H-EM-505	Mr. Glidewell		33
H-EM-506	Jeff Herzog		33
H-EM-507	Kenneth L. Malpus		33
H-EM-508	Jason M. Colon		33
H-EM-509	Brandt T. Kennedy		33
H-EM-510	Jason Bicknell		33
H-EM-511	Kevin Marshall		33
H-EM-512	Lyle Jones		33
H-EM-513	Jon Allen		33
H-EM-514	Patrick O'Connor		33
H-EM-515	Steve Harris		33
H-EM-516	Dan O'Connell		33
H-EM-517	Elysia Ulrich		33
H-EM-518	Jerry Bunch		33
H-EM-519	Dennis J. Potter		14
H-EM-520	Michael Loer		33
H-EM-521	Robert Swegle		33
H-EM-522	John Logan		1
H-EM-523	Miguel Flores		NA
H-WC-524	Paul Brunelli		62
H-WC-525	John Gill		29
H-WC-526	Joseph Gill		NA
H-WC-527	Nicholas Haris		1
H-WC-528	Karen Folger		33
H-WC-529	Michael Damaso		33
H-WC-530	DeWayne Hiatt		33
H-WC-531	Robert Robinette		33
H-WC-532	Krista Kelly		33
H-WC-533	Maureen E. Kelly		33
H-WC-534	Clarence Machado Jr.		62
H-WC-535	Niki Menvielle		33
H-WC-536	Andy May		33
H-WC-537	Zac Shipman		13
H-WC-538	Mike Weber		14
H-WC-539	Bill Flett		13
H-WC-540	Reason Bradley		13,23
H-WC-541	Zack Cinek		1,5
H-WC-542	Earl Gann		33
H-WC-543	Brian Douglas		71

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H-WC-544	Launa Gann		33
H-WC-545	Brandi Hiatt		33
H-WC-546	Alex House		71
H-WC-547	Douglas&Elizabeth Lampman		14
H-WC-548	Gina Lubuto		NA
H-WC-549	Jack Roberts		NA
H-WC-550	Tim Stockwell		33
H-WC-551	Jeffrey Banister		33
H-WC-552	Dennis Baronie		14
H-WC-553	Danny Bawdon		NA
H-WC-554	Gary M. Benito		33
H-WC-555	Jack Beite		NA
H-WC-556	William Blocher		13
H-WC-557	Bob Bowers		12,13
H-WC-558	Bruce Brazil		NA
H-WC-559	Nolan Brown		13,73
H-WC-560	Donna Burych		35
H-WC-561	Lucas Camp		68
H-WC-562	Nick Chronis		NA
H-WC-563	Conklin Glenn		NA
H-WC-564	James Curry		1
H-WC-565	Brian Dean		60
H-WC-566	Ken Deeg		NA
H-WC-567	Thomas Dyer		NA
H-WC-568	Ben Ellis		7
H-WC-569	Joe Ferrante		NA
H-WC-570	Shan Wilcox		14
H-WC-571	Derrick & Ben McCullough		NA
H-WC-572	John Fry		NA
H-WC-573	Bill Gemula		1,2
H-WC-574	Jeff Gillis		1,7
H-WC-575	David E. Goddard		14
H-WC-576	Ben Gray		NA
H-WC-577	Larry Gurley		13
H-WC-578	Robert Hale		30,35
H-WC-579	Mugs Hammer		57,60
H-WC-580	Loren Higley		NA
H-WC-581	Demetri Jannings		NA
H-WC-582	Randy Jackson		21
H-WC-583	Benjamin Jay		1
H-WC-584	Chris Jost		32
H-WC-585	Aron Kirchem		13
H-WC-586	Brad Kohler		13
H-WC-587	Aaron Lakey		13,28
H-WC-588	Denise Larned		NA
H-WC-589	Curt Leipold		14
H-WC-590	Nathan Littrell		33
H-WC-591	David Lowi		NA

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H-WC-592	David MacDonald		71
H-WC-593	Theron Miller		15
H-WC-594	Kurt Nielsen		61
H-WC-595	Joe Palermo		NA
H-WC-596	Michael Panzica		13
H-WC-597	Nelson J. Parrish		NA
H-WC-598	Ian Porteous		NA
H-WC-599	Robert Reed		62
H-WC-600	Eddie Renshaw		62
H-WC-601	Jeanie Rizzuto		13
H-WC-602	Ronald Schetgen		14
H-WC-603	Richard Schonert		73
H-WC-604	Chris Seite	BRC	NA
H-WC-605	Glenn Sherry		NA
H-WC-606	Ilya Sone		33
H-WC-607	James Stanley		NA
H-WC-608	John Stepovich		13
H-WC-609	Jason Tannchill		13
H-WC-610	Paul Ungaro		NA
H-WC-611	Alex Wagner-Jauregg		29
H-WC-612	Jeff Wilson		NA
H-WC-613	Janet Brians		35
H-WC-614	Gene Cunningham		86
H-WC-615	Nicholas Haris		7
H-WC-616	Steven Ross		85,86
H-WC-617	Mary Ann Matthews		35
H-WC-618	Don Amador	BRC	33
H-WC-619	Ed Waldheim		33
H-WC-620	Phil Ray		88
H-WC-621	Allen Ytunalde		NA
H-WC-622	Steve Matlock		13,71
H-WC-623	Kelly Knipe		NA
H-WC-624	Kimberley Anderson		13
H-WC-625	Sam Anderson		64
H-WC-626	Van Andel		33
H-WC-627	Carl Anderson		33
H-WC-628	Richard Alonso		33
H-WC-629	Joe Andersen		33
H-WC-630	Jeff Aten		33
H-WC-631	Brandon Baldwin		33
H-WC-632	James Brindos		33
H-WC-633	Steve Christensen		7
H-WC-634	Michelle Carey		33
H-WC-635	Dean Chaney		33
H-WC-636	Robert Cyte		33
H-WC-637	Scott Denham		91
H-WC-638	Dan Duffy		33
H-WC-639	Don Dickey		33
H-WC-640	John Dangberg		33

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H-WC-641	Poul-Erik Christensen		33
H-WC-642	Joe Fratis		33
H-WC-643	Alex Florea		33
H-WC-644	Bryan Fiscalini		33
H-WC-645	John Fraser		33
H-WC-646	Ken Flores		33
H-WC-647	John Jilippi		14
H-WC-648	Miguel Flores		14,68
H-WC-649	Jason Grubb		33
H-WC-650	John Gorbet		33
H-WC-651	Tim Guinn		33
H-WC-652	Jason Gee		33
H-WC-653	John Heckaman		33
H-WC-654	Wade Hammond		NA
H-WC-655	Steve Craig		NA
H-WC-656	Gene Cunningham		NA
H-WC-657	Teresa Ford		13
H-WC-658	Al Garrahan		13
H-WC-659	Brian Garrahan		13
H-WC-660	Patrick Harrahan		13
H-WC-661	Michael Grundy		34
H-WC-662	Carlos Huerta		13
H-WC-663	Curtis Kimble		32
H-WC-664	Kevin MacDonald		NA
H-WC-665	Vanessa MacDonald		NA
H-WC-666	Andrew Martinez		13
H-WC-667	Jeffrey Shannon		NA
H-WC-668	Todd Slattery		NA
H-WC-669	Charles Stemberge		NA
H-WC-670	Jerry Stoodley		28
H-WC-671	Jim Strenfel		65
H-WC-672	Mark Stromberg		35
H-WC-673	Robert Tomlinson		13
H-WC-674	Julia Adams		NA
H-WC-675	Ora Anders		14
H-WC-676	Dale Barkhoff		32
H-WC-677	James Boardman		45
H-WC-678	Nick Alafouzios		13
H-WC-679	Daniel Allen		73
H-WC-680	John Bruzzone		7
H-WC-681	Ben Burkett	PO	26
H-WC-682	David Crosby		NA
H-WC-683	Ron Cash		1
H-WC-684	Cameron Chabre		35
H-WC-685	Richard Garisto		13,57
H-WC-686	Steve Hall		13
H-WC-687	Jay House		24
H-WC-688	Robert Jump		13
H-WC-689	Eric Krimm		76

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H-WC-690	Alex Lehr		NA
H-WC-691	Kyle Newman		NA
H-WC-692	Brian LeNeve		35
H-WC-693	Robert Leighton 11		NA
H-WC-694	Cindy Lieurance		35
H-WC-695	Christopher Mack		32
H-WC-696	Joshua Mackenroth	ORBA	APPENDIX J
H-WC-697	Kurt Marriner		NA
H-WC-698	John Moore Jr.		13
H-WC-699	John Moore		13
H-WC-700	Joseph Nufer		32
H-WC-701	Lynn Overtree		35
H-WC-702	Kent Parker		12
H-WC-703	Nelson Parrish		NA
H-WC-704	Terry Pederson		NA
H-WC-705	David Peel		21
H-WC-706	Dean Pellegrini		14
H-WC-707	Ben Porschet		14,91
H-WC-708	Eric Schellenberger		NA
H-WC-709	John Schoenfeld		62
H-WC-710	Joe Wytman		7
H-WC-711	Ed Vitoujeh		13
H-WC-712	Mark Ward		45
H-WC-713	Marty Weisler		32
H-WC-714	Dieter Wilken		35
H-WC-715	Thomas A. Hopkins	VWA	APPENDIX J
H-EM-716	Steve Johnson		60
H-EM-717	Brenda Johnson	USGS	APPENDIX J
H-EM-718	Greg Creech		33
H-EM-719	David Behlings		33
H-EM-720	Perer Doyle		33
H-EM-721	Chris Blaufas		13
H-EM-722	David House		13
H-EM-723	Dominique		13
H-EM-724	Donald Allhands		13
H-EM-725	Peter Brandt		13
H-EM-726	Jamey Bethard		13
H-EM-727	Jeffery Bethard		13
H-EM-728	Cassandra Bethard		13
H-EM-729	Phil Castro		13
H-EM-730	Stephanie Castro		13
H-EM-731	Ray Cueba		13
H-EM-732	Vanessa Cueba		13
H-EM-733	Suzette Ford		13
H-EM-734	Norm Mach		13
H-EM-735	Joe Martinez		13
H-EM-736	Lucy Martinez		13
H-EM-737	Natalie Martinez		13
H-EM-738	Michelle Ngwyen		13

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H-EM-739	Buster Peterson		13
H-EM-740	Brent Souzx		13
H-EM-741	Joe Vierra		13
H-EM-742	Terry Adams		13
H-EM-743	Richard Baker		33
H-EM-744	Matthew Buck		33
H-EM-745	Linda Brekke		33
H-EM-746	Vern Booth		33
H-EM-747	Shawn Black		33
H-EM-748	Dannnas Berchtold		33
H-EM-749	James Barnes		33
H-EM-750	Lindsey Barnes		33
H-EM-751	Bruce Cook		61
H-EM-752	Ryan Chamberlin		33
H-EM-753	Mike Cline		34
H-EM-754	Robert Cavakis		33
H-EM-755	Parker Compton		33
H-EM-756	Michael Damaso		33
H-EM-757	Janette Damaso		33
H-EM-758	Ken Deeg		79
H-EM-759	Dave Decamp		33
H-EM-760	Ron Day		33
H-EM-761	Steve Erickson		33
H-EM-762	Gregory Farris		33
H-EM-763	Todd Frias		33
H-EM-764	Michael Fuhre		33
H-EM-765	Earl Gann		33
H-EM-766	Launa Gann		33
H-EM-767	Scott Greco		33
H-EM-768	Larry Garrett		1
H-EM-769	Charles Gollaher		33
H-EM-770	Heath Gimmetstad		34
H-EM-771	Bill Garringer		NA
H-EM-772	Frank Giraffe		33
H-EM-773	Peter Hartman		33
H-EM-774	John Hlebo		33
H-EM-775	Robert Hale		35
H-EM-776	Brian Hoskin		33
H-EM-777	Brandon Henning		33
H-EM-778	Mr. & Mrs. Lester Boal		NA
H-EM-779	Chris Jost		33
H-EM-780	David Kitchen		36
H-EM-781	Brandon Keller		33
H-EM-782	Clifton Kump		33
H-EM-783	Kyle Larson		33
H-EM-784	Dale Lineaweaver		33
H-EM-785	Vince LaRocca		33
H-EM-786	John LaFountain		33
H-EM-787	Michael Pereira		7

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H-EM-788	Jim Ports		33
H-EM-789	Marcus Matthews		3,55
H-EM-790	Kevin Moore		33
H-EM-791	Kale McKenzie		33
H-EM-792	Mark Mulliner		33
H-EM-793	Peter Maguire		NA
H-EM-794	Ryan Marlett		33
H-EM-795	Tisha Matsuoka		33
H-EM-796	Roland McClung		7
H-EM-797	Butch Meyner		33
H-EM-798	Clarn Machado		13
H-EM-799	Ryan Moore		33
H-EM-800	Piotr Majewski		33
H-EM-801	Craig Jelich		14,49
H-EM-802	Bill Price		33
H-EM-803	Kenneth Neese		33
H-EM-804	Rick Nemeth		33
H-EM-805	Frank Nye		14
H-EM-806	Diana Nye		33
H-EM-807	Adam Hugues		13
H-EM-808	Steve Koretoff		13
H-EM-809	Hoss Nye		33
H-EM-810	David Nowlin		NA
H-EM-811	Brent Nichols		68
H-EM-812	Eric Pan		33
H-EM-813	Bob Piper		12,57
H-EM-814	Mike Pansky		33
H-EM-815	Randy Johnson		NA
H-EM-816	Larry Rego		33
H-EM-817	Emily Roberson	CNPS	APPENDIX J
H-EM-818	Rick Rinks		33
H-EM-819	George Smyrniotis		33
H-EM-820	Daniel Shetler		13
H-EM-821	Dan Sullivan		33
H-EM-822	Kane Silverberg		33
H-EM-823	Michael Stotler		33
H-EM-824	Greg Stefani		33
H-EM-825	Chris Saville		33
H-EM-826	Keith Serpa		33
H-EM-827	Erin Sharp		33
H-EM-828	John Sorenson		33
H-EM-829	Brad Seder		33
H-EM-830	Ian Tucker		33
H-EM-831	Steve Theroux		33
H-EM-832	Doug Teeter		33
H-EM-833	Trace Trimble		33
H-EM-834	Terry Traub		33
H-EM-835	Trevor Traub		33
H-EM-836	Tyler Traub		33

Comment Code	Commenter	Affiliation	Comment/Response
H-EM-837	Lexi Traub		33
H-EM-838	Sandra Traub		33
H-EM-839	Jason Troyer		33
H-EM-840	Billy Tidwell	SR	14
H-EM-841	Tom White		33
H-EM-842	Clyde Walther		13
H-EM-843	Oliver Weissenberger		33
H-EM-844	Anthony Weiser		33
H-EM-845	Bill Whalen		33
H-EM-846	Ron Wright Jr.		33
H-EM-847	Richard Wurzelbacher		33
H-EM-848	Ruben Zuniga		33

Table K-3; Comment Summary & Responses

#	Comment Summary	Response
Theme	PROCESS	
1	NEPA Process is not Being Followed/Need Scoping Period	A Notice of Intent to Prepare and Environmental Assessment (EA)/CCMA RMP Amendment was published in the Federal Register on April 29, 2003, and also posted on the Hollister Field Office Web Page. Based on public scoping, BLM decided to prepare an Environmental Impact Statement (EIS) to analyze the potential impacts of route designation and expansion of the San Benito Mountain Research Natural Area. A Notice of Availability for the Draft EIS was published on July 19, 2004, followed by a 120 day public review period for the Draft RMP Amendment and Draft EIS.
2	Not Enough Time Allowed to Review Draft Document	The National Environment Policy Act (NEPA) requires a 90-day public comment period for draft resource management plans (RMP) and draft environmental impact statements (EIS). In response to public comments, the comment period for the CCMA Draft RMP and Draft EIS was extended for an additional 30 days, until November 15, 2004.
3	Insufficient Notice for Public Meetings/Increase public outreach	BLM requires that all public meetings are announced 15 days prior to the event. The Hollister Field Office published a news release announcing the public meetings for the CCMA Draft Plan Amendment and DEIS in local newspapers and on the BLM website.
4	Private Land Owners Were Not Consulted	Private landowners have the right to deny or allow public access to their lands as stated on page 1-9 of the Draft EIS. Landowners have been contacted and their responses will be honored in the final designation of routes.
5	Not Consistent with the ROD/Provide ROD for Public Review	The CCMA Draft Plan Amendment and DEIS is tiered to the 1995 CCMA Plan Amendment and its associated Record of Decision (ROD) (DEIS pg 1-1). The 1999 ROD was distributed at public meetings for the CCMA DEIS in September 2004, and is included as an Appendix to the CCMA FEIS.

#	Comment Summary	Response
6	Process Has Taken too Long	Comment noted. No response necessary.
7	Request that the BLM withdraw the DRMP/DEIS and redesign it to adequately address the needs of the OHV recreating public.	In accordance with 40 CFR 1508.27, the DEIS includes a thorough analysis of the natural and physical environment and the relationship of people with that environment. In particular, Chapter 3 (pg. 3-46) describes the Affected Environment, in terms of society as a whole, the affected region, the affected interests, and the locality and intensity of the proposed action. Chapter 4 (pg. 4-51) analyzes the impacts to the human environment, including the degree to which the effects on the quality of the human environment are likely to be highly controversial, or the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. Chapters 3 and 4 of the CCMA Plan Amendment contain a thorough analysis of the supply of recreation opportunities (pg. 3-32), and the effects of other activities on the supply of recreation activities (pg. 4-37), linking user demand with available opportunities and identifying complementary roles for regional recreation suppliers (3-33 and 4-53).
Theme	TRAILS/OHV USE AREAS	
9	Maps/Miles of Trails and Land Available for OHV Use Provided by BLM are Incomplete or are Incorrect/Insufficient	The route inventory and assessment process is ongoing. This analysis considers approximately 440 miles of routes in the BLM inventory at the initiation of this analysis. Routes in excess of this would be analyzed with the same process, and could be designated open or closed in the future under this Plan Amendment.

#	Comment Summary	Response
10	Do Not Lump Public Lands with Private Lands when Calculating Trails and Available Use Areas	Private landowners have the right to deny or allow public access to their lands as stated on page 1-9 of the Draft EIS. Landowners have been contacted and their responses will be honored in the final designation of routes. BLM has no authority to designate routes across private lands. However, approximately....XX miles of routes...on private land are included in the total route network. None of the acreage figures for barrens available for OHV use include private properties.
11	Process of Designating Routes/Identifying Routes is Inadequate	The process outlined in the DEIS (Section 2.3.4) includes 11 categories of analysis used in the designation screening process, many of which were identified in the 1995 CCMA Plan Amendment.
12	Need More Trails Open/Expansion of Area	Any additional trails identified in the ongoing inventory process will be screened using the same criteria described in section 2.3.4. There are a variety of conflicting resource, recreational, and public safety issues that must be balanced during the designation process. The intent of the designation process is not to reduce or expand OHV opportunities, but to balance all relevant issues in the long term.
13	Opposed to reduction in open routes/Keep area open.	Comment noted. See previous response.
14	Please do whatever is necessary to keep Clear Creek open. (eg; Work with OHV community) to protect this world class OHV FOR FUTURE GENERATIONS	Comment noted. This process is intended to balance recreational and resource values within the area.
15	No Net Loss of Trails	Comment noted. No response necessary.
16	Keep Clear Creek for Dirt Bikers, not Hikers and Conservation	Comment noted. This process is intended to balance recreational and resource values within the area.

#	Comment Summary	Response
17	Need Fewer Routes	Routes will be designated based on an assessment of each route.
18	Trails Need be Closed Unless Marked Open	This methodology is described on page 1-12 of the Draft EIS.
19	Trails Should be Open Unless Marked Closed	Page 1-12 of the DEIS states, "It would be a formidable task to attempt to sign or physically close all routes or areas within the CCMA where OHV use would not be authorized." The remainder of the section provides a rationale of the proposed CCMA signage policy, including the BLM decision to emphasize what routes are available versus those that are unavailable, the prohibitive cost of signing all closed routes, and the fact that "the user is responsible for being aware of which routes are open for OHV use." In addition to the rationale provided in the DEIS, the proposed route signage strategy will allow visitors to become familiar with the route network and reduce the likelihood of OHV users becoming disoriented and getting lost on unmarked or unsigned routes. This type of scenario, not only has the potential to endanger lost visitors, but professional emergency personnel on search and rescue missions as well.
20	Need Transportation Routes/Route Designation from Point A to B	The designated route network will allow customary access to most parts of the CCMA, although some routes accessing specific areas would be closed to motorized vehicle access. Please see route network map in the Final EIS.
21	Do Not Close Single Track Trails	Trail type is not a criteria within the designation process described in section 2.3.4. However, BLM will work with the public to ensure a variety of trail types remain available in the area.
22	Parking Allowance Makes Trails too Wide	This decision allows parking to occur throughout the area without vehicles blocking roadways. It is expected this provision will have no appreciable effect on trail width area-wide.

#	Comment Summary	Response
23	Existing Barrens Should Remain Open/Re-Open Previously Closed Barrens	Section 2.3.5 and Appendix B of the Draft EIS describes the methodology for designating barrens.
24	Motorcycles must stay on trails so hikers can enjoy the area too	With the exception of designated open barrens, the proposed action limits all motorized vehicle use to a designated trail network and prohibits all cross-country travel.
25	Why have OR598 through OR749 not been evaluated	This was an administrative oversight and these routes are addressed in the Final EIS in Appendix A.
26	Will not allow access to, or through their parcel of land	As stated on page 2-5 of the draft EIS, BLM has no jurisdiction over routes on private land. These comments have been incorporated into the Proposed RMP Amendment and FEIS, but private landowners are responsible for posting signs to notify trespassers onto private lands.
Theme	ALTERNATIVES	
28	The best and most beneficial course is to implement the Record of Decision as it was written and signed in 1999.	The CCMA Draft RMP Amendment and Draft EIS is tiered to the 1995 CCMA Plan Amendment and its associated Record of Decision (ROD), as noted on page 1-1 of the DRMP/DEIS.
29	None of the Alternatives are Acceptable	Comment noted. No response necessary.
30	No Action Alternative is Not Acceptable	Comment noted. No response necessary.
31	The proposed Alternative is not acceptable.	Comment noted. No response necessary.
32	Supports/Will Tolerate No Action Alternative	Comment noted. No response necessary.
33	Prefers Alternative E	Comment noted. No response necessary.
34	Prefers Alternative D	Comment noted. No response necessary.
35	Prefers Alternative C	Comment noted. No response necessary.
36	Prefers Alternative B	Comment noted. No response necessary.
37	Prefers Alternative A	Comment noted. No response necessary.
38	Supports Enhanced	Comment noted. No response necessary.

#	Comment Summary	Response
	Species Protection Alternative	
39	The document must contain a "no change" option.	The "No Action" alternative, Alternative D, is described on pages 2-25 through 2-27.
40	Favor the alternative "D" Proposal for the general area. Plus the addition of Alt-A Proposal for the Natural Area.	Comment noted. No response necessary.
Theme	PROTECTION OF SENSITIVE SPECIES AND HABITAT	
42	Capacity Study Needs to be Conducted for Multiple Use	Comment noted. This process is intended to balance recreational and resource values within the area. A carrying capacity for CCMA is not within the scope of this analysis, but could be considered in the future.
43	No Additional Barrens	Comment noted. This process is intended to balance recreational and resource values within the area
44	Protect Sensitive Species and Habitats	Comment noted. This process is intended to balance recreational and resource values within the area
45	There are sensitive areas that need special attention, close off these areas, but build additional routes around the area to maintain an adequate trail system.	Comment noted. This process is intended to balance recreational and resource values within the area
46	(Additional) Plant and Species Inventories & Monitoring Need to be Conducted	Under all alternatives, additional inventories and monitoring will be conducted, pursuant to the 1995 CCMA Plan Amendment.

#	Comment Summary	Response
47	Fencing or Signs Would be Helpful to OHV Users to Avoid Sensitive Areas	Page 1-12 of the DEIS provides a rationale of the proposed CCMA signage policy, including the BLM decision to emphasize what routes are available versus those that are unavailable, the prohibitive cost of signing all closed routes, and the fact that “the user is responsible for being aware of which routes are open for OHV use.” The proposed route signage strategy will allow visitors to become familiar with the route network and reduce the likelihood of OHV users becoming disoriented and getting lost on unmarked or unsigned routes. This type of scenario, not only has the potential to endanger lost visitors, but professional emergency personnel on search and rescue missions as well.
48	Fencing Should be Limited and Closed on All Sides	Comment noted. See response above.
49	All Fencing/Signs Should be Removed	Comment noted. No response necessary.
50	No More Fencing or Signs than Currently Exists	Under all alternatives, additional fences could be installed to protect sensitive habitat, pursuant to the 1995 CCMA Plan Amendment.
51	Objection to Protections of Habitat and Sensitive Species at the Cost of OHV Trails/Areas	BLM Manual 6840.01 states, “[Special status species] are species which are proposed for listing, officially listed (T/E), or candidates for listing as threatened or endangered by the Secretary of the Interior under the provisions of the Endangered Species Act (ESA); those listed or proposed for listing by a State in a category implying potential endangerment or extinction; and those designated by each State Director as sensitive”. Page 3-22 states, “Seven different special status plant species occur within the CCMA”, which are described in detail in Appendix F of the DEIS. These plant species and their

#	Comment Summary	Response
		status are as follows: 1. San Benito Evening-primrose (<i>Camissonia benitensis</i>): Federally Threatened 2. Rayless layia (<i>Layia discoidea</i>): BLM Special Status 3. Mt. Diablo Phacelia (<i>Phacelia phaceliodes</i>): BLM Special Status 4. San Benito Fritillary (<i>Fritillaria viridea</i>): BLM Special Status 5. San Benito Spineflower (<i>Chorizanthe biloba varimmemora</i>): BLM Special Status 6. Slender pentachaeta (<i>Pentatchaeta exilis</i>): BLM Special Status 7. Talus Fritillary (<i>Fritillaria falcate</i>): BLM Special Status The species described above are also listed by the California Native Plant Society as List 1B. All of the plants that make up List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. Section 7 of the Endangered Species Act (ESA), of 1973, as amended directs Federal departments and agencies to ensure that actions authorized, funded or carried out by them are not likely to jeopardize the continued existence of any species proposed for listing as threatened or endangered, or whenever an action might result in adverse modification of critical habitat proposed for listing (50 CFR 402).

#	Comment Summary	Response
52	Concerned that appropriate decisions & activities made by BLM are consistent with <i>(those that involves land within the WRCD boundary. Specifically in activities that could have an impact on the watershed mgmt programs. CRMP's are that they would object to any activities on the San Joaquin Valley side that would conflict with their)</i> goals of preventing soil erosion & restoring the rangeland, riparian corridors or natural habitats.	The management actions outlined in the Proposed CCMA Plan Amendment and FEIS would allow BLM to establish a standard for maintenance of existing routes and trails that is consistent with the goals of the Westside Resources Conservation District. In particular, management actions outlined in the Proposed Plan Amendment include mitigation for soil erosion and a significant reduction of routes in riparian areas and stream crossings. Also, consistent with San Joaquin Valley best management practices, a majority of the routes in western Fresno County would be limited to 4-wheeled vehicles only.
Theme	MANAGEMENT OF AREA BY BLM	
54	Lack of BLM Management and/or Funds for Project Implementation	BLM requests funding annually from Congress and the California Off-Highway Vehicle Recreation Division for management of the CCMA. Budget decisions are outside the scope of this analysis.
55	Need Rider Education	A visitor contact station will be at the main entrance throughout the use season, and LE and other recreation staff will patrol throughout the area providing information to users about the route network. Information will be available on site regarding the designated route/area network. A new user map will be available upon completion of route designation.
56	Supports Rotation of Land Use in Specific Areas/ Limits on Numbers of Users and	Comments noted. No response necessary.

#	Comment Summary	Response
	Use	
57	Sport is Growing, but Less Trails Available	Comment noted. No response necessary.
58	People have the Right to Access Public Lands for Other Uses, Including Religious/Spiritual Worship	These uses are not restricted by the Proposed Action.
59	DEIS violates Americans with Disabilities Act - Right to Access Public Lands	Access is limited, but not eliminated, under the Proposed Action. The proposed action provides reasonable accommodation to disabled persons.
60	People have the Right to Recreation Areas (for motorbiking)	Management of motorized use and access is subject to laws as stated in section 2-2 of the Draft EIS.
61	Having Places like Clear Creek to enjoy OHV with friends and families is fun and constructive.	Comment noted. The Proposed Action does not eliminate OHV use within CCMA.
62	We need areas near our homes & family for recreation riding/ Great place for family recreation	Comment noted. No response necessary.
63	Will Grant Money be Reduced if Trails Reduced?	Decisions on grant funding are not within the jurisdiction of BLM.
64	Off-road users are the primary users of the trails / roads funded by their taxes & fees. Please don't say we can't get what we pay for.	The Proposed Action does not eliminate OHV use within CCMA.
65	Funds Should be Spent on Trails, not Rangers	Comment noted. Staff is needed within OHV areas to monitor sensitive areas and enforce area rules and regulations. Budget and resource allocation are not within the scope of this EIS.

#	Comment Summary	Response
66	Need More Emphasis on Quiet, Non-motorized Recreation	The Proposed Action seeks to balance motorized and non-motorized types of recreation within the area.
67	Objection to Proposed Camping Locations Due to Potential Conflicts with OHV Use	No changes in existing camping areas are being considered within the Proposed Action.
68	Find Other Solutions to Erosion/Sedimentation (Alternatives to Closing Trails)	Comment noted. Trail restoration, reroutes, and maintenance will be ongoing within the area to reduce erosion and sedimentation.
69	Erosion/Other Problems not Caused by OHV, but by Mismanagement	Comment noted. No response necessary.
70	Supports recreation/entry fee for camping facilities and/or environmental protection	Comment noted. No response necessary.
71	Many of the potential AA enduro loop trails previously used for Quicksilver National Enduro and other competitive enduro events have been redlined by the HFO. Please support the continued use of Clear Creek for organized competitive events.	Use of trails off the designated route network would be analyzed in the Environmental Assessments for these events on a case-by-case basis.
Theme	SAFETY AND ENFORCEMENT	
73	Safety Concerns for Crowded Trails	Visitor safety is a primary concern for BLM. The designated route network would continue to be monitored for user safety, and modifications made as needed to ensure visitor safety.
74	More Enforcement Needed (Safety FOR	Law Enforcement efforts will continue within the area.

#	Comment Summary	Response
	EVERYONE)	
75	More Enforcement Needed (Garbage and Dumping/ Unauthorized Trail Cutting or Use/Closed Trail Use)	Comment noted. See response above.
76	By closing the places we have will only force people to ride on lands illegally.	This analysis only pertains to lands within the Clear Creek Management Area.
77	Defend RNA boundaries	The RNA expansion and route closures within the expansion area will enable BLM to better manage the RNA as a whole.
Theme	AIR QUALITY AND HAZMAT	
79	Dangers of Asbestos are Exaggerated	Section 1.11 of the FEIS outlines current and future efforts to determine the human health risk posed by naturally occurring asbestos.
80	OHV Use of Area Exacerbates Asbestos Problems for Nearby Air Basins and Water Supply	BLM and EPA are cooperating to develop a new fact sheet that would explain and clarify the risks to asbestos exposure in the CCMA.
81	Air Particulates go Above Thresholds on Weekends	Comment noted. No response necessary.
82	Pg 3-2 Clarify sentence on "attainment" or "unclassified"... particles	Refer to Appendix J, AG-3-R.

#	Comment Summary	Response
83	Pg 3-3 Change the statement which states that PM10 emissions were within existing air quality standards to potentially exceeding State and Federal standards. Clarify statements regarding the 1998 Attainment Report.	Refer to Appendix J, AG-3-R.
84	More riders on fewer trails will lead to increased erosion/impacts	Page 4-37 of the DEIS states that "full implementation of any of the alternatives is not expected to result in any changes in the number or type or recreation user" and "visitation trends are expected to remain fairly constant with moderate yearly increases." However, page 4-38 also states that "the trails system proposed in the alternatives provide access to the majority of the CCMA that is commonly used today." Therefore, the impacts from soil loss and erosion are expected to remain fairly constant.
85	The DEIS should inform the public that any decisions made by BLM regarding uses at the CCMA may need to be evaluated further based on adverse findings from EPA's asbestos study.	Section 1.11 of the FEIS outlines current and future efforts to determine the human health risk posed by naturally occurring asbestos.
86	BLM should re-evaluate human activities based on an appropriate risk assessment. It is deceptive of BLM to continue to use the questionable and outdated risk	Section 1.11 of the FEIS outlines current and future efforts to determine the human health risk posed by naturally occurring asbestos.

#	Comment Summary	Response
	assessment number of 5 in 100,000.	
Theme	SOCIOECONOMICS	
88	Sport Brings Money to the Local Economy/ Closure would have a major impact on OHV-related businesses.	Page 3-48 of the DEIS describes the social and economic conditions in the region surrounding CCMA, and page 4-54 presents an evaluation of the impacts to social and economic conditions as required by 40 CFR 1502.22
Theme	RMP/DEIS DOCUMENT	
90	BLM should confine the scope of the document to identifying the criteria for evaluating routes, barrens, and the boundaries of the RNA.	Preliminary criteria for route designation were identified in the 1999 ROD. The scope of the FEIS has been refined to address route designation. Research Natural Area expansion, and to incorporate newly acquired public lands.
91	The DEIS does not adequately address the concerns of the public that recreates in the area.	In accordance with 40 CFR 1508.27, the DEIS includes a thorough analysis of the natural and physical environment and the relationship of people with that environment. In particular, Chapter 3 (pg. 3-46) describes the Affected Environment, in terms of society as a whole, the affected region, the affected interests, and the locality and intensity of the proposed action. Chapter 4 (pg. 4-51) analyzes the impacts to the human environment, including the degree to which the effects on the quality of the human environment are likely to be highly controversial, or the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. Chapters 3 and 4 of the CCMA Plan Amendment contain a thorough analysis of the supply of recreation opportunities (pg. 3-32), and the effects of other activities on the supply of recreation activities (pg. 4-37), linking user demand with available

#	Comment Summary	Response
		opportunities and identifying complementary roles for regional recreation suppliers (3-33 and 4-53).
92	Important Native American Areas Need to be Identified in the Document	The presence of cultural resources in CCMA is discussed on pages 3-41-3-43, and BLM has consulted with Native American interests to identify potential conflicts with route designation. Otherwise, this issue is outside the scope of this document.
93	Provide Information on how Studies and Data were Developed and Analyzed	Section 2.3.3 on page 2-5 of the DEIS provides a thorough explanation of the "Route and Barren Designation Methodology", and the results are presented in Appendices A & B.
94	State how much of the Existing Contamination was Caused by Mining Industry	Comment noted. No response necessary.
95	Specify Standards for Wet/Dry Season Closures	Section 2.3.1 on page 2-4 of the DEIS describes the Standards for the Wet Season Closure in CCMA. Based on comments made by the Environmental Protection Agency, standards for dry season closures will be developed through a separate planning process, pending the release of the EPA's final Human Health Risk Assessment from exposure to naturally occurring asbestos. Section 1.11 on page 1-10 of the FEIS outlines current and future efforts to determine the human health risk posed by naturally occurring asbestos.
96	Fencing Plan Should be Shown on Map in Plan	A fencing plan is outside the scope of this document. Installation of all fences will require site specific environmental assessments, which will be conducted upon completion of the route designation process.
97	Specify How Much of New Land is Primrose Habitat	Approximately 70 acres of acquired lands within the CCMA boundary provide habitat for the San Benito Evening-primrose (<i>Camissonia benitensis</i>).

#	Comment Summary	Response
98	Alternatives (and Document) Need to Differentiate between "Recreation" for OHV Use and "Recreation" for Hiking/Camping, etc., (Quiet Uses).	In general, the DEIS differentiates OHV use from other forms of recreation by classifying them as "motorized" or "non-motorized" recreational activities. Page 4-39 of the DEIS includes a discussion of the benefits of route designation to non-motorized recreational activities. However, management decisions related to non-motorized recreation (ie; "camping, hunting, hobby gem/mineral collection, hiking, backpacking, etc, etc." are not within the scope of this document, as noted on page 1-1 of the DEIS. The rationale for limiting the scope of this Plan Amendment is based on the 1995 CCMA Plan Amendment and its associated Record of Decision (1999), which identified the need to designate routes in CCMA to reduce impacts to water quality from soil erosion and for the protection of threatened and endangered species habitat.
99	Please explain why a new TRT (technical review team) will be formed as described in Chapter 2	The Federal Advisory Committee Act (FACA) established in 1972 as one of the "openness in government" laws was designed to counter the undue influence of special interests by balancing the membership of federal advisory committees and ensuring that committee meetings and minutes are open to the public. The central tenets of FACA require that federal advisory committees: 1. Establish a written charter that explains the mission of the committee; 2. Give timely notice of committee meetings in the Federal Register; 3. Have fair and balanced membership on the committee; 4. Open committee meetings to the public, whenever possible; 5. Have the sponsoring agency prepare minutes of committee meetings; 6. Provide public access to the information used by the committee; 7. Grant to the federal government the

#	Comment Summary	Response
		authority to convene and adjourn meetings; and 8. Terminate within two years unless the committee charter is renewed or otherwise provided for by statute. To be chartered under FACA, committees must be "established" under the authority of federal laws, by an executive agency, or by the president.

Table K-4, Legend of Acronyms & Comment Code

Source:

H - Comments received by the Hollister Field Office

PM - Speakers at public meetings

WC - Written Comments or Letters

FO - Comments received by phone

EM - Comments received by e-mail

Comment Code Format:

(Source)-(Public meeting date, *if applicable*)-(Order comment received)

Example:

The third written comment received at public meeting on September 15 = WC-15-03

The third written comment received by the Hollister Field Office = H-WC-03

Affiliation:

AFM - American Federation of Motorcyclists

AMA - American Motorcyclist Association

CERA - California Enduro Riders Association

CFW - California Four Wheel

CNPS - California Native Plant Society

COHVS - California Off-highway Vehicle Stakeholders

CORVA - California Off-Road Vehicle Association

DD - Dirt Dog Group

GR - Ghost Riders

HP - Honda Peninsula

LADB - Los Altos Dirt Bikers

MBUAPCD - Monterey Bay Unified Air Pollution Control District

LGMC - Los Gatos Motorcycle Club
PEER - Public Employees for Environmental Responsibility
PO - Adjacent Property Owner/Private Land Owner
SC - Sierra Club
SCRU - Santa Clara Riders Unlimited
SCC - Save Clear Creek
SCVGMS - Santa Clara Valley Gem and Mineral Society
SR - Salinas Ramblers Motorcycle Club
TK - Time Keepers
WRCD - Westside Resource Conservation District
VWA - Ventana Wilderness Alliance

APPENDIX L – SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

RESOURCES	Summary of Environmental Consequences of the Proposed Action
4.2 Air Quality	A 45% reduction of open routes and trails (198/440 miles), 79% reduction of open barren play areas (1833/2311 acres) would reduce emissions improving air quality conditions. All barren play areas within the San Joaquin Valley Air Basin portion of the CCMA will be closed.
4.3 Human Health	Under the proposed action, 1833 acres of barrens would be closed resulting in the contribution to overall reduction in asbestos dust generation.
4.4 Watershed Resources 4.4.1 Water Quality	Under the proposed action, the number of miles of available routes in the Larios and San Carlos watershed where the highest levels of background concentrations of hazardous metals are present would be reduced to 242 miles of unpaved roads and trails and 478 acres of barren play areas. Of the existing conditions, the proposed action includes 5.15 miles of routes within riparian areas, which is a 58% reduction from existing conditions. The 122 stream crossings in the proposed action represent a 58% reduction from the existing route inventory. The Aurora Mine site area would be completely closed between the Aurora grade and SBMRNA. Human exposure and contaminated sediment delivery would be reduced.
4.4.2 Soil Loss and Erosion	Under the proposed action, a reduction in erosion and sediment yield to streams within the CCMA and planning area would occur. 242 miles of unpaved roads and trails would be available for OHV use and the Clear Creek watershed would have 478 acres of barren play areas. 50 to 100 miles of roads and trails would be closed and restored in a 5 year period. A portion of R008 would be closed. Camping would be limited to within 40 feet of the centerline of designated open routes. Wet season closures would also be imposed. Erosion and sediment yield to streams within the CCMA would see a reduction of approximately 83% (or 11,610 tons per year).
4.5 Biological Resources 4.5.1 Vegetation Communities	The proposed action will enhance the long-term protection of the sensitive habitat and species that occur throughout the CCMA. Soil disturbing activities would be reduced on the number of miles of unpaved roads by 45% and reduce the acres of barren play areas by 79%. 50-100 miles of roads and trails would be closed and restored under the proposed action over a 5 year period. A portion of R008 could be closed to reduce impacts to sediment to the sub-watershed, riparian areas, and sensitive habitat. There is a 38% reduction of routes in proximity to CABE polygons. There is an 80% reduction in single track trails affecting these polygons. There is a 46% reduction of routes in rayless layia polygons. There is an 82% reduction of single track trails affecting these polygons.

RESOURCES	Summary of Environmental Consequences of the Proposed Action
Serpentine Barrens	The proposed action would administratively close 1833 acres, allowing an opportunity for potential restoration and biotic and abiotic monitoring. 478 acres of serpentine barrens limited to the Clear Creek watershed would be designated open. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed reducing sediment yield of 1,750 tons per year. Barrens within the Clear Creek watershed would contribute 2,390 tons of sediment per year, which is a 58% reduction in sediment yield from existing barrens in the CCMA watershed. All barrens within 1/4 mile of Clear Creek would remain closed. The remaining watersheds would see a sediment reduction of approximately 11,610 tons per year. The San Benito River, Sawmill Creek, and San Carlos Creek barrens would be closed and slated for restoration, substantially reducing impacts to resources.
Serpentine Foothill Pine-Chaparral Woodland	Under the proposed action, 2.45 miles of designated routes and trails would be designated as open in the serpentine foothill pine-chaparral woodland, which is a 21% reduction from existing conditions.
Southern Ultramafic Jeffrey Pine Forest	The San Benito Mountain Research Natural Area (SBMRNA) would be expanded to 4,147 acres to include most of the upper Clear Creek, most of the San Carlos Creek and Sawmill Creek watersheds beyond the northern and eastern perimeters of the existing SBMRNA. Open use within the forested ecosystem would be prohibited which would assist in forest regeneration and sensitive plant and animal protection. There would be a substantial reduction in motorized access in this community with the only routes authorized for OHV access being R011 (Spanish Lake Road), T158 (Sawmill Creek Road), and R013, reducing disturbance to this forest community. Overall there would be a 42% reduction of routes within this vegetation community.
Serpentine Riparian Vegetation	The proposed action would designate 6.5 miles of open trails in, through, or along riparian ecosystems, which represents a 52% reduction from the existing route inventory. This reduction should result in substantial reductions in sediment delivery and associated impacts to riparian and sensitive species habitat. There would be a significant reduction of routes affecting this vegetation community in the Larios watershed, and in particular closure of all routes in the upper east form of Larios Creek affecting rayless layia within this riparian community. There would be a reduction of approximately 350 acres of barrens for OHV use within the Clear Creek watershed, with a corresponding reduction in sediment yield of 1750 tons per year to the Clear Creek watershed.

RESOURCES	Summary of Environmental Consequences of the Proposed Action
Serpentine Vernal Pools	Since the current management situation prohibits all OHV use within the vernal pools. All known vernal pools within the CCMA are currently protected by fencing and pipe barriers to prevent disturbance by OHV recreation activities.
Serpentine Chaparral	Under the proposed action, 157 miles of routes would be designated within the serpentine chaparral. This is a reduction of 39% in this vegetation community.
Non-Serpentine Vegetation Communities	Under the proposed action, 23 miles of routes and trails have been identified for OHV use on non-serpentine vegetation types. This is a 58% reduction in the miles of routes compared to existing conditions. These routes are primarily in the Condon Peak area and a small area on the east side of the CCMA in the Cantua Creek watershed.
San Benito Evening Primrose (<i>Camissonia benitensis</i>)	Under the proposed action there are 4.04 miles (2.94 miles of county roads) of routes in proximity to potential habitat polygons for the San Benito evening-primrose. This is a reduction of 38 percent compared to existing conditions. Routes affecting this habitat are primarily lower Clear Creek Road and R015 (KCAC, paved.) which are part of the county road network. There is an 80 percent reduction in single track trails (STT) affecting these habitat polygons from existing conditions. The current status of the 42 known San Benito evening primrose populations on public lands in the CCMA would be maintained or enhanced due to fence protection, habitat improvement, and public education. Planned actions include: (1) the protection of San Benito evening primrose at 33 medium- and high-priority terrace sites; (2) the closure of nearly 2,000 acres of OHV open use areas to facilitate the protection of primrose terrace and streamside habitat and populations at the base of these closed "play areas"; and (3) the expansion of the SBMRNA would increase the number of primrose populations and acreage of habitat protected from OHV use within the SBMRNA.
4.5.6 Special Status Animal Species	The proposed action would enhance the long-term protection of the sensitive habitat and species that occur throughout the CCMA by reducing unregulated use, erosion, sediment yield, and impacts to watershed resources. The reduction of open routes and barrens, and the elimination of cross-country use will diminish habitat fragmentation, auditory disturbance, and the probability of being crushed by vehicles will be lessened through the proposed action in upland and riparian wildlife habitats. The elimination of all barrens of low hydrographic position will reduce the sediment flow into watersheds within the CCMA increasing the protection and decreasing the negative impacts to the sensitive riparian areas and animal species. There would be a reduction of barrens for OHV use within the Clear Creek watershed. All barrens within 1/4 mile of Clear Creek would remain closed. Sediment yield from routes affecting riparian habitat would be

RESOURCES	Summary of Environmental Consequences of the Proposed Action
	reduced by an average of 8,000 tons per year.
4.5.7 Invasive Weeds	Under the proposed action, the spread of invasive, non-native plants would continue. In particular, the CCMA has an existing infestation of yellow starthistle (<i>centaurea solstitiatus</i>) that is expanding in coverage. Yellow starthistle seed is transported on the undercarriage of vehicles and colonization is occurring on both serpentine and non-serpentine soils. Rare plant and animal habitat is threatened and routes and trails outside of the Serpentine ACEC are at greater risk of infestation.
4.6 Recreation Resources 4.6.1 Motorized Vehicle Access Network	The proposed action provides 197 trails comprising 242 miles of routes ranging from paved roads to single track trails. Under the proposed action, the route network includes 135 miles of single track and ATV trails (56% of routes), and 53 miles of jeep trails (22% of routes). Of the 242 miles of routes open for casual recreation use, 15 miles would be limited and the limitation would be no motorcycles. These routes are located on the southern end of the CCMA leading to Condon Peak. The remaining 227 miles of routes would be open to all motorized vehicles. Thirty-one miles of administrative use only routes would be closed to public use.
4.6.2 Barrens	The proposed action provides 478 acres of open play areas for public use in a centralized area. There would be a 79% reduction in barrens available for recreation use from the complete barren inventory (2,311 acres). Many of the barrens in the inventory are already closed (RNA, mine areas) or are on private or state land. Barrens considered for open designation would be limited to those within the Clear Creek watershed. These areas would be mapped, easily recognizable and marked.
4.6.3 Non-OHV Recreation Opportunities	The proposed action provides 197 trails comprising 242 miles of routes ranging from paved roads to single track trails. The majority of non OHV activities occur on foot (hunting, hobby gem & mineral collecting, hiking, backpacking, wildflower viewing, hang gliding, and sightseeing) throughout the CCMA and destinations are reached using major routes which would remain open. For example, several miles of routes in the Condon Peak area would remain open to 4-wheeled vehicles to provide access for traditional hunting areas. The Condon Peak hiking trail would be closed to motor vehicles and provide an improved hiking experience. Passive recreation opportunities (hiking/backpacking, wildlife watching, nature study) would be enhanced under the proposed action with areas free of motorized disturbance and user conflicts.

RESOURCES	Summary of Environmental Consequences of the Proposed Action
4.7 Cultural Resources	Route and barren designation should not adversely affect any cultural resources. Incorporating the strategies outlined in Appendices C and D will provide the tools and mechanisms for maintaining designated routes while affording cultural resource protection. As new information is gathered from archeological inventory and excavation and new ethnographic data is revealed from Native American concerns, future undertakings and projects within the CCMA would address this new data and management strategies would change if warranted.
4.8 Special Management Areas 4.8.1 Serpentine Area of Critical Concern	Expansion of the SBMRNA to include 4,147 acres would result in high quality areas nearly containing the CCMA's entire Southern Ultramafic Jeffrey Pine forest habitat. The added upland habitat would include most of the upper Clear Creek, San Carlos Creek, and Sawmill Creek watersheds, all of which support unique forest stands. The proposed action provides a high value for scientific study; this transition zone contains one of only two known populations of the Mt. Diablo phacelia within the CCMA.
San Benito Mountain Research Natural Area (SBMRNA)	The boundary would be expanded by 4,147 acres to increase protection of the existing Southern Ultramafic Jeffrey Pine forest habitat. The added upland habitat would include most of the upper Clear Creek, San Carlos Creek, and Sawmill Creek watersheds. This transition zone also contains one of only two known populations of the Mt. Diablo phacelia within the CCMA. Open use or cross-country travel within the forested ecosystem would be prohibited. R010, T154, and T155 would be closed to OHV recreation. Three of the known San Benito evening primrose populations and thirteen acres of occupied primrose terrace habitat would be protected. Three additional miles of stream bank primrose habitat along upper Clear Creek would be protected.
4.9 Socio-Economic	The proposed action would result in a decrease in the routes and areas available for OHV recreation, though it is not anticipated that this would result in a curtailment of OHV recreation related activities. The proposed action would support current user levels and visitation with slight increases. The proposed action would not likely support substantial increases in OHV recreation use over the long-term. The geographic areas most likely to have economic impacts are those currently with high numbers of employees in retail motorcycle sales, within the region. With visitor use levels remaining fairly constant or experiencing slight increases, economic impacts are not expected to negatively affect current local or regional sales and purchases of OHV equipment or related supplies. Impacts from potential implementation of the Recreation Fee Demonstration program related to visitor use fees are not expected to be significant, as fees would be comparable to those collected at other OHV recreation areas. Enduro and other Special Recreation Permit type events would continue to take place, and the associated economic

RESOURCES	Summary of Environmental Consequences of the Proposed Action
	benefits from these events would be maintained.