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

California Desert District
22835 Calle San Juan De Los Lagos
Moreno Valley, Ca 92553

May 2004

Proposed Route Designation in the Northern and Eastern Mojave Desert

An Amendment to the California Desert Conservation Area Plan 1980 and
Environmental Assessment

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United States Department of the Interior
BUREAU OF LAND MANAGEMENT

CALIFORNIA DESERT DISTRICT
22835 CALLE SAN JUAN DE LOS LAGOS
MORENO VALLEY, CA 92553

(909) 697-5200
www.ca.blm.gov

IN REPLY REFER TO:
8342 NEMP (P)
(CA-680.21)

Dear Reader:

Enclosed for your review is the Proposed Plan Amendment for the Northern and Eastern Mojave Desert Routes of Travel Designation and Environmental Assessment (NEMO Route Designation). The NEMO Route Designation will update the Bureau of Land Management 1980 California Desert Conservation Area (CDCA) Plan by incorporating into that plan a network of motorized vehicle access routes in portions of Inyo, Mono and San Bernardino Counties in the northeastern portion of the CDCA. BLM has prepared this Amendment in partial fulfillment of its responsibilities under the Federal Land Policy and Management Act of 1976, the National Environmental Policy Act of 1969, and the Federal Endangered Species Act of 1973. This NEMO Proposed Plan Amendment/EA is tiered to the previous NEMO Plan/FEIS (Record of Decision 2002). The NEMO Plan/FEIS designated routes of travel in desert tortoise habitat and established Desert Wildlife Management Areas (DWMA). This Plan Amendment designates routes of travel in the remaining planning area outside of DWMA in some Category III habitat for the desert tortoise. To gain a full management picture in the NEMO planning area, the reader is also referred to the CDCA Plan, as amended and reprinted in 1989. Through this land-use planning process, only route designations of the CDCA Plan are amended. Other aspects, such as the cultural resource, Native American, geology, energy, and mineral resources, and energy production and utility corridors elements remain unchanged except as affected and described in the NEMO Route Designation. This document includes a CDROM that contains an electronic version of the text and maps of route designations for the Proposed Action and other alternatives considered.

Any person who has participated in the plan amendment process and has an interest that is or may be adversely affected by the proposed amendment may protest such approval or amendment. A protest may raise only those issues that were submitted for the record during the planning process. Protests must be filed in writing with the BLM Director in accordance with 43 CFR 1610.5-2 and must contain the following information:

- i. The name, mailing address, telephone number and interest of the person filing the protest;
- ii. A statement of the issue or issues being protested;
- iii. A statement of the part or parts of the plan or amendment being protested;
- iv. A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
- v. A concise statement explaining why the State Director's decision is believed to be wrong.

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All protests must be received by close of business Monday, June 14, 2004. Please provide information on how to be contacted if you would like follow-up to resolve or clarify issues that may affect you. Protest should be sent to the following address:

Regular mail and Overnight mail:

Director (210) U.S. Department of the Interior
Attn: Brenda Williams Director, Bureau of Land Management
P.O. Box 66538 Protest Coordinator (WO-210)
Washington, D.C. 20035 1620 "L" Street, NW, Rm 1075
Washington, D.C. 20036

Copies of the protests should also be sent to:

Edythe M. Seehafer
Protest Coordinator, NEMO Routes Plan
Barstow Field Office
Bureau of Land Management
2601 Barstow Road
Barstow, CA 92311

Your input has been helpful in developing the Proposed Plan Amendment. After any protests are reviewed, a final decision in a Decision Record will be made in late June 2004. I want to thank you for your continued interest and participation in the Northern and Eastern Mojave Desert Routes of Travel Designation project.

Sincerely,

Linda Hansen
District Manager

Enclosures

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An Amendment to the California Desert Conservation Area Plan 1980 and
Environmental Assessment

Prepared by
Department of Interior
Bureau of Land Management
California Desert District Office

May 2004

Linda Hansen
District Manager, California Desert

Mike Pool
State Director, California

Cover Sheet

Proposed Route Designation in the Northern and Eastern Mojave Desert

**An Amendment to the California Desert Conservation Area Plan 1980 and
Environmental Assessment**

Lead Agency:	U.S. Department of the Interior Bureau of Land Management California Desert District
Project Location:	(portions of) eastern San Bernardino and Inyo Counties, and a small portion of Mono County, California
For Further Information Contact:	Harold Johnson, Project Lead Bureau of Land Management California Desert, Barstow Field Office 2601 Barstow Road Barstow, CA 92311
Abstract:	The Proposed Plan would amend the Bureau of Land Management (BLM) 1980 California Desert Conservation Area Plan to incorporate a network of motorized vehicle access routes for the area identified as the Northern and Eastern Mojave Desert. The planning area is 2.7 million acres, covering portions of BLM field offices in Needles, Barstow, and Ridgecrest. This document was produced through a coordinated process involving numerous local, state, and federal agencies and special interest groups.

EXECUTIVE SUMMARY

In 1980, the California Desert Conservation Area Plan (CDCA Plan) was adopted for the 25 million-acre California Desert Conservation Area. Since 1980, BLM has taken a number of steps to designate motorized vehicle route networks on public lands in portions of the California Desert. The BLM designated routes of travel for this planning area in 1985 and 1987. More recently, bioregional plans have amended the CDCA Plan, including the record of decision for the Northern and Eastern Mojave Desert Management Plan and Environmental Impact Statement that designated routes within desert tortoise bioregions (400,000 acres) (NEMO December, 2002). This plan amendment designates routes of travel in the remaining NEMO area (2,700,000 acres of public lands) outside of desert tortoise bioregions. The purpose of this plan amendment is to update the existing route designations to reflect (1) regulatory changes, (2) laws that have changed boundaries of the public access network managed by the Bureau of Land Management and (3) to improve the route network based on resource sensitivities and vehicle access needs in the NEMO Routes planning area. This Proposed Route Designation would amend the CDCA Plan and the Environmental Assessment presented in this report is tiered to information presented in the Proposed North and Eastern Mojave Desert Management Plan and Final Environmental Impact Statement (NEMO, July, 2002).

This Proposed Plan Amendment revises and updates designated motorized vehicle routes of travel for the Northern and Eastern Mojave Desert (NEMO) planning area. The NEMO Routes planning area covers portions of Mono County, Inyo County and San Bernardino County. A total of 1,527 miles of vehicle routes are designated under Proposed Action Alternative as open for vehicle use in the NEMO planning area. In addition to the 1,527 miles of designated open routes in the Proposed Action Alternative, there are 419 miles of county roads and 184 miles of private roads. Also, there are 749 miles of open routes in desert tortoise bioregions (DWMA) that were previously designated in the NEMO FEIS.

Route designation is a two step process: 1) designate routes of travel as open, closed or limited; and 2) amend the CDCA Plan to incorporate the resulting network of open and limited routes of travel. This Proposed Plan Amendment will designate routes of travel with up to date information and incorporates the resulting network into the CDCA Plan.

The process of developing this Plan Amendment has involved the public, interest groups, local governments, and interagency and intergovernmental consultations. A series of five public scoping meetings were held in May of 2003 to obtain user comments and recommendations regarding possible changes to the existing designated route system. Meetings to provide briefings on the process and obtain input occurred with interest groups and local government representatives during the preparation of this Plan Amendment. Using this information, four alternatives for route network revisions were developed and evaluated and the Proposed Action was determined.

BLM provides motorized vehicle access on public lands for recreational and commercial purposes and to access private property. This Plan Amendment provides for designated vehicle routes of travel to meet these needs in a manner that is compatible with cultural and natural resources. Important historic and prehistoric sites and habitat for sensitive or endangered plant and animal species are present in the area. The type and level of casual motorized vehicle access in this planning area under the Proposed Action Alternative protects sensitive resources, provides for vehicle access and creates an environment that promotes the health and safety of public land users and visitors now and in a sustainable manner for the reasonably foreseeable future.

FINDING OF NO SIGNIFICANT IMPACT

After complete review of the scoping comments, analysis of the potential impacts identified in the environmental assessment, and coordination and consultation input received from other agencies, I have determined that the environmental effects of the proposed action are not expected to significantly affect the quality of the human environment, individually or cumulatively. Therefore, an environmental impact statement is not needed. This finding is based on the following consideration of context and intensity as required by federal environmental regulations (40 CFR 1508.27).

Context

Portions of the project area falls within Category III habitat for the federal listed desert tortoise, critical habitat for the Amargosa vole and the Amargosa niterwort and Ash Meadows gumplant; as well as non-critical habitat for the southwestern willow flycatcher, the least Bell's vireo, the California Inyo towhee, and the spring-loving centauray. The discussion of significance criteria that follows applies to the intended action and is within the context of local importance. The environmental assessment and proposed plan amendment details the effects of the project and are incorporated by reference into this FONSI. None of the effects identified including direct, indirect and cumulative effects are considered to be significant, based on the lack of routes in much of the habitat, on the route closures proposed, and on consistency with the overall Desert Tortoise Recovery Strategy adopted in NEMO (2002).

Intensity

The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27.

1) Impacts may be both beneficial and adverse.

Due to the design features of the proposed plan amendment, the predictive effects would include increased habitat and habitat protection for the Amargosa niterwort, the southwestern willow flycatcher, and the least Bell's vireo compared to the current conditions. Increased protection for cultural and archeological resources is predicted as well. The Proposed Action should reduce the air emissions compared to the current conditions. The rehabilitation of routes that are designated as closed will result in less air emissions due to wind erosion, more habitat and species protection and better conservation of cultural resources. Some adverse impacts are predicted. Nevertheless, of the alternatives considered, the Proposed Action provides the best balance between the recreational use and conservation of natural resources and provides substantially fewer and less intense impacts compared to the current conditions. Details concerning the effects of the Proposed Action are included in the environmental assessment and proposed plan amendment.

2) The degree to which the selected alternative will affect public health or safety

Public health and safety were identified as an issue. The proposed plan amendment is comparable to other route designation projects that have occurred within the California Desert District. Off highway vehicle use can be a high-risk recreational activity. Some risk is a part of this activity. Locations of past accidents and other safety factors were considered in developing the alternatives and choosing the Proposed Action. BLM law enforcement and recreation staff reviewed the route network for each alternative in the NEMO project. Staff did identify one specific route as having a significant accident rate or safety concern for the public, and it was closed. BLM lands and minerals staff identified a few generally one-way facility ingress and egress routes that also were safety concerns and these were designated limited.

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wild and scenic rivers, or ecologically critical areas.

There are unique cultural and archeological sites within the project area. Nevertheless, the effects of the Proposed Action on these resources are generally positive. The Proposed Action provides for increased conservation of these areas, while allowing recreational use of the project area. There are ecologically critical areas, eligible wild and scenic rivers, wilderness study areas, wetlands and riparian areas within the project area. The Proposed Action will not significantly affect these resources. Many of these sensitive resource values already have been included within Areas of Critical Environmental Concern and had at least partial route closure to protect the sensitive resources identified within their boundaries. The Proposed Action continues and, where appropriate, increases conservation of these areas. There are no park lands, prime farm lands, and floodplains within the NEMO Routes planning area.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The effects of the proposed plan amendment on the quality of the human environment were addressed in the environmental assessment. Although there are effects that are clearly identified, strategies have also been built into the Proposed Action to greatly offset these effects. In addition, the effects for the Proposed Action are fewer and have lower intensity than the current conditions, including those for air quality, cultural and paleontological resources, and sensitive species.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The proposed plan amendment is not unique or unusual. The BLM has experience developing similar plans for routes of travel in similar areas and has found effects to be reasonably predictable. The environmental effects to the human environment were analyzed in the environmental assessment and proposed plan amendment. There are no predicted effects on the human environment, which are considered to be highly uncertain or involve unique or unknown risks.

6) 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.

The proposed plan amendment does not set a precedent for future actions that may have significant effects, nor does it represent a decision in principle about a future consideration. The proposed plan amendment establishes a designated route system needed by the BLM for resource management within the northeastern portion of the California Desert Conservation Area and maintains the existing system of primary and secondary routes, as modified herein, for the motor-vehicle using public. Any future projects that require access across public lands will be evaluated through the National Environmental Policy Act process, consistent with current laws and regulations.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The proposed plan amendment was evaluated in the context of past, present, and reasonably foreseeable actions. These cumulative effects are identified in the environmental assessment and the NEMO EIS from

which this EA tiers. Significant cumulative effects are not predicted from this proposed plan amendment, based on the modest level of overall access change that would occur as a result of the designations herein.

8) The degree to which the action may adversely affect the districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.

The proposed plan amendment will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the neither National Register of Historic Places, nor will the proposed plan amendment cause loss or destruction of known significant scientific, cultural, or historical resources. The cultural resource survey strategy and subsequent conservation strategies that are identified in the proposed plan amendment will help in the identification and conservation of currently undocumented cultural and paleontological resources on public lands.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

BLM consulted with the U. S. Fish and Wildlife Service in regards to the desert tortoise, the southwestern willow flycatcher, and the least Bell's vireo. The Proposed Action was specifically designed to conserve these species by limiting access in nesting areas, the rehabilitation of impacted areas, clear signing of routes and public education and information. In critical habitat of listed species, few or no routes currently exist and all routes that were not already designated closed, would be closed under the Proposed Action.

10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The proposed plan amendment does not violate any known federal, state, or local law or requirement imposed for the protection of the environment. The environmental assessment and supporting project record contain discussions pertaining to the Endangered Species Act, National Historic Preservation Act, Clean Water Act, Clean Air Act, and Executive Order 12898 (Environmental Justice). State, local, and tribal interests were consulted during the environmental analysis process. Furthermore, applicable land management plans, policies and programs have been reviewed for consistency.

ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ADC	Animal Damage Control
AIRFA	American Indian Religious Freedom Act of 1978
AML	Appropriate Management Level
AMP	Allotment Management Plan
AMS	Analysis of the Management Situation
APE	Area of Potential Effect
AQCR	Air Quality Control Regions
AQS	Air Quality Standard
ARMP	Approved Resource Management Plan
ATB	All Terrain Bicycle
ATV	All Terrain Vehicle
AUM	Animal Unit Month
BCB	Back Country Byway
BMP	Best Management Practices
BO	Biological Opinion
BOR	Bureau of Reclamation
BLM	Bureau of Land Management
BP	Before Present (Present is equated as 1950)
B to V	Barstow to Las Vegas Racecourse
CA.	California
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CDCA	California Desert Conservation Area
CDFG	California Department of Fish and Game
CDPA	California Desert Protection Act of 1994
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CPHI	California Points of Historic Interest
CHL	California Historic Landmarks
CHU	Critical Habitat Unit
CNDDDB/NNDDDB	California/Nevada Natural Diversity Database
CNPS	California Native Plant Society
CRBSP	Colorado River Basin Salinity Project
CRC	Colorado River Commission
CRMP	Coordinated Resource Management and Planning
DAG	Desert Access Guide
DCA	Desert Conservation Area
DCP	Desert Conservation Plan
DEIS	Draft Environmental Impact Statement
DLE	Desert Land Entry
DOD	Department of Defense

DOE	Department of Energy
DOI	Department of the Interior
DPC	Desired Plant Community
DRMP	Draft Resource Management Plan
DRP	Draft Resource Plan
DT	Desert Tortoise
DTRP	Desert Tortoise Recovery Plan, June 1994
DWMA	Desert Wildlife Management Area
DVNP	Death Valley National Park
EA	Environmental Assessment
ECC	Erosion Condition Class
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act of 1973
ESL	Endangered Species List
ESR	Erosion Susceptibility Rating
ERMA	Extensive Recreation Management Area
FCR	Field Contact Representative
FDWA	Federal Drinking Water Standards
FEIS	Final Environmental Impact Statement
FEMA	Fire Fuels Management Area
FESA	Federal Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FMIR	Fort Mojave Indian Reservation
FP	Flood Plain
FRP	Fire Rehabilitation Plan
FSA	Fire Suppression Area
FUA	Fire Use Area
FY	Fiscal Year
GAO	General Accounting Office
GEM	Geology, Energy, Minerals (Survey)
GIS	Geographic Information Systems
GMP	General Management Plan
HAZMAT	Hazardous Material
HCP	Habitat Conservation Plan
HMA	Habitat/Herd Management Area
HMAP	Herd Management Area Plan
HMP	Habitat Management Plan
I-XX	Interstate
IBLA	Internal Board of Land Appeals
ICMP	Interim Critical Management Policy
IMP	Interim Management Policy
IPP	Intermountain Power Project
ISA	Instant Study Area
LADWP	Los Angeles Department of Water and Power

LDA	Lands Disposal Areas
LURS	Land Use Requirements Study
LWCF	Land and Water Conservation Fund
MCL	Mid-Carapace Length
MDA	Mineral Disposal Areas
MFP	Management Framework Plan
Mg/l	Milligrams per liter
MMS	Mineral Management Service
MNP	Mojave National Preserve
MNSAMP	Mojave National Scenic Area Management Plan
MOA	Memorandum of Agreement
MOG	Management Oversight Group
MOU	Memorandum of Understanding
MSA	Management Situation Analysis
MUC	Multiple Use Classification
NAAQS	National Ambient Air Quality Standards
NBS	National Biological Service
NECO	Northern and Eastern Colorado Desert Planning Effort
NEMO	Northern and Eastern Mojave Planning Effort
NEPA	National Environmental Policy Act of 1969
NERC	National Ecology Research Center
NHA	Natural Hazard Area
NHPA	National Historic Preservation Act of 1966
NOI	Notice of Intent
NPS	National Park Service
NRCS	National Resources Conservation Service (Previously SCS)
NRHP	National Register of Historic Places
NRI	National Rivers Inventory
NRFTF	National Range Studies Task Force
NV	Nevada
NWR	National Wildlife Refuge
OHV	Off-Highway Vehicle
ONA	Outstanding Natural Areas
PFC	Proper Functioning Condition
PNC	Potential Natural Community
PRP	Proposed Resource Plan
PRMP/FEIS	Proposed Resource Management Plan/Final Environmental Impact Statement
PL	Public Law
RAMP	Recreation Activity/Area Management Plan
RDRA	Road Designation Restriction Areas
R&PP	Recreation and Public Purpose (Act)
RFDS	Reasonable Foreseeable Development Scenario
RFFA	Reasonably Foreseeable Future Action
RL	Recreation Lands
RMA	Recreation Management Area
RMP	Resource Management Plan

RNA	Resource Natural Area
RPP	Recreation and Public Purpose Act
RPS	Rangeland Program Summary
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Right-of-Way
RRA	Road Designation Restriction Areas
RU	Recovery Units
RZ	Riparian Zone
SCS	Soils Conservation Service (Name Changed to NRCA)
SA	Special Areas
S&G	Standards and Guidelines
SHPO	State Historic Preservation Office
SIP	State Implementation Plan (Air Quality)
SLC	State Lands Commission
SMA	Special Management Area
SMARA	Surface Mining and Reclamation Act of 1976
SR	State Route (Highway)
SRMA	Special Recreation Management Area
SSP	Special Status Plant
SSS	Special Status Species
T&E	Threatened and Endangered (Species)
TAS	Total Adjusted Sign
TCP	Traditional Cultural Property
TDS	Total Dissolved Solids
TLA	Traditional Lifeway Area
TMA	Tortoise Management Area
UPA	Unusual Plant Assemblages
URTD	Upper Respiratory Tract Disease
USMC	United States Marine Corps
US	United States
USC	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USGS	United States Geological Survey
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management
WA	Wilderness Area
WAPA	Western Area Power Administration
WH&B	Wild Horse and Burros
WHBA	Wild Horse and Burro Act
WMP	Watershed Management Plan
WSA	Wilderness Study Area
WSR	Wild and Scenic River

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Map 2-4. No Action Alternative Route Designation

NEMO Route Designations on 7.5 minute quadrangles (see list below and quadrangle location map) are on the enclosed CDROM for the Proposed Action (pa), Enhanced Recreation Opportunities and Access Alternative (eroa), Enhanced Resource Protection Alternative (erp) and No Action Alternative (na).

RIDGECREST

R1	Piper Peak
R2	Lida Wash
R3	Chocolate Mountain
R4	Last Chance
R5	Cowhorn Valley
R6	East of Waucoba Canyon
R7	Cerro Gordo Peak
R8	Jackass Canyon
R9	Keeler
R10	Lee Wash
R11	Maturango Peak
R12	Emigrant Pass
R13	Ballarat
R14	Galena Canyon
R15	Layton Springs

BARSTOW

B1	Ryan
B2	Devils Hole
B3	West of Eagle Lake
B4	Stewart Valley
B5	Sixmile Spring
B6	Salsberry Peak
B7	North of Tecopa Pass
B8	Stump Springs
B9	Green Monster Mine
B10	Avawatz Pass
B11	Silurian Lake
B12	Kingston Peak
B13	Silurian Valley
B14	Turquoise Mountain

NEEDLES

N1	Mesquite Mountain
N2	Clark Mountain
N3	Nipton
N4	Solomons Knob
N5	Mineral Hill
N6	Castle Peak
N7	East of Grotto Hills
N8	East of Homer Mountain
N9	Signal Hill
N10	Needle NW
N11	Fenner Spring
N12	Soda Lake South
N13	Glasgow
N14	East of Broadwell Lake
N15	East of Siberia
N16	Brown Buttes

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CHAPTER 1 INTRODUCTION

1.1 Purpose and Need

The purpose and need of this plan amendment is to designate routes of travel for casual use in portions of the Northern and Eastern Mojave Desert (NEMO) within the California Desert Conservation Area (CDCA). The CDCA Plan was adopted in 1980, and is being amended by several bioregional plan amendments including NEMO (2002a). The NEMO Plan designated routes of travel in Desert Wildlife Management Areas (DWMAs), but did not designated a vehicle access network outside of DWMA and surrounding desert tortoise bioregions. The Record of Decision for the NEMO Plan (December 20, 2002) required designation of the remaining vehicle access network outside of DWMA by June 30, 2004.

This Proposed Plan amendment would designate routes of travel in the areas outside of DWMA in the NEMO planning area. This Environmental Assessment is tiered to the environmental analysis in the Proposed Northern and Eastern Mojave Desert Management Plan and Final Environmental Impact Statement (BLM 2002a). Four alternatives are considered and analyzed in this amendment: the Proposed Action and three alternatives.

Route designation is a two step process: 1) designate routes of travel as open, closed or limited; and 2) amend the CDCA Plan to incorporate the resulting network of open and limited routes of travel. Routes of travel in the NEMO planning area were designated in 1985 and 1987. Since that time, there have been designations of threatened and endanger species and critical habitats and the route designation process was clarified by BLM policy. The proposed plan amendment would designate routes of travel using up to date information and incorporate the resulting network of open and limited routes of travel in the CDCA Plan, including those routes identified after the last formal route designations. In other respects, the Proposed Action would conform to the CDCA Plan, as amended, and county general plans for Inyo and San Bernardino Counties.

1.2 Planning Area

The Northern and Eastern Mojave (NEMO) planning area originally encompassed 3.3 million acres of land of which over 2.7 million acres are now public lands managed by BLM. This planning area is located in the Mojave Desert in southeastern California adjacent to Nevada. Routes of travel were already designated in Shadow, Ivanpah and Piute-Fenner Valleys and surrounding desert tortoise bioregions (about 0.4 million acres) and these routes will not be further addressed in this environmental analysis (NEMO 2002a). Congressionally designated wilderness also excludes 1 million acres of the planning area from casual motor vehicle use by the public. Therefore, this route designation project will designate routes of travel within the remaining 1.3 million acres of the public lands managed by the BLM in an area referred to in this document as the NEMO Routes planning area.

1.3 Scoping and Issues

The scoping and development of planning issues began in the summer of 1995 with a series of public scoping meetings. These meetings were followed by supplemental scoping meetings in the fall of 1998. During this process, the following major issues were identified:

- Continued Access for Recreation Opportunities
- Surprise Canyon Access & Protection of Resources
- Cumulative Changes to Public Access
- Protection of T&E Species
- Access to Private Lands and Resources and Resources for Economic and Social Needs
- T&T Access & Protection of Resources
- Effects on Eligible Wild and Scenic River Segments
- Effects of Changes to Land Ownership on Continued Public Access
- Effects on Dumont Dunes OHV Area
- Wash Route Access & Protection of Wash Resources
- Coordination with Adjacent Jurisdictions and Counties
- Preservation of RS2477 Assertion Rights

1.4 Alternatives

These issues resulted in the formulation of the four alternatives to be considered in this analysis: No Action, Enhanced Recreation Opportunities and Access, Enhanced Resource Protection, and the Proposed Action.

No Action Alternative

Under this alternative no new route designation would be undertaken and current management would continue. The previous route designations (in 1985 and 1987) would continue without change except as previously modified by the CDCA Plan Amendments, (e.g., NEMO 2002) within the planning area.

Enhanced Recreation Opportunities and Access Alternative

This alternative emphasizes road network analysis to ensure vehicle access to areas of casual user interest including various forms of recreation. Inyo, Mono and San Bernardino County recreation plans were an important consideration in this route designation process. Road network analysis included evaluations of adjacent jurisdictions, access to private lands, access for recreation, ACEC considerations, and other important sensitive resource values.

Enhanced Resource Protection Alternative

This alternative would close routes or provide limited access on routes which are identified as having conflicts between uses and sensitive resources, with exceptions for regional routes and to maintain reasonable access to private lands.

Proposed Action

The Proposed Action includes criteria of both the Enhance Recreation Opportunities and Access and Enhanced Resource Protection Alternatives and resolves conflicts through a decision tree (Appendix A) using a series of questions and the answers to those questions.

1.5 Alternatives Considered but Eliminated

A NEPA document is required to rigorously explore and objectively evaluate a reasonable range of alternatives. The range of reasonable alternatives is constrained by legal requirements and requirements to fulfill the purpose and need. Two additional alternatives were considered, but eliminated from detailed analysis.

An alternative was examined that would have opened all identified routes. This alternative was dismissed from detailed study because it was inconsistent with the designation criteria presented in 43 CFR 8342.1.

Based on public scoping comments, an alternative was considered that would allow “limited” access on all wash routes in the planning area during the fall hunting season. The alternatives carried forward for detail analysis allow for access on wash routes, on a route-by-route basis, when consistent with designation criteria presented in 43 CFR 8342.1. As a result, a spectrum of wash route alternatives is already provided for consideration.

As a result of public scoping and internal evaluation, the route of travel in Surprise Canyon is the subject of a separate EIS evaluating human access to the canyon and its suitability as a wild and scenic river. As a result of interagency coordination efforts, approximately two miles of the Furnace Creek route managed by BLM has been included in a separate ongoing analysis which was already underway for the US Forest Service portion of the route, with the US Forest Service as lead agency and BLM as a cooperator.

1.6 Planning Criteria

Planning Criteria are the rules and other factors used to form judgments about data collection, analysis, and decision making during planning. Planning criteria include all applicable federal laws, regulations, executive orders, policies, and applicable portions of existing land use plans, which the cooperating agencies are required to follow. The planning lies entirely within the California Desert Conservation Area, which was established by Congress in 1976. Some of the planning criteria, however, were specifically developed for the Routes of Travel planning effort in NEMO. These planning criteria are listed below.

The planning criteria for the Routes of Travel planning effort in NEMO include the following:

- A. Comply with applicable laws, Executive Orders, and regulations.
- B. Define the planning area as public lands within the Northern and Eastern Mojave (NEMO) planning area boundary excluding the two desert tortoise bioregions, and the study area as all lands within and immediately adjacent to the NEMO planning area.
- C. The authorized officer shall designate all public lands (including areas, and trails) as either open, limited, or closed to off road vehicles.

- D. Four criteria are identified in 43 CFR 8342.1 to consider when making area and route-specific designation decisions, including:
- a. Areas and trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;
 - b. Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats;
 - c. Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses;
 - d. Areas and trails shall not be located in officially designated wilderness areas or primitive areas, and shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which established.
- E. Applying location-specific criteria occasionally leads to the designation of an entire route as closed rather than limiting the closure to a portion of the route.
- F. Consider all proposals in the context of their consistency with standards and guidelines.
- G. Redundant routes (see definition of terms in the next section) would be given strong consideration for closure.
- H. Develop and implement actions in all alternatives to accomplish the goals and overall objectives of USFWS recovery plans for listed species, to assist in the recovery and delisting of those species as feasible.
- I. Consider strategies for threatened and endangered species management to make it easier, more efficient, and more cost-effective for public land users to obtain activity and use permits.
- J. Maximize the available public access network provided to the public outside of sensitive areas within the framework of these criteria and BLM's overarching multiple use, sustained yield framework, in light of (a) the California Desert Protection Act (CDPA), and (b) other changes to public land ownership and management patterns within the planning area that have both resulted in the elimination and additional limitations on the public access network in the planning area and regionally since the adoption of the CDCA Plan in 1980.

Definitions

The following terms and definitions pertaining to routes and their designation are used in this document.

- **Redundant route** – A redundant route is one whose purpose is seemingly identical to that of another route, inclusive of providing the same or very similar recreation opportunities or experiences. Redundant routes are given strong consideration for closing, particularly where other conflicts exist such as in Amargosa vole critical habitat, where it widens another existing route, or where invasive species have become problematic. Upon designating such a route as “closed,” the use thereby redirected to another route or routes would be in accordance with the route designation criteria in 43 CFR 8342.1.

- **Problem route** - A route, for example, that once furnished access to a point that now occurs in wilderness (a) could provide access to the boundary of that wilderness area, or (b) has become a management “problem” as motorized access into wilderness has continued and no purpose would be served in establishing a trailhead at that point. Existing access to cultural or other sensitive resources may have resulted in degradation of the resources. Problem routes are given strong consideration for closing, if the problem is established. It is not enough to anticipate a future problem if no problem is currently documented, but can identify cause and effect adjacent to sensitive areas and build a case for a problem route. To document a future problem: If this occurs, then will try that...if that fails, then route would be closed...must include specific criteria for future route closure.
- **Non-existent route** – These routes were closed in the NEMO Plan as a class. Non-existent routes are defined in the context of the NEMO Plan as routes that are no longer used and have been substantially reclaimed by the forces of nature. Some routes that are delineated on the 1979 CDCA existing route inventories and/or the most recent versions of 7.5-minute USGS maps cannot be located due to complete or near-complete natural reclamation. Non-existent routes are not included in the inventory if no evidence of them can be found. If some evidence of past use can be found, they are given strong consideration for closing unless there is an overriding need for network connectivity.
- **Partially non-existent routes** – Partially non-existent routes are (1) intermittently visible, encouraging cross-country travel at locations where surface evidence of the route disappears and/or (2) although still visible, travel upon them would require the crushing of substantial vegetation due to the degree of reclamation that has already occurred. Partially non-existent routes are given strong consideration for closing, or partial closing; depending on what other routes they may connect with.
- **Maintained road** – The CDCA Plan, as amended, defines a maintained road as “regularly or frequently maintained by continuous use (e.g., passage of vehicles) or machine maintenance.” For determining which routes the BLM will designate in the NEMO Plan, a maintained dirt road is generally one that is maintained periodically with the use of machines (e.g., motorized graders), which is a standard that can be more uniformly applied. Several maintained roads are mapped and maintained by each County. BLM also maintains some frequently traveled routes, and a few rights-of-way are privately maintained.
- **Casual use** – Casual use of public lands in the context of motorized-vehicle access is defined as the use of routes not requiring a specific authorization. Routes of travel designations are focused on this use.
- **Authorized use** – Authorized use in such context is the use of routes approved through a permitting process for specific activities (e.g., rights-of-way issued for development of communication). Authorized use may or may not be limited by the routes of travel designations. An example would be a right-of-way granted off of the routes of travel network for development of a specific communication site without existing access (e.g., to a mountaintop without roads). Reclamation of that access would be considered, and if appropriate, incorporated as part of the plan of development and right-of-way grant, upon site abandonment. The communication site proposal, including access, would undergo public review (environmental assessment or environmental impact statement).
- **Primary Transportation System** – Some roads and routes crossing public lands are considered to be part of the primary transportation system of the planning area and will not be addressed in

the route designation process. This includes federal, state, and county paved and maintained roads and major linear rights-of-way or similar authorizations. These roads and routes will be shown on the route designation maps to give an overall view of the transportation network. In addition, route designations apply only to routes and portions thereof on BLM-managed public lands. The designation of routes as “open,” “limited,” and “closed” is not applicable on private lands. Access for the use and enjoyment of private lands will be addressed on a case-by-case basis where private landowners may be adversely affected by route designation decisions. Easements across private lands will be pursued for routes that are included in the route network.

- **Wash Routes** – Washes as motorized-vehicle routes of travel are addressed in the same manner as non-wash routes, that is, they are designated “open”, “limited”, or “closed”. The designation of routes as “open”, “limited,” and “closed” is also generally applicable to both casual and authorized users of public lands. Where there is a requirement for occasional access associated with an authorized use, but it is determined that unlimited casual use may cause undesirable resource impacts, routes will be designated “closed” and available for use only by the authorized party. In such cases, the authorized use of a “closed” route usually limits this use in some manner or requires mitigation in some form. It is anticipated that BLM will make few “closed” routes available for use by authorized parties, except those within wilderness for which use is strictly defined in the California Desert Protection Act (1994).

1.7 Consistency with Bureau of Land Management Plans

The goals of the California Desert Conservation Area (CDCA) are outlined in the CDCA Plan. These goals are achieved through management and program actions and resolution of conflicts. The CDCA Plan provides overall direction through land use zoning, including four major Multiple-use Classes (MUC), and special designations for identified special-emphasis areas. The multiple-use classes are Controlled Use (C) for wilderness areas, Limited Use (L), Moderate Use (M), and Intensive Use (I). These MUC have different area designations for Routes of Travel management. Routes in MUC Controlled Use areas are Closed, while some MUC Intensive Use areas are Open (OHV Open Areas and certain dry lake beds). With the MUC Limited Use and Moderate areas, all routes of travel are designated as Open, Closed or Limited.

The CDCA Plan has special-emphasis areas including Wildlife Habitat Management Areas (WHMA and Areas of Critical Environmental Concern (ACEC). These areas may have their own plans, including route designation. Off Highway Vehicle Open Areas, Wild Horse and Burro Herd Management Areas, Cattle and Sheep Allotments were designated for further development of site-specific, focused management plans, including routes of travel management. Further Routes of Travel direction--both “programmatic” and on-the-ground allocations--is included in “plan elements” for such programs as utilities, mining, access, and recreation. The CDCA Plan is an adaptive plan that has been amended numerous times over the past twenty-four years. The NEMO Routes Plan is the latest of these amendments. The CDCA Plan, as amended by the NEMO (2002a) creates an overall framework for managing routes of travel in the planning area.

1.8 Consistency with Local, State, Tribal, and other Federal Plans

Many local, state, and federal agencies provided input or were cooperators in developing this plan amendment. These include National Park Service, the State Lands Commission which oversees most of the State lands in the planning area, the U.S. Fish and Wildlife Service, the California Department of Fish

and Game, San Bernardino County, Inyo County, Mono County, and local communities. Fort Mojave, Chemehuevi, and Timbisha tribal councils have been consulted in the planning process. Other agencies have also been involved to varying extent, and were provided copies of the document. A list of these entities was included in Chapter 5. BLM is the lead agency and has coordinated the Proposed Plan development with all these agencies at various levels as required for consistency with plans and/or formal consultation. Plan decisions address only public lands under the jurisdiction of BLM.

BLM has also reviewed other route designation decisions identified in related plans as well as with the purpose and need as stated in the CDCA Plan. These include the following related planning efforts:

- Northern and Eastern Colorado Plan (NECO)
- West Mojave Route Designation Plan
- Las Vegas Resource Management Plan (LVRMP)
- Mojave National Preserve (MNP)
- Death Valley National Park (DVNP)

1.9 Policy

Subsequent to the 1985/1987 route designations, substantial changes have occurred in the study area including:

- Listing of the desert tortoise as a federally threatened species, designation of its critical habitat and development of the recovery plan. The majority of the effect from this change on the Routes of Travel network was addressed in the NEMO Plan (2002).
- California Desert Protection Act of 1994, which (1) established wilderness on BLM and National Park Service lands (2) established wilderness study areas on BLM managed lands that may lead to establishment of additional wilderness, (3) established Death Valley National Park with parklands on lands previously under BLM jurisdiction. Motorized vehicle use is prohibited in wilderness areas.
- Designation of critical habitat in the planning area for a federally threatened Ash Meadows gumplant and federally endangered Amargosa niterwort. Some of the effect from this change on the Routes of Travel network was addressed in the NEMO Plan (2002).
- Increased use of routes of travel in planning area due to CDCA closures outside the NEMO Planning Area and population growth in adjacent urban areas.
- Additional surveys and expansion of the known habitat of the federally threatened Inyo California towhee to include parts of the planning area; and critical habitat designation for Inyo California towhee to include a small portion of the planning area. The majority of the effect from this change on the Routes of Travel network is addressed in the West Mojave Plan (underway, Draft Plan Amendment and DEIS released in 2004).
- Congressional legislation that transfers approximately 50,000 acres of the planning area to the Fort Irwin National Training Center. This area is no longer part of the casual Routes of Travel network managed by the BLM and some of the area is Wilderness Study Area (WSA). The fate of the evaluation of and decision on WSA lands adjacent to the transfer area is uncertain at this time.

1.10 Goals

The specific goals of this Plan Amendment are to:

- Designate Routes of Travel in the planning area consistent with 43 CFR 8342.1 and the CDCA Plan;
- Implement route designations that conserve and recover threatened and endangered (T&E) species as well as species that may be considered for listing in the reasonably foreseeable future;
- Maintain and enhance the overall route network in the planning area.

CHAPTER 2 ALTERNATIVES

This chapter describes the Proposed Action and alternatives considered to fulfill the purpose and need for designation of vehicle access within the NEMO Routes planning area. This chapter presents and discusses the Proposed Action and alternatives considered. Alternatives considered but eliminated from detailed study are described in Chapter 1.

The approved decision will ultimately amend the CDCA Plan related to general public access by means of motor vehicles in the NEMO Routes planning area. Routes of travel in critical desert tortoise habitat were previously designated in the NEMO Plan Amendment Record of Decision (BLM 2002b)

2.1 Route Designation

Three key concepts are critical to understanding route designations, the alternatives, and the scope of a decision: 1) the definitions of Open, Closed and Limited routes, 2) casual use versus authorized use, and 3) access rights.

2.1.1 Definitions

Routes of travel included roads, ways, trails, and accessible desert washes. Route designation definitions for “open”, “closed”, and “limited” routes were established in the CDCA Plan. The definitions are shown here to help the reader.

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.

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:

- number of vehicles allowed
- types of vehicles allowed
- time or season of vehicle use
- permitted or licensed vehicle use only
- establishment of speed limits

2.1.2 Casual versus Authorized Use

Casual use of public and national park lands in the context of motorized-vehicle access is defined as the use of routes not requiring a specific authorization. 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 requiring a recreation permit). The designation of routes as “open”, “limited”, and “closed” is generally applicable to both casual and authorized users of public lands. Where there is a requirement for occasional access associated with an authorized use and it is determined that unlimited casual use may cause undesirable resource impacts, routes would be designated “closed” and available for use only by the authorized party. In such circumstances, the authorized use of a “closed” route usually limits this use in some manner or requires mitigation in some form. Only a few routes would be in this group of “for use only by authorized parties”. Access for the use and enjoyment of private lands would be addressed on a case-by-case basis where private landowners are adversely affected by route designation decisions and upon the occasion of receiving an application for right of access.

2.1.3 Access Rights and Mineral Development

The decisions will not affect any right of access that may be determined to exist to private lands, including any Revised Statute 2477 right-of-way. As noted above 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, the array of alternatives does not address general or specific rights of access over federal lands. However, it is intended that this document 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 plan amendment and EA also 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.

A decision on this Plan Amendment will also not alter such mineral rights or the intent of Congress regarding access and other rights and mineral development. In addition, this EA would not satisfy NEPA compliance requirements for access associated with a mining plan of operation or other large-scale operation involving the use of specialized commercial or industrial equipment, road reconstruction, etc.

2.2 General Scope of Route Designation

Some roads and routes crossing public lands are considered to be part of the primary transportation system of the planning area and will not be addressed in the route designation process. This includes federal, state, and county paved and maintained roads. These roads and routes will be shown on the route designation maps to give an overall view of the transportation network. Major linear rights-of-way or similar authorizations are included in the route designations to indicate where they may also provide casual access to the public, and likewise, where routes may be designated as “limited” to rights-of-way holders to access facilities. In addition, route designations apply only to routes and portions thereof on BLM-managed public lands. The designation of routes as “open,” “limited,” and “closed” is not applicable on private lands. Access for the use and enjoyment of private lands will be addressed on a case-by-case basis where private landowners may be adversely affected by route designation decisions, as needed. Easements across private lands will be pursued for routes that are included in the route

network, as needed. Washes as motorized-vehicle routes of travel are addressed in the same manner as non-wash routes, that is, they are designated “open”, “limited”, or “closed”.

The Record of Decision (2002b) for the Approved NEMO Plan Amendment to the CDCA Plan designated routes of travel in Desert Tortoise Bioregions, including the newly designated Desert Wildlife Management Areas (DWMA). This current Plan Amendment would designate routes of travel in remaining areas outside of DWMA. Surprise Canyon Road and Furnace Creek Road will be analyzed and designated in separate planning efforts.

Table 2-1 presents a breakdown of the 3,039 total miles of routes of travel in the Northern and Eastern Mojave Desert Area (NEMO) for lands managed by BLM including county and private roads. This total includes 419 miles of county road, 184 miles of private roads and 749 miles of roads previously designated in Desert Tortoise habitat by the NEMO Plan (2002b). In this planning effort, 1,519 miles of routes are evaluated in the No Action Alternative. The other Alternatives include route designations on this 1,519 miles of routes and an additional 168 miles of routes identified that were not part of the 1985-1987 route designations.

Table 2-1. Routes of Travel Network on Public Lands Managed by BLM in the NEMO Area

Route Type	Miles
County Road	419
Private Road	184
BLM Managed Lands	
Public Lands	1,519
Previously Designated in Desert Tortoise Habitat	749
Routes not Designated in 1985-1987	168
Total	3,039

2.3 Designing the Alternatives

The alternatives below provide decision makers with a range of realistic and distinct options to fulfill the purpose and need and alternative visions expressed in Chapter 1. Alternatives were developed based on:

- public scoping of issues identified in Chapter 1,
- a collaborative process involving major stakeholder agencies and the BLM Desert Advisory Council, and
- routes of travel designation regulations 43 CFR 8342.1 and Executive Orders 11644 and 11989
- the specific changing conditions that have arisen since the last route designation process

Designations for each alternative were developed through a two step process. The first step for the No Action Alternative was the original designation, if determined, for a route. For all other alternatives the first step was the processing of a route through the 43 CFR 8342.1 criteria. If as a result of that first step, a clear designation was made, it would go through the second step to provide a rationale only. If no clear decision was made on the basis of the first phase, each alternative sent the routes through the second phase to determine route decisions. For the No Action Alternative, the second phase is inclusion of later decisions, as described below under the alternative description. For other alternatives, decision trees are utilized (See Appendix A).

Following describes formulation of four alternatives: **No Action, Enhanced Recreation Opportunities and Access, Enhanced Resource Protection**, and the **Proposed Action**. A discussion of aspects that are common to all alternatives is described first. These descriptions highlight differences and similarities.

2.3.1 Common to all Action Alternatives

Designation of motorized vehicle access on routes or into areas in general is a requirement of Executive Orders 11644 and 11989, and such designation requires compliance with other laws and regulations for management of off-road vehicle use on federal lands. The regulatory guidance for vehicle route designation on public land managed by the Bureau is contained in 43 Code of Federal Regulations (CFR) 8342.1 (See Chapter 1.6 D for the four criteria). The legal and regulatory requirements for vehicle route designation are reflected in the CDCA Plan.

Four criteria are identified in 43 CFR 8342.1 to consider when making area and route-specific designation decisions, including:

- a) Areas and trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;
- b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats;
- c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses;
- d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas, and shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which established.

Two Congressional actions have modified the planning area boundaries for routes of travel designations. The 1994 California Desert Protection Act (CDPA) and the Fort Irwin National Training Center Expansion have excluded large areas of the Northern and Eastern Mojave planning area that previously included portions of the casual use network. Taken together, the BLM-managed routes of travel network under review has been decreased from over 2.3 million acres to under 1.3 million acres. None of this area is anticipated to be available for casual motorized public use (see cumulative impacts analysis at the end of Chapter 4 for further discussion).

The alternatives will be described in this section and analyzed in Chapter 4 in the following order:

1. Proposed Action (PA)
2. Enhanced Recreation Opportunities and Access (EROA)
3. Enhanced Environmental Protection (ERP)
4. No Action (NA)

2.3.2 Proposed Action

The Proposed Action uses criteria of both the Enhanced Recreation Opportunities and Access (EROA) and Enhanced Resource Protection (ERP) Alternatives. The Proposed action resolves conflicts that arise through application of the criteria through a decision tree approach using questions and answers to those questions. Various questions are asked, depending on the conflicts identified for each route. This decision tree approach is explained in Appendix A. Five starting questions are utilized, depending on where routes are located and what validated conflicts may exist. These five questions pertain to: 1) Private land access; 2) threatened and endangered species, listed or eligible properties on the National Register of Historic Places, and ACEC values; 3) regional access; 4) other sensitive resource values; and 5) (If no conflicts, start here...) recreational opportunities and network connectivity. This information is integrated to provide information for BLM decision-makers to use to determine which routes should be open, closed or limited in the Proposed Action.

BLM recognizes specific access requirements granted through formal authorization processes, such as rights-of-way, and the value of a motorized recreation-touring network. BLM also recognizes that the requirements of both generally are reflected in the existence of current roads, whether paved and/or maintained dirt. This alternative analyzes the road network including evaluations of adjacent jurisdictions, access to private lands, access for various types of recreation, ACEC considerations, and route redundancy and associated indirect impacts, depending upon location and offsetting route values.

Additional biological parameters to minimize harassment of wildlife and significant disruption of wildlife habitats are included in this alternative and are listed under the Enhanced Resources Protection Alternative. The Proposed Action also includes careful consideration of closing washes, based on whether they provide major through access in an area, access a major recreational site, and based on current and projected future use levels and associated impacts to sensitive areas; and careful consideration of habitat fragment size, based on current and projected future use levels and associated impacts to sensitive areas. This alternative also considered opening routes in washes where there was a need for access that was not being provided for by other routes. This alternative has a goal of no net increases of miles of open wash routes in the planning area.

The network of open and limited routes available for use by motorized vehicle is shown on Map 2-1. Routes of travel that would be closed are also shown on Map 2-1. There are a total of 1,527 miles (90.5%) of open routes, which includes 143 miles of new routes not designated in 1985 or 1987. There is an additional 32 miles (2%) of limited routes in this alternative. This alternative results in closure of 128 miles of routes (7.5%). Appendix A lists each route of travel, and indicates its status as open, closed or limited and rationale for limiting or closing the route of travel.

2.3.3 Enhanced Recreational Opportunities and Access Alternative

In addition to the application of 43 CFR 8342.1 criteria for all action alternatives, this alternative emphasizes road network analysis to ensure vehicle access to areas of casual user interest including various forms of recreation such as rock-hounding, bird watching, trail riding, extreme 4-wheel driving, horseback riding, camping, backpacking, mountain-bike riding, hunting, wildlife observation, scenic vistas, etc.. Inyo, Mono and San Bernardino County recreation plans were an important consideration in this route designation process. Road network analysis included evaluations of adjacent jurisdictions, access to private lands, recreation access, ACEC considerations, and route redundancy.

The network of open and limited routes available for use by motorized vehicle is shown on Map 2-2. Routes of travel that would be closed are also shown on Map 2-2. There are a total of 1,661 miles (98.5%) of open routes, which includes 164 miles of the new routes not designated in 1985 or 1987, and 9 miles (<1%) of limited routes in this alternative. This alternative would close 17 miles of routes (1%). Appendix A lists each route of travel, and indicates its status as open, closed or limited.

2.3.4 Enhanced Environmental Protection Alternative

The Enhanced Environmental Protection alternative tended to close routes or provide limited access on more routes which are identified as having conflicts or potential conflicts between uses and sensitive resources. In addition to the application of 43 CFR 8342.1 criteria for all alternatives, this alternative included the following criteria:

- 1 Strongly consider closure or seasonal limitations for routes within ¼ mile of significant (e.g., maternal; listed species) bat roosts, as feasible.
- 2 Strongly consider closure or reroute of routes within ¼ mile of prairie falcon and golden eagle aeries (i.e., cliff nests).
- 3 Strongly consider closure, reroute, and/or conversion to hiking trail for routes within ¼ mile of significant natural and or artificial water source (e.g. springs, seeps, streams, guzzlers).
- 4 All motorized trails are closed in designated wilderness.
- 5 Motorized routes designated open or limited in natural areas (e.g., Areas for Critical Environmental Concern) must not adversely affect natural, esthetic, scenic, or other values for which the areas were established.
- 6 Consider closing or seasonally limiting washes, including navigable washes, in sensitive areas (e.g., special areas). Consider opening navigable washes outside of special areas.
- 7 Strongly consider closure, seasonal limitation, or upgrade for routes with significant erosion and degradation potential.
- 8 Strongly consider closure or reroute of routes within ¼ mile of a significant sacred site or cultural resource that may be impacted or lost.
- 9 Additional criteria for special areas (ACEC) to protect site-specific resources therein including:
 - a. Strongly consider closure of routes with potential impact to federally listed plants;
 - b. Two routes (6 miles) that were closed under the NEMO Plan (2002b) to protect Amargosa niterwort populations would remain closed;
 - c. Strongly consider not identifying any new motorized routes as open within ¼ mile of the high water mark of the Amargosa River; and
 - d. Strongly consider closure of routes impacted by federally listed Amargosa vole.

This alternative would also close routes that BLM found to be non-existent or intermittently visible, i.e., those where vehicle use would require the crushing of substantial vegetation, or those no longer used and substantially reclaimed by natural forces, even if such routes are shown on authoritative maps (e.g., the most recent USGS 7.5-minute quadrangle maps), unless they are regional network routes or provide unique recreational values.

The network of open and limited routes available for use by motorized vehicle is shown on Map 2-3. The primary and secondary access routes are also identified. Routes of Travel that would be closed are also shown on Map 2-3. There is a total of 1,485 miles (88.0%) of open routes, which includes 135 miles of the new routes not designated in 1985 or 1987, and 28 miles (1.7%) of limited routes in this alternative. This alternative would close 174 miles of routes (10.3%). Appendix A lists each route of travel, and indicates its status as open, closed or limited.

2.3.5 No Action Alternative

This alternative continues current management and defines the management and environmental affects baseline to compare with the other alternatives. The previous route designations (in 1985 and 1987) would continue without change except as previously modified by the CDCA Plan Amendments, (e.g., NEMO 2002b) within the planning area. The NEMO Plan (BLM 2002a) updated the CDCA Plan for three routes that were previously closed by Federal Register Notice in Carson Slough for protection of Amargosa niterwort, consistent with 43 CFR 8342.1.

The existing designated route network, as shown on Map 2-4, would remain for the No Action Alternative. There are 1,509 miles of open routes in the designated route network in the No Action Alternative and 10 miles of routes that have already been closed since the 1985-1987 route designations. None of the 168 miles of newly identified routes are in the No Action alternative, although some of these routes may be designated open at some future time. Therefore, the total network is 89.4% of the existing route inventory designated in the other alternatives. As such, this alternative does not fully meet the purpose and need outlined in the first paragraph of Chapter 1.

2.3.6 Comparison of Alternatives

Table 2-2 presents a summary comparison of the mileage of Open, Closed and Limited routes for the four alternatives considered in the present planning effort.

Table 2-2. Miles of Open, Limited and Closed Routes by Alternative for the Present Planning Effort

Route Designation	Alternative			
	Proposed Action	Enhanced Recreation Opportunities & Access	Enhanced Resource Protection	No Action
Total Open	1,527	1,661	1,485	1,509
New Design. Open Routes included in above	143	164	135	case-by-case
Limited	32	9	28	0
Closed	128	17	174	10
Total	1,687	1,687	1,687	1,519

2.4 Implementation of Route Designation Decisions

- Routes comprising the access network within the NEMO Routes planning area would be individually signed to signify their availability for use. Signing strategies may vary to reflect site-specific needs.
- Information kiosks depicting the basic recreational access network would be installed at key locations throughout the NEMO Routes planning area. These kiosks would furnish information relating to access opportunities and limitations, resource protection, and visitor safety.
- Maps, brochures, etc. depicting the basic recreational access network would be developed and distributed to the public. Information would be similar to that on the kiosks, but would be more comprehensive as space allows.
- Certain segments of the open route network would be nominated for inclusion by the California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division (OHMVRD) as part of the California Back Country Discovery Trail (CBDT), an element of the California Statewide Motorized Trail System. The CBDT is a system of existing motorized routes that when formally designated would offer long distinct backcountry touring opportunities from Mexico to Oregon and throughout the state of California. Utilizing an OHVMRD grant, the BLM California Desert District commissioned a study that identified a proposed system of routes for inclusion as part of the CBDT. That proposed system of routes would be included as a component of the CDCA Plan through additional signing and brochures after the public has had an opportunity to review the proposed CBDT maps at local BLM offices and provide feedback. Currently, the NEMO Planning area includes portions of four of the seven proposed California Back Country Discovery Trail (CBDT) routes. These are CBDT Routes 5, 6, 7, and 9. Together they offer a comprehensive look at the California Desert, its resources and its history.
- Routes designated “closed” within desert tortoise route sub-regions would be appropriately signed, barricaded, or rehabilitated to exclude access, and allow recovery, except where limited use is needed to achieve management objectives (e.g., maintenance of small game guzzlers to support wildlife populations). In such cases, access would be controlled to exclude casual use by the general public, yet allow administrative use. In other sub-regions, closure strategies would be appropriate to specific area goals and would be addressed at the time of specific route designations, by sub-region.

2.5 Summary of Impacts of Alternatives

Table 2-3 summarizes the impacts of the alternatives considered.

BLM CDD
NEMO-Proposed Route Designation -Plan Amendment and EA

Table 2-3. Summary of Impacts by Alternative

Resource	Alternative			
	1. Proposed Action	2. Enhance Recreation Opportunities and Access	3. Enhanced Resources Protection	4. No Action
Air Quality	Result in reduction of PM ₁₀ emissions over time as 129 miles of closed routes are rehabilitated.	Result in slight reduction in PM ₁₀ emissions over time as 17 miles of closed routes are rehabilitated.	Result in reduction in PM ₁₀ emissions over time as 175 miles of closed routes are rehabilitated.	Result in slight reduction in PM ₁₀ emissions over time as 10 miles of closed routes are rehabilitated
Vegetation	Slight increase (178 acres) in vegetation biomass for region as routes are rehabilitated	Minimal Change	Slight increase (255 acres) in vegetation biomass for region as routes are rehabilitated	No change
Noxious Weeds	Reduce introduction and spread of noxious weeds on closed routes and surrounding area	Minimal Change	Similar to Alternative 1	No change
Riparian and Wetland Vegetation	Little adverse impact to riparian and wetland vegetation. Closure of routes in vicinity of Denning Spring, Badwater and Amargosa River. Limited route on Valley View allotment.	Moderate impact to riparian and wetland vegetation	Similar to Alternative 1 with additional closures at Mexican Spring and Carson Slough (benefiting habitat for Amargosa niterwort)	Similar to Alternative 2
Wash Vegetation	Closure of a few sensitive wash routes, some impact to wash vegetation	Moderate impact to wash vegetation	Closure of most wash routes reduces impact to vegetation and minimizes introduction of invasive plant species	Similar to Alternative 2
Wildlife	Wildlife would benefit from the closure of routes that impact wildlife behavior (i.e. feeding, breeding, nesting, watering sites, migration corridors)	Potential for habitat fragmentation if routes have moderate to high use	Similar to Alternative 1	Similar to Alternative 2
Amargosa Vole	No routes in Amargosa vole habitat	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1

Resource	Alternative			
	1. Proposed Action	2. Enhance Recreation Opportunities and Access	3. Enhanced Resources Protection	4. No Action
Least Bell's Vireo	Potential benefit from reduced human disturbance and therefore increased likelihood of future nesting	No open routes in Amargosa ACEC forage area for Least Bell's Vireo	Same as Alternative 1	Same as Alternative 2
Southwestern Willow Flycatcher	Level of disturbance below threshold to effect nesting	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Inyo California Towhee	No routes in habitat (springs) in the Argus Range. Some routes leading to springs are barricaded	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Desert Tortoise	Action area is in low-density desert tortoise habitat (Category III). Previous NEMO Plan (2002b) designated routes in Category I and II habitat. Route closures provide some benefit to desert tortoise habitat.	Action area is in low-density desert tortoise habitat (Category III). Previous NEMO (2002b) designated routes in Category I and II habitat. Increased potential for adverse impacts due to modification of habitat	Similar as Alternative 1 with more route closures	Similar as Alternative 2, but fewer route closures
Black toad	No routes cross the wetland area around Deep Springs Lake where black toads have been observed. Open routes traverse riparian habitat (near Antelope Spring) which may be habitat for Black Toad	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Swainson's Hawk	Two nesting pairs near Fish Valley Lake. Route F0036 closure decreases human disturbance in the nest vicinity and benefits Swainson's Hawk.	Route F0036 to remain open	Same as Alternative 1	Same as Alternative 2

Resource	Alternative			
	1. Proposed Action	2. Enhance Recreation Opportunities and Access	3. Enhanced Resources Protection	4. No Action
Bats and Myotis	Routes to active mines and claims remain open and maternity roosts to be mitigated with bat grates across mine openings.	Same as Alternative 1	Closure of a few routes in Silurian Hills, an area of high concentration of bat maternity roosts since evaluation of mine adits will not precede designations.	Same as Alternative 1
Bighorn Sheep	Pleasant Canyon route in Panamint Mountains to remain open for access to Death Valley National Park	Same as Alternative 1	Same as Alternative 1, except for closure of Kingston Wash in Bighorn Sheep habitat	Same as Alternative 1
Western Burrowing Owl	Western burrowing owls in Panamint and Fish Lake Valleys have tolerated the current levels of occasional vehicle access for many years.	Same as Alternative 1	Closure of Route F0036 in Fish Lake Valley enhances protection of Western burrowing owls	Same as Alternative 1
Le Conte's Thrasher	Panamint Mountain range may be habitat for Le Conte's thrasher. No change in route designation in this area	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Mojave Fringe-toed Lizard	Close a portion of Route D1612 near the lizard's habitat at Dumont Dunes	Same as Alternative 1, also due to route instability	Same as Alternative 1	No action to close Route D1612
Cultural Resources	Closure of routes would enhance the preservation of cultural resources along these routes	No substantial change from existing conditions	Similar to Alternative 1 with more route closures	Minimal Route Closure
Soils	Soil impacts would be decreased on 3 routes closed due to erosion potential and re-vegetation would eventually improve soil stability on all closed routes.	No substantial change from existing conditions	The same as Alternative 1, with greater decreases in soil erosion due to increased closures.	Minimal Route Closure

NEMO-Proposed Route Designation -Plan Amendment and EA

Resource	Alternative			
	1. Proposed Action	2. Enhance Recreation Opportunities and Access	3. Enhanced Resources Protection	4. No Action
Water	Locally moderate impacts to Amargosa River and Salt Creek	Moderate impacts to Amargosa River and Salt Creek	Low impacts to Amargosa River and Salt Creek	Same as Alternative 2
Watershed	Low impact on Eureka-Saline Valleys, Upper Amargosa, Ivanpah – Pahrump Valleys and Death Valley – Central and Lower Amargosa watersheds	Slightly higher impact on these watersheds and higher impact on Upper Amargosa	Same as Alternative 1	Same as Alternative 2
Lands and Reality	No Impact	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Livestock grazing	No Impact	Same as Alternative 1	Closure of duplicate routes that access springs	Same as Alternative 1
Minerals	No substantial direct or indirect impacts to access to minerals or mineral development	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Prospecting and Staking Claims	Route closures make prospecting in affected areas less likely.	No Impact	Similar to Alternative 1, but with more route closures	Same as Alternative 2
Nonrenewable Energy	No substantial impacts to oil and gas, geothermal, or uranium/thorium development	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
Recreation	A variety of areas and types of routes are available to meet the needs of recreational users. 129 miles of routes are closed or limited.	Closes or limits 17 miles of routes with minimal impact on recreation use.	Closes or limits 175 miles of routes leaving 1,486 miles of routes available for recreation access	Closes less than 10 miles of routes with minimal impact on recreation use.
Vehicle Access	The route network meets the public motor vehicle access, touring and transportation needs; 1,528 miles of open routes available for use.	Enhanced access with a total of 1,663 miles of open available for use.	Provides for 1,486 miles of open routes, but further limits network access in a few areas.	Provides access on 1,511 miles of open routes

Resource	Alternative			
	1. Proposed Action	2. Enhance Recreation Opportunities and Access	3. Enhanced Resources Protection	4. No Action
ACEC	Enhance the conservation of resources within the Areas of Critical Environmental Concern (ACEC) by closing routes through Carson Slough, Denning Spring and some routes in Upper Amargosa	Designates 2 routes open in Amargosa niterwort habitat. The impacts of casual use of the routes in Carson Slough are minor. One is an existing route that is seldom used and does not connect to the network. The other is primarily used by a mining company and does provide a connector to the network and to Nevada. Some potential for introduction of invasive species exists from the casual use of these routes.	Closure of Routes to Carson Slough ACEC, Willow Wash, Denning Spring and several closures in Upper Amargosa protect ACEC from direct and indirect impacts associated with open routes.	One route is open in Amargosa niterwort habitat. The impacts of casual use of the routes in Carson Slough are minor. The route is already permitted for use by a mining company provides a connector both to Stateline Road and to Nevada. Some potential for introduction of invasive species exists from the casual use of these routes.
California Back Country Discovery Trail	The routes for the CA Backcountry Discovery Trail or alternative CBDT routes are designated open and available to maintain the continuity of the backcountry touring system for portions of 4 trails in the planning area.	Same as Alternative 1	Most of the routes for the CA Backcountry Discovery Trail or alternative CBDT routes are designated open and available to maintain the continuity of the backcountry touring system for portions of 4 trails in the planning area.	Same as Alternative 1
Wild and Scenic Rivers	One route adjacent to Sperry Wash would be closed and result in minor watershed benefits to the Amargosa River. The little used Cottonwood creek 4-wheel drive route would remain open.	Same as Alternative 1	Similar to Alternative 1, except for closure of Cottonwood wash	No route closure adjacent to Sperry Wash with minimal impact to Amargosa Wild and Scenic River Segment

Resource	Alternative			
	1. Proposed Action	2. Enhance Recreation Opportunities and Access	3. Enhanced Resources Protection	4. No Action
Socio-economics	Meets the need of access to the Northern and Eastern Mojave by residents and visitors for transportation, work, visiting, and recreation for the reasonably foreseeable future. Small increases in the cost of doing business in some more remote areas.	Similar to Alternative 1, but the cost of doing business is reduced in some areas	Similar to Alternative 1, but the cost of doing business is increased in some areas	No change from present conditions

CHAPTER 3

AFFECTED ENVIRONMENT

This section describes the affected environment of the BLM-administered public lands within the Northern and Eastern Mojave (NEMO) Routes planning area as it relates to the NEMO Routes of Travel project. A complete description of the resources can be found in the CDCA Plan and EIS, as well as the Proposed NEMO Plan and Final EIS (2002a), both of which are incorporated by reference (40 CFR 1502.21). The existing management situation for the planning area is summarized in Appendix K of the NEMO Final EIS (July 2002). A separate more detailed, existing management situation for the desert tortoise and the resource values and uses of its habitat in the NEMO planning area was prepared in April, 1998, (Foreman 1998) and is available for review at local BLM offices in Needles, Barstow, and Moreno Valley, California.

The NEMO Routes planning area is a large and diverse region in southeastern California¹ characterized by several north-south trending, parallel mountain ranges separated by narrow valleys in the north and by wide valleys in the south. The planning area is considered to contain parts of primarily the Mojave Desert, with a small portion of the Great Basin Desert. BLM-managed public lands in the planning area consist of three distinct and geographically separated regions.

The northernmost area of public lands includes those lands north and west of Death Valley National Park, and north of the Fort Irwin National Training Center. This area is the westernmost extent of the Great Basin mountain ranges and their valleys, including the Panamint Range, the Inyo Mountains, and the Argus Range. The mountain ranges are moderately to very steep, and the higher elevations tend to get more rain than Death Valley to the east. Although overall annual precipitation levels are still within the desert range, short-term flood flows are not unusual.

The central area of public lands includes those lands east and south of Death Valley National Park, between Nevada on the east and State Route 247 on the west, extending south to the peaks of the Kingston Range in a line approximately parallel to and about a mile south of the Inyo/San Bernardino County line. This is the Amargosa watershed, a complex of mountain ranges feeding into the Amargosa River and its tributaries to provide a desert oasis for wildlife and humans since prehistoric times. This area provides the first trails and settlements of men and women from the eastern United States seeking ranching and farming opportunities in Southern California.

The southern area of public lands includes those lands from the Kingston and Mesquite Range on the north, between Nevada on the east, and six miles east of Baker or the Mojave National Preserve on the west to highway I-40 on the south. In this area the valleys and mountains become more gently rolling; elevation rises gently upward from the Baker sink on the west to the Halloran Summit and then tapers down somewhat to the Nevada border. This is a country of wider open spaces, more and larger dry lakebeds, and somewhat more consistent, but still very low rainfall that generally results in good spring and fall vegetation growth. This is desert tortoise habitat. Primary land uses are grazing, mining, major transportation, and utility corridors. Within this southern area, routes have already been designated for routes within desert tortoise Areas of Critical Environmental Concern (Desert Wildlife Management Areas), and routes immediately adjacent within the NEMO Plan.

¹ The planning area also includes a very small portion of land in Nevada that is entirely within the Death Valley National Park (DVNP), which is described and analyzed in a separate planning document specific to DVNP.

The discussion of the affected environment is organized into the following sections: Resources, Uses, Special Designations and Regional Socioeconomic Considerations.

3.2 Resources

The resources in the affected environment are discussed in alphabetical order.

3.2.1 Air Quality

The Northern and Eastern Mojave planning area is located in two different air basins. These are the Great Basin Valley Air Basin and the Mojave Desert Air Basin. The Great Basin Valley Air Basin includes all of Inyo County. The Mojave Desert Air Basin is subdivided into the desert portions of San Bernardino County and Owens Valley.

Air quality throughout the Northern and Eastern Mojave planning area is generally fair, but large portions of the area are in non-attainment of the Clean Air Act based on infrequently exceeding the State and/or national ozone standard and the 24-hour standard for PM₁₀. The non-attainment areas do not meet air quality standards because of local generation of and/or long distance transportation of pollution to the area. Definitions used to determine whether an area meets air quality standards for health are found in the Federal Clean Air Act as Amended (1990), and associated national ambient air quality standards. There is also concern for visibility-reducing particles and PM₁₀ precursor emissions, including oxides of nitrogen (NO_x), oxides of sulfur (SO_x) and reactive organic gases (ROG) in most of Southern California, including the Northern and Eastern Mojave planning area.

Ozone Pollution

The only major contributing source of ozone in the planning area is motor vehicle emissions, but these emissions alone would not exceed federal ozone standards. Much of the ozone pollution in the desert has been transported from the Los Angeles air basin to the southwest and the San Joaquin Valley air basin to the northwest. National standards do not allow for subtraction of transported ozone in determining attainment/non-attainment status. State standards allow for the subtraction of transported ozone in determining attainment/non-attainment areas. However, state standards are more restrictive than federal standards that do not allow for transport as a factor. As a result, all of the planning area outside of Inyo County is in non-attainment of the California ozone standards, and the southern and western portions of the San Bernardino County areas are in "serious" non-attainment of the federal ozone standard.

PM₁₀ Pollution

Suspended particulate matter, PM₁₀, is the air pollutant of most concern in the Northern and Eastern Mojave Routes planning area. The EPA classified the San Bernardino County desert as a PM₁₀ non-attainment area on January 20, 1994. The State Implementation Plan was prepared and is under review.

PM₁₀ emissions are comprised of particulate material less than 10 microns in diameter. PM₁₀ is a mixture of substances including elemental carbon, lead and nickel, compounds such as nitrates, organics and sulfates and complex mixtures such as diesel exhaust and soil. Ambient PM₁₀ in the air comes from direct and precursor emission sources. Direct emissions are PM₁₀ particles emitted directly from the source.

Many PM₁₀ precursors are emitted as gases and form into particles in the atmosphere downwind from the source.

One of the reasons for the concern with PM₁₀ emissions is their adverse effect on human health. Particles below 2.5 microns in size are termed fine particles (sometimes listed as PM_{2.5}), and those from 2.5 to 10 microns in size are coarse particles. All of the PM₁₀ particles can be inhaled, and tend to deposit in the air sacs of the lungs. The fine particles are generated primarily from precursor emissions, and many are toxic or carcinogenic. Fugitive dust mostly consists of coarse particles that are not as likely to contain toxic materials.

PM₁₀ in the atmosphere can be caused by natural factors and human activities. In the planning area, human activities primarily contribute to direct PM₁₀ emissions through fugitive dust generation. These human activities include construction, excavation and demolition, off-highway vehicle (OHV) travel, wind action on unpaved roads and other denuded areas such as parking lots, dust from moving vehicles associated with unpaved and paved roads, OHV open areas and military activities, and in a few cases, industrial activities.

National PM₁₀ standards are considered to be a level at which the whole population would have health effects from PM₁₀. State standards are considered public health goals, and have been set at a level where the elderly, the very young and those with other respiratory illnesses would be affected. Nearly all of the NEMO Routes planning area has recorded concentrations of PM₁₀ in excess of the national and state ambient air quality standards for PM₁₀ emissions. EPA has classified two areas in the planning area as federal non-attainment areas. They are the Owens Valley PM₁₀ planning area, classified as “serious”, and the general San Bernardino County area, classified as “moderate”.

All federal actions within air quality district areas that have been designated as “moderate”, such as San Bernardino County, must make a determination of federal conformity. Then reasonably available control measures (RACM) are implemented for activities/sources, including existing sources, unless their effect on PM₁₀ emissions is insignificant (below de minimus levels). The Owens Valley PM₁₀ State Implementation Plan area includes portions of the Northern and Eastern Mojave Routes planning area east of Darwin. The primary source of PM₁₀ emissions in this area is wind erosion dust from Owens Dry Lake. The objective of the PM₁₀ plan is to reduce Owens Lake emissions and work through the permit process for any new possible emission sources.

Visibility Reducing Particles (VRP)

The planning area is currently unclassified for visibility reducing particles under both national and state ambient air standards, and many VRP are transported from outside the planning area. Reduced atmospheric visibility results mainly from suspended particles. Particles between 0.1 and 1.5 microns diameter are the most effective in reducing visibility. This range of particle sizes is a subset of the fine PM₁₀ particles. Soot particles in particular are effective in reducing visibility. Small nitrate and sulfate particles may also substantially reduce visibility. Nitrogen dioxide and water droplets can reduce visibility. Many of the VRP form in the atmosphere downwind from sources of emissions.

3.2.2 Biological Resources - Vegetation

Most of the vegetation of the planning area can be classified within creosote bush/white bursage, creosote bush scrub, mixed saltbush, Joshua tree, blackbrush, and Mojave yucca vegetation series. Fremont cottonwood, mixed willow, black willow, and water birch series do not cover large areas, but the structure

and variety of plants and the variety of animals found in these series make them a significant resource to maintain. As general references to vegetation sections of this Chapter, please refer to the CDCA Plan, (USBLM 1980), Hickman (1993), and the California Native Plant Society (2001).

The NEMO Routes planning area contains a number of Unusual Plant Assemblages (UPA) designated in the CDCA Plan for emphasis in the environmental review process and for special monitoring attention. The Proposed Action is consistent with protection and enhancement of UPA; all riparian systems in the (CDCA) are classified as UPA. UPA are stands of vegetation within the CDCA that can be recognized as extraordinary due to factors such as wildlife value, unusual ages, size, unusually high cover or density, or disjunction from main centers of distribution. By definition, vegetation associated with water, such as seeps, springs, or riparian areas are examples of this type of association. UPA in areas affected by the planning effort include Salt and Brackish Marsh (near Carson Slough), and Riparian and River Bottomland along the Amargosa River and in the Inyo Mountains and Panamint Range.

Special Status Plants

Two federally listed plant species, the endangered Amargosa niterwort (*Nitrophilia mohavensis*) and the threatened Ash Meadows gumplant (*Grindelia fraxino-pratensis*), are known to occur on BLM lands in the planning area. Critical habitat has been designated for both species in the Carson Slough area. The two critical habitat units are separated by a 1.2 mile-wide stretch of public lands, and both units, as well as the area between these units, are suspected to support the federally listed threatened spring-loving centaury (*Centaureum namaphilum*). In addition, two other state-listed plant species and 23 BLM California sensitive plant species occur or potentially occur in the NEMO planning area. See Appendix I of the NEMO Proposed Northern and Eastern Mojave Desert Management Plan and FEIS (BLM 2002a) for a complete list of the special status plant species.

The Clark Range, Kingston Range and Mesquite Mountain, as well as the Amargosa River Basin and Lower Carson Slough are focal areas for a number of special status plants. Additionally, several High Sierran-influenced canyons and peaks in the Inyo and Panamint Mountains, notably Pleasant and Wildrose Canyons in the latter range, and around the Cerro Gordo Peak area, in the former mountain range, contain an unusually high number of special status plants (Sawyer and Keeler-Wolf 1995). For further information contact John Willoughby, State Botanist for BLM 2800 Cottage Way Room W-1834, Sacramento, CA.

The Multiple Use Class Moderate (MUC M) designated area at the south end of the Inyo Mountains contains several special status plant species, including: Inyo hulsea (*Hulsea vestita* ssp *inyoensis*) and Jaeger's caulostramina (*Caulostramina jaegeri*). Additionally, the Panamint Mountains lupine (*Lupinus magnificus* var. *magnificus*) is known from a MUC M area in the Panamint Mountains. Other special status plant species are thought to occur in this area as well.

Riparian-Wetland Vegetation

Riparian communities occur near desert springs and along flowing streams and are of special interest. Under the CDCA Plan, all riparian areas in the planning area are designated as Unusual Plant Assemblages (UPA), which are to be given special consideration in management decisions.

The amount of scientific data and history of BLM-managed wetland habitats varies greatly by location. The best information available on wetland habitats for this EA is Functioning Condition Assessment data (See Appendix J, NEMO Plan July 2002). There are three categories of functioning condition: 1) proper

functioning, 2) functioning-at-risk, and 3) non-functional. Detailed definitions of these categories are available in BLM's Technical References 1737-9 (USBLM 1993) and 1737-11 (USBLM 1994).

Many of the desert spring riparian areas within the NEMO Routes planning area have been rated as non-functional or functioning-at-risk, primarily resulting from water diversion, weed establishment, vehicle use, mining, burro use or livestock grazing (Refer to Appendix J). Many riparian riverine segments have similarly been rated as functioning-at-risk due to upstream water use, groundwater overdraft and/or exotic plant establishment (Tamarisk/saltcedar or *Tamarix ramosissima*).

A number of weeds are of concern in the planning area. Mustards and thistles are present and take advantage of favorable weather conditions. Tree of heaven (*Ailanthus altissima*) and African rue (*Peganum harmala*) are known to occur in a few sites, and probably elsewhere. Depending weather conditions, filaree (*Erodium cicutarium*), red brome (*Bromus rubens*), and Mediterranean split grass (*Schismus barbatus*) can be found throughout the planning area in varying densities. Black locust (*Robinia pseudoacacia*) and honey locust (*Gleditsia triacanthos*) infest spring-fed riparian areas in the same manner as tree of heaven, greatly impacting critical riparian areas, and replace native vegetation. Both are known to occur at many old mining sites. Halogeton (*Halogeton glomeratus*) infests a small area on either side of Interstate 15 several miles east of the rest stop in Shadow Valley and it appears not to be spreading. Tamarisk (salt cedar - *T. ramosissima*) is of great concern because it easily spreads in riparian or wetland areas and if not treated with prescribed burning, mechanical methods, or herbicides, it will eventually be the only vegetation to occupy the site. Athel tree (*Tamarix aphylla*) is not considered an invasive species, but can cause problems at spring sites due to the tremendous amount of water it absorbs and transpires. This has been a problem at several sensitive fish habitats. Other than tamarisk, most weed control efforts have been limited in general because weeds take advantage of wetter years and native plants appear to have the advantage during drier years.

3.2.3 Biological Resources - Wildlife

A complex combination of soil types, topography, vegetative communities and climatic conditions found in the planning area supports numerous wildlife habitats and many endemic (i.e., found only here) animal species. The area is well known for its species diversity, particularly reptiles, neotropical migratory birds, small mammals and aquatic insects. Major wildlife habitats or special habitat features, in addition to the plant communities listed previously, include: sand dunes, rocky outcrops, talus slopes, cliffs, mineshafts, adits, streams, and spring pools.

Over 35 reptile species are known to occur within planning area, with representative species including the western whiptail lizard (*Cnemidophorus tigris*), zebra-tailed lizard (*Callisaurus draconoides*), side-blotched lizard (*Uta stansburiana*), desert iguana (*Dipsosaurus dorsalis*), chuckwalla (*Sauromalus obesus*), sidewinder rattlesnake (*Crotalus cerastes*) and speckled rattlesnake (*Crotalus mitchelli*). Seven amphibian species are also known to inhabit some of the springs, streams and moist areas found in the planning area. These include the Inyo Mountains' slender salamander (*Batrachoseps campi*), red-spotted toad (*Bufo punctatus*), western toad (*Bufo boreas*), Great Basin spadefoot toad (*Scaphiopus intermontanus*), Pacific tree frog (*Hyla regilla*), leopard frog (*Rana pipiens*) and bullfrog (*Rana catesbeiana*). However, the latter species is an introduced, non-native species. The presence of an eighth species, the Amargosa Toad (*Bufo boreas nelsoni*) is also suspected.

The varied habitats which occur also support over 150 avian species, most of which are classified as neotropical migratory birds. Some habitats support both nesting and migratory use, whereas others, particularly riparian areas, support extensive migratory use.

Horned lark (*Eremophila alpestris*), greater roadrunner (*Geococcyx californianus*), Le Contes thrasher (*Toxostoma lecontei*), black-throated sparrow (*Amphispiza bilineata*) and common raven (*Corvus corax*) are known to occur throughout the planning area, particularly in creosote bush (*Larrea tridentata*) scrub, and Joshua tree (*Yucca brevifolia*) plant communities. Phainopepla (*Phainopepla nitens*), yellow warbler (*Dendroica petechia*), verdin (*Auriparus flaviceps*) and Gambel's quail (*Callipepla gambelii*) are common to mesquite bosque forests (*Prosopis* spp.) in the region; whereas northern flicker (*Colaptes auratus*), blue grosbeak (*Guiraca caerulea*), ladder-backed woodpecker (*Picoides scalaris*), ash-throated flycatcher (*Myiarchus cinerascens*) and western kingbird (*Tyrannus verticalis*) frequent willow (*Salix* spp.) and cottonwood (*Populus fremontii*) dominated riparian areas.

Bewick's wren (*Thryomanes bewickii*), blue-gray gnatcatcher (*Polioptila caerulea*) and long-eared owl (*Asio otus*) are also known from wash habitats that support heavy shrub cover, whereas Say's phoebe (*Sayornis saya*), rock wren (*Salpinctes obsoletus*) and canyon wren (*Catherpes mexicanus*) are common in to less vegetated canyons. Foothill areas supporting pinyon (*Pinus monophylla*) and juniper (*Juniperus* spp.) stands support birds such as bushtit (*Psaltiriparus minimus*), yellow-rumped warbler (*Dendroica coronata*), scrub jay (*Aphelocoma coerulescens*) and pinyon jay (*Gymnorhinus cyanocephalus*). In forested mountains, the white-breasted nuthatch (*Sitta pygmaea*), mountain chickadee (*Parus gambeli*), Townsend's solitaire (*Myadestes townsendi*) and great horned owl (*Bubo virginianus*) are known to occur. Raptors with large territories, such as prairie falcon (*Falco mexicanus*) and golden eagle (*Aquila chrysaetos*), can range over all these habitats, but suitable nesting sites are usually limited to cliff and canyon areas.

Numerous small mammals also exist in the planning area. Representative species include canyon, cactus and deer mice (*Peromyscus* spp.), Botta's pocket gopher (*Thomomys bottae*), antelope ground squirrel (*Ammospermophilus leucurus*) and round-tailed ground squirrel (*Spermophilus tereticaudus*), kangaroo rats (*Dipodomys* spp.), pocket mice (*Perognathus* spp.), black-tailed hare (*Lepus californicus*), as well as desert cottontail (*Sylvilagus audubonii*). Large mammals common to the region include badger (*Taxidea taxus*), ringtail (*Bassariscus astutus*), kit fox (*Vulpes macrotis*), bobcat (*Felis rufus*), coyote (*Canis latrans*), mountain lion (*Felis concolor*) and mule deer (*Odocoileus hemionus*).

Special Status Animals

State and federally listed animals found on public lands in the planning area include the following:

- State and federally threatened desert tortoise (*Gopherus agassizii*);
- State and federally endangered Amargosa vole (*Microtus californicus scirpensis*);
- State and federally endangered least bells vireo (*Vireo bellii pusillus*);
- State and federally endangered southwestern willow flycatcher (*Empidonax trailli extimus*);
- State endangered and federally threatened Inyo California towhee (*Pipilo crissalis eremophila*);
- State endangered western yellow-billed cuckoo (*Coccyzus americanus occidentalis*);
- State threatened Mohave ground squirrel (*Spermophilus mohavensis*); and
- State threatened Swainson's hawk (*Buteo swainsoni*).

Several BLM-designated sensitive wildlife species also occur within the planning area. Sensitive wildlife species are generally associated with specialized habitats, such as desert bighorn sheep (*Ovis canadensis nelsoni*) in their preferred mountainous terrain; mineshaft, cliff and rock crevice-dwelling animals (eight bat species) and their extensive habitat in the planning area; western burrowing owl (*Athene cunicularia*).

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hypugea) and mixed Mojave woody scrublands or creosote bush scrublands; Amargosa River and tributary riparian-obligate species, such as the Amargosa pupfish (*Cyprinodon nevadensis amargosae*) and the Amargosa speckled dace (*Rhinichthys osculus amargosae*); the Mojave fringe-toed lizard (*Uma scoparia*), and its limited sand dune habitat; Gila monster (*Heloderma suspectum*), and its patchy succulent scrub-canyon habitat, and the endemic Shoshone cave whip-scorpion (*Trithyreus shoshonensis*) and its unique subterranean habitat. The sources of water at Antelope Springs and Deep Springs Lake (actually a group of springs- see discussion under “water”), which are on private land are known to be inhabited by the black toad; whether black toads use the downstream habitat on adjacent BLM lands is not known.

See Appendix I of the NEMO Proposed Plan and FEIS (July 2002) for a complete description of listed, sensitive and special concern species occurring within the NEMO Routes planning area. A complete list of known species which occur within the planning area is found in the California Desert Conservation Area Plan, Final Environmental Impact Statement and Proposed Plan, Appendix IX: Wildlife and Appendix X: Vegetation (USBLM 1980).

The remainder of the discussion of biological resources focuses on specific listed or sensitive species affected by one or more alternatives. Some of the NEMO route closure or limitation proposals are specifically aimed at addressing the needs of rare or declining species.

Desert Tortoise

The desert tortoise is found throughout arid lands of the southwest United States in Arizona, California, Nevada, Utah and northern Mexico. The species has two distinct populations, referred to as the Mojave and Sonoran populations, effectively separated by the Colorado River.

Data from a variety of sources indicate that there are at least six ecologically significant units of the desert tortoise within the Mojave region. These units (hereafter referred to as Recovery Units) consist of populations or groups of populations that show significant differences in genetics, morphology, ecology, or behavior. The four Recovery Units occurring in the CDCA include the Western Mojave, Eastern Mojave, Northern Colorado Desert, and Eastern Colorado Desert Recovery Units. The Eastern Mojave Recovery Unit, addressed in the NEMO plan amendments, lies east of Death Valley and extends in the north from the Nevada border southward to Interstate Highway I-40. The small portion of the Northeastern Mojave Recovery Unit in Ivanpah Valley is included in the Eastern Mojave Recovery Unit in this document.

Desert tortoises spend much of their lives in burrows, emerging to feed and mate during late winter and early spring. They typically remain active through the spring, and sometimes emerge again after summer storms. During these activity periods, desert tortoises eat a wide variety of herbaceous vegetation, particularly grasses and the flowers of annual plants (Luckenbach 1982). Eggs and young are quite vulnerable to predation due to their small size and soft shells. Adults, however, are well protected against most predators other than humans and other environmental hazards and consequently are long-lived. (Germano 1992, Turner et al. 1987).

In adverse conditions the desert tortoise retreats to burrows or caves, at which time they reduce their metabolism and loss of water and consume very little food. Adult desert tortoises lose water at such a slow rate that they can survive for more than a year without access to free water of any kind (USFWS 1994a, p. 18). Desert tortoises apparently tolerate large imbalances in their water and energy budgets (Nagy and Medica 1986). This ability enables them to survive lean years and exploit resources that are only periodically available. During years of average, or better than average precipitation and forage

production, desert tortoises can balance their water budgets and have a positive energy balance, providing opportunity for growth and reproduction (Nagy and Medica 1986).

Habitat requirements include sufficient suitable plants for forage and cover, and suitable substrates for burrow and nest sites. Throughout most of the Mojave region, desert tortoises occur primarily on flats and bajadas with soils ranging from sand to sandy gravel, characterized by scattered shrubs and abundant intershrub space for the growth of herbaceous plants. Desert tortoises are also found on rocky terrain and slopes in parts of the Mojave region (USFWS 1994a, p.15).

It is estimated that many desert tortoise populations have declined at rates ranging between 3 and 59 % per year (Berry 1990, as amended). These declines have been attributed to direct take by humans (e.g., collection for pets or food, shooting, killing and injuring with motor vehicles). Habitat loss, degradation, and fragmentation due to roads, agriculture, residential development, military training, diseases and recent drought are other decline factors (Sievers et al. 1988, Luckenbach 1982, Coombs 1977a and b, Appendix D). Populations in areas with a high incidence of known human-caused mortality exhibit the greatest declines (USFWS 1994a, p.3). In the Planning area, declines up to 90% have been recorded at the Goffs permanent study plot in Fenner Valley (K.H. Berry, USGS, desert tortoise researcher, pers. comms. 2000-2002.).

In 1989, the Fish and Wildlife Service listed the desert tortoise – Mojave population - as an endangered species on an emergency basis (USFWS 1989). The Mojave population was subsequently listed as threatened on April 2, 1990 (USFWS 1990).

Critical habitat essential to achieve recovery was identified by USFWS in 1994. Portions of the Ivanpah Critical Habitat Unit and Piute-El Dorado Critical Habitat Unit occur in the planning area (Fig. 6a). BLM has designated tortoise habitat categories. Category I habitat within the Planning Unit occurs in Shadow Valley, Ivanpah Valley, and the Piute and Fenner Valleys (Fig 6a). BLM's goal for Category I desert tortoise habitat is to maintain a viable population of tortoises. All other tortoise habitat in the planning area (e.g., Pahrump Valley) is BLM Category III desert tortoise habitat. The management goal is to mitigate impacts to the extent possible.

There is a large body of literature analyzing the threats to desert tortoise populations. Table 1 in the Desert Tortoise (Mojave Population) Recovery Plan lists many of the references up to 1994 on the direct and indirect effects of human activities, off-highway vehicles, and livestock grazing on tortoises and tortoise habitat (USFWS 1994, p. 5). Boarman (1999) reviewed the literature on threats to the desert tortoise.

Amargosa Vole

Critical habitat for the Amargosa vole, a small rodent, has been designated (Federal Register Volume 49, No. 222, 1984) and includes approximately 2,440 acres of public land. Located along the Amargosa River between the towns of Shoshone and Tecopa, California, critical habitat primarily encompasses lands in the Grimshaw Lake Natural Area ACEC vicinity and immediately south. Additional suitable riparian habitat for the vole occurs on public and private lands located to the south in the Amargosa Canyon Natural Area ACEC, and to the north as far upstream as the town of Shoshone. The public and private lands between the two existing ACEC form a critical link protecting the species.

North Mojave Desert Bats

The planning area supports at least nine different bat species, eight of which are designated as California BLM sensitive species (Appendix I) of NEMO (2002a). Bats use both natural features, such as rock crevices, rocky outcrops, cliffs, caves, desert washes and riparian and human-created habitat features, such as historic mine-workings, mineshafts, adits and abandoned buildings. The Amargosa River and its tributaries (China Ranch Wash, Salt Creek, and Willow Creek), together with the Kingston Mountain-Silurian Hills-Kingston Wash area, represent a bat concentration zone in the planning area.

The Silurian Hills is a semi-mountainous region located in Silurian Valley. It is bounded on the west by a flat plain, Silurian Dry Lake and Salt Creek. On the east are the Shadow Mountains and a flat plain. On the north, it is bordered by Kingston Wash and Valjean Dunes; and on the south, by the Hollow Hills Wilderness. Public lands in this area total approximately 7,400 acres, with a scattering of private lands located immediately to the south. Mining occurs on some of the private parcels. Numerous cliff faces and crevice slopes are common in the Silurian Hills. Mine shafts and adits are also numerous, and at least four bat species are known to use these shafts and adits as roosting, hibernation or maternity sites. Additional bat species are suspected to use the area as well.

Habitats crucial for a wide variety of desert bat species surround Silurian Hills, i.e., desert washes, springs, desert riparian areas, sand dunes, crevice slopes, wide plains and mountains. The Kingston Wash is thought to be a major bat foraging area and flight corridor into the Kingston Mountains. The Salt Creek Hills and riparian area are both a major bat foraging and roosting area, and are suspected to serve as a crucial flight travel corridor into the Avawatz Mountains, where numerous spring foraging and roosting sites occur. This same corridor is also important for bat species that use the Ibex Dunes and Dumont Dunes.

Inyo Mountains Slender Salamander

Amphibians are rare in the desert as they depend on pools and streams for reproduction. The Inyo Mountains slender salamander (*Batrachoseps campii*) is an uncommon species known only from several canyons on the west and east slopes of the Inyo Mountains. They are associated with permanent springs or seepage, primarily below the pinyon-juniper belt, where they reside under rocks on moist soil in shaded, steep-walled canyons. Giuliano (1976) found the Inyo Mountains slender salamander in a majority of the canyons on the east slope of the Inyo Mountains, including Hunter and Craig Canyons and Willow Creek.

Inyo California Towhee

The total known distribution of the Inyo California towhee lies in the southern Argus Range at elevations ranging from 2,680 ft. to 5,630 ft. The Inyo California towhee was listed as a state endangered species and a federally threatened species under the Endangered Species Act due to the small population, its restricted range, and the potential destruction of its habitat (LaBerteaux and Garlinger 1998). Potential threats to its habitat include wild burros and horses, mining, recreational activities, cattle grazing, water exportation, and encroachment by rural residents.

Critical habitat (5,802 acres) was designated for the Inyo California towhee in 1987. It includes riparian habitat at springs as well as upland and streambed habitats surrounding the springs. Only a small portion (less than 5%) of the species' critical habitat occurs within the NEMO Routes planning area. The majority of the critical habitat occurs to the south and west, within the West Mojave planning area.

The following discussion of habitat for the Inyo California towhee is taken from the recovery plan for the Inyo California Towhee (U.S. Fish and Wildlife Service 1998a).

Inyo California towhees nest and forage in areas of dense riparian vegetation dominated by willows (*Salix* spp), Fremont cottonwood (*Populus fremontii*), and desert olive (*Forestiera neomexicana*) with associated rubber rabbitbrush (*Chrysothamnus nauseosus*) and squaw waterweed (*Baccharis sergiloides*). They also nest in shrubs of the upland community adjacent to riparian habitat and use the upland habitat as their principal foraging grounds. This habitat consists of Mojave creosote bush (*Larrea tridentata*) scrub or Mojave mixed woody scrub. (LaBerteaux 1994).

LaBerteaux and Garlinger (1998) conducted an Inyo California towhee survey during the 1998-breeding season. A total of 640 adult towhees representing an estimated 317 pairs and 23 single adults were detected at 210 sites within the Argus Range. Prior to the 1998 survey, the towhee population was estimated to be no more than 200 individuals. Along with an increase in the numbers of birds detected, the 1998 census documented a range expansion of 15 km to the north of the previous known range. Seventy-three percent of the population occurred on U.S. Navy lands, 25% on BLM lands on the east slopes of the Argus Range, and 2% on State-owned and private lands.

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is a state and federally listed endangered species. The vireo was federally listed in 1986 and critical habitat was designated in February 1994. The NEMO Routes planning area does not contain critical habitat for this species. At the time of listing, an estimated population of the least Bell's vireo was only 300 pairs (RECON 1989)

The least Bell's vireo is a small, gray migratory songbird that has declined dramatically in both numbers and distribution. This species was once widespread and abundant throughout the Central Valley and other low elevation riparian zones in California. Least Bell's vireo historically bred in riparian woodlands from the interior of northern California (near Red Bluff, Tehama County) to northwestern Baja California, Mexico. In 1973, no least Bell's vireos were found during an extensive search of their formerly occupied habitat between Tehama County and San Joaquin County (Gaines 1974). By 1980 the species was extirpated from the entire Central Valley (U.S. Fish and Wildlife Service 1998b). Its current breeding distribution is restricted to a few localities in southern California and northwestern Baja California, Mexico (Franzreb 1989). There are breeding records for the southern Owens Valley of Inyo County and it regularly breeds at the South Fork of the Kern River Preserve (Heindel pers. comm.).

Least Bell's vireo nests primarily in willows (*Salix* spp.), but also uses a variety of other shrub and tree species for nest placement. Foraging occurs in riparian and adjoining upland habitats. Quality habitat occurs within the NEMO Routes planning area, along the Amargosa River in San Bernardino County. The reduction of least Bell's vireo numbers and distribution is associated with widespread loss of riparian habitats and brood parasitism by the brown-headed cowbird (*Molothrus ater*). Habitat degradation characterized by changes in predator-prey relationships, livestock grazing, agricultural use, dam construction, fragmentation, isolation, pollution, and human disturbance is associated with habitat loss (Kus 1998). About 76 percent of the U.S. population is found at just five localities (USFWS 1994b Federal Register 59:4848-4867).

Since federal listing in 1986, and follow-up restoration and management activities, the species has undergone a population increase almost as dramatic as its decline. The 1996 breeding population of the

least Bell's vireo in California consists of 1,346 pairs (USFWS 1998b). . In addition to population increases, observations indicate that the species is undergoing a northward expansion (Craig and Williams 1998). Currently, least Bell's vireos are re-colonizing areas unoccupied for decades and have the potential to reestablish breeding populations in the central and northern portions of their historical range (USFWS 1998b).

Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*) is a federally endangered species. The final ruling listing the southwestern flycatcher as endangered was published in February 1995, although designation of critical habitat was postponed (USFWS 1995). It is currently known to breed at only about 75 sites in riparian areas throughout the southwest. The known breeding population is estimated at between 300 and 500 pairs. The southwestern willow flycatcher nests only in dense riparian vegetation associated with streams, rivers, lakes, springs, and other watercourses and wetlands.

The most significant historical factor in the decline of the southwestern willow flycatcher is the extensive loss, fragmentation, and modification of riparian breeding habitat. Large-scale losses of wetlands have occurred, particularly the cottonwood-willow riparian habitat. (Phillips et al. 1964, Johnson and Haight 1984, Katibah 1984, Johnson et al. 1987, Unitt 1987, General Accounting Office 1988, Dahl 1990, State of Arizona 1990). Habitat changes have occurred and continue to occur because of urban, recreational, and agricultural development, water diversion and impoundment, streambed alteration, livestock grazing, and replacement of native habitats by introduced plant species. Fire danger in riparian systems may increase with the conversion from native to exotic vegetation, diversions or reductions of surface water and drawdown of local water tables.

Brood parasitism by the brown-headed cowbird is another significant and widespread threat to the southwestern willow flycatcher. Once a flycatcher nest is parasitized, it has almost no chance of producing flycatcher young, which may result only in the rearing of cowbird chicks (National Park Service Technical Report 1997). At the South Fork Kern River Preserve, an average of 63.5% of nests were parasitized from 1989 to 1992, with a range from 50% in 1989 to 80% in 1991 (Craig and Williams 1998). Trapping of brown-headed cowbirds has proven to be successful in decreasing the rate of parasitism and is a valuable tool that can be used as riparian habitat restoration proceeds.

Swainson's Hawk

The Swainson's hawk is a California threatened species. Swainson's hawks were considered to be a common to abundant breeding species in California at the end of the 19th century (Sharp 1902). By the early 1940s, breeding population declines were being documented (Grinnell and Miller 1944). Bloom (1980) conducted the first statewide survey of Swainson's hawks in California in 1979 and estimated 110 nesting pairs and a total population of 375 pairs in California. These data revealed that the remaining population centers were in the Great Basin in the extreme northeastern portion of the state and in the Central Valley, and that the species was nearly extirpated throughout large parts of its former range. The declines were greatest in coastal southern California where Sharp in 1902 had classified the species as abundant. In 1988, the total statewide population was estimated to be 550 breeding pairs. Additional surveys done in the 1990s indicate that the total statewide population is 500-1,000 breeding pairs. The difference in numbers of breeding pairs between 1980 and the 1990s is thought to be the result of increased survey efforts and not a population increase.

The decline of Swainson's hawks in California has been attributed to mortality during migration and on the wintering grounds in South America, poisoning by toxic chemicals, including pesticides in South America, eggshell thinning, habitat loss on wintering grounds, disturbance on breeding grounds, loss or degradation of habitat on the breeding grounds, and increased competition with other species. Habitat degradation could occur through a variety of mechanisms including but not limited to fires, which eliminate nesting opportunities in Joshua trees and riparian trees. Decreases in prey populations or long-term recruitment of new nest trees, alteration of normal stream and wash hydrology, can lead to the loss of riparian habitat, and lowering of water tables that result in the loss of nesting habitat, or contribute to a decline in prey availability. Shooting, has historically contributed to the loss of birds (England 1998). Bloom (1980) estimated the historical population in the Mojave and Colorado Deserts at 270-1,080 pairs. Declines of the hawk in the Mojave Desert, according to Bloom, could be directly related to the decrease in the range of the Joshua tree. As the tree's range decreased, especially in the Antelope Valley, Swainson's hawk numbers probably decreased proportionately.

Historically, the Swainson's hawk breeding range in California included the Great Basin and Modoc Plateau, the Sacramento and San Joaquin Valleys, the coastline in Marin, Monterey, Ventura, Los Angeles, and San Diego counties, and a few scattered sites in the Colorado and Mojave deserts (Bloom 1980). Swainson's hawks nest almost exclusively in trees, but in a few instances have been recorded nesting on cliffs, coulees, human-built structures, and the ground. But these types of sites are rarely used (England et al. 1997). A survey of nesting birds in 1979 revealed that Swainson's hawks nested almost exclusively in large, sparsely vegetated flatlands characterized by valleys, plateaus, broad floodplains, and large expanses of desert.

Typical habitat for the Swainson's hawk is open desert, grassland, or cropland containing scattered, large trees or small groves where they prey upon a variety of animals including bats, birds, lizards, snakes, amphibians, and insects. The prey species vary from location to location, but are generally dominated by ground squirrels, jackrabbits, cottontails, mice, gophers, and birds such as mourning doves during the breeding season. Insects are an important part of the diet outside of the breeding season.

Western Yellow-billed Cuckoo

The yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a California endangered species. A statewide survey of yellow-billed cuckoos in California during 1986 and 1987 found a total of 30-33 pairs and 31 unmated males at nine localities (Laymon and Halterman 1989). More recent surveys on the Sacramento River from 1988-1990 have shown a fluctuating population of 23-35 pairs depending on the year (Halterman 1991). Continuous surveys on the South Fork of the Kern River from 1985-1996 have shown a population that varied from a low of 2 pairs in 1990 to a high of 24 pairs in 1992 (Laymon et al. 1997). These two sites are the only localities in California that sustain breeding populations. Small and unstable breeding populations are found along the Amargosa River near Tecopa and at several locations in the Owens Valley.

Yellow-billed cuckoos have one of the most restrictive suites of macro-habitat requirements of any bird species. They inhabit extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of the vegetation. They may inhabit mesquite thickets when willow is absent. Nesting typically occurs in sites with at least some willow, dense low-level or understory foliage, high humidity, and wooded foraging spaces in excess of 300 feet in width and 25 acres in area. Nesting sites with less than 40% canopy closure are unsuitable. Those areas with greater than 65% closure are optimal (Laymon 1998). In California, during the breeding season the cuckoos remain in cottonwood-willow

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riparian habitats (Laymon 1998). Cuckoos have large home ranges, often exceeding 50 acres and sometimes approaching 100 acres (Laymon and Halterman 1985).

The cause of decline of yellow-billed cuckoos both historically and recently is primarily from habitat loss on the breeding grounds in California. Habitat loss has occurred due to clearing for agriculture, clearing for flood control, flooding behind dams, withdrawal of ground water causing a lowering of the water table, clearing for urban and suburban development, invasion by exotic vegetation, and long-term (greater than 100 years) and intensive year-round grazing (Laymon 1998). Firewood cutting and wildfire cause important temporary losses of riparian habitat.

3.2.4 Cultural Resources

Ethnographic studies of tribal distributions were completed for all of the CDCA as part of CDCA Plan. The NEMO Routes cultural analysis tiers from the CDCA Plan studies. At European contact, circa 1776, with the crossing of the Mojave Desert by the Spanish Franciscan priest Francisco Garces, various Yuman and Shoshonean peoples whose cultures were characterized by complex adaptations to the arid environment inhabited the area. These include the Serrano Indians, who occupied the Mojave River Valley and San Bernardino Mountains during the Late Prehistoric until the Historic Era. The Mohave natives occupied the Colorado River Valley and portions of the Mojave Desert adjacent to the river, Western Shoshone (Panamint/Koso and Timbisha Band). Kawaiisu and Southern Piute peoples inhabited portions of the Colorado River Valley, lands adjacent to Death Valley, Fort Irwin, and the Chemehuevi lived in the Mojave Desert from the Colorado River to lands within the Mojave Preserve. All of the desert-adapted groups practiced hunting and gathering subsistence strategies, making the seasonal round, exploiting available plants, grass seed resources, acorns, and available mammals. They interacted with their neighbors and some type of trade existed, evidenced by marine shell beads and obsidian utilized for tools. In addition, the Mohave practiced limited agriculture in the flood plains of the Colorado River.

Cultural resources are generally concentrated along trails around springs and along lake margins. In addition, Native American sites are found adjacent to seasonal collection or mining areas for tools. Some of these are the same areas that current day rock-hounds use. Cultural properties include a variety of prehistoric camps and trails as well as historic mining, military, and transportation activities. Also, the Dinosaur Trackway Site is California's only known occurrence of fossil Mesozoic reptile tracks. It has been impacted by a historic rock quarry and partially transected by an old mining road.

Numerous sites within the boundaries of the planning area have been listed on or determined eligible for inclusion on the National Register of Historic Places (NRHP). In addition, several sites are listed as California Historic Landmarks (CHL) and California Points of Historic Interest (CPHI). (See Table 3-1 which follows.) Sites listed on the CHL and CPHI may or may not have been evaluated for NRHP. Several were identified as historic landmarks as a consequence of eligibility evaluations. Due to their potential to yield information important to prehistory and history, several archaeological sites have been determined eligible for inclusion on the National Register of Historic Places. The locations of these sites are confidential. Old Traction Road and 20-Mule Team Road also cross the planning area and are potentially eligible for inclusion on the NRHP. Both sites were identified as sites of concern during NEMO public scoping.

In addition to Table 3-1, eligible properties include Picture Canyon, Halloran Springs, Coyote Holes, intaglios and campsites within the Crucero ACEC, Horsethief Springs, Camp Essex Division Camp, Camp Clipper, Army Air Force airfields and U.S. Army Quartermaster facilities within the CAMA-AMA,

historic resources associated with the Clark Mountain Mining District, numerous prehistoric and historic trails, and immigrant and mining roads.

Table 3-1. Identified Significant Cultural and Native American Resource Sites

Property Name	Listed	Eligible	CHL	CPHI	Notes
CA-SBR-3186 (Baker vicinity)	X				aka Aboriginal Rock Cairn Site
Paiute Pass Archaeological District	X				Mojave Preserve
Cerro Gordo National Historic District	X				
Death Valley Junction Historic District	X				Private land
National Old Trails Road (CA-SBr-2910H)		X			aka Route 66
Mormon Road/Trail (CA-SBr-4411H)		X			
AT & SF Railroad (CA-SBr-6693)		X			
Old Spanish Trail (CA-SBr-4272H)		X			
Tonapah & Tidewater Railroad (CA-INY-4772H)		X			aka CA-SBr-2340H
Hoover Dam to San Bernardino Transmission Line		X			CA-PSBr-38H
Boulder Transmission Lines 1, 2, 3		X			CA-SBr-7694H
Mormon Road Monument (CA-SBr-4411H)			X		
Harry Wade Exit route			X		
Searles Lake Borax Discovery Site			X		
National Old Trails Monument			X		
Von Schmidt State Boundary			X		
Mojave Road (CA-SBr-3033H)			X		
California/Arizona Desert Training Center Maneuver Area			X		
Camp Ibis (Desert Training Center)			X		Patton Camps
Lanfair				X	

Properties determined ineligible include many small and large prehistoric lithic scatters and other prehistoric structures containing remains without diagnostic characteristics or sufficient site integrity that could contribute to the knowledge of the history and prehistory of the Mojave Desert. Unevaluated properties include lithic scatters, prehistoric rock alignments, and historic trash scatters that have not been determined eligible or ineligible. The vast majority of the routes of transportation within the NEMO Routes planning area have not been surveyed for cultural properties. The majority of the recorded archaeological sites, 355 of the 464 properties (77%), have not been evaluated for eligibility for nomination to the National Register of Historic Places, as identified in Table 3-2.

Table 3-2. Eligible, Ineligible and Un-determined Eligibility of Archaeological and Historic Sites

Site Status	High Use	Moderate-High Use	Moderate Use	Low-Moderate Use	Low Use	Total
Eligible	15	11	9	14	2	51
Ineligible	27	14	12	2	3	58
Undetermined	28	4	35	0	4	355
Total	70	29	56	16	9	464

Table 3-2 shows a general trend with most sites being documented in Moderate-High and High Use areas and fewer sites documented in the Moderate and Low Use areas. This consistent pattern is explained by a documentation bias rather than the lack of sites in areas of low and moderate use. The majority of determinations of eligibility for nomination to the National Register of Historic Places resulted from archaeological surveys and investigations resulting from construction projects associated with utility transmission projects (i.e. pipeline, communication cable, electrical transmission lines, and utility upgrade projects) and in High and Moderate to High Use Special Areas, i.e. not in low use areas which are infrequently surveyed.

3.2.5 Soils

The soils in the planning area are as varied as the landforms, microclimates and geology of the region. Soil surveys have been conducted in the Saline Valley area and the Kingston-Amargosa areas, but most of the soils have not been formally surveyed. Most planning area soils are poorly developed, and are generally well drained and coarse textured. Some portions of the planning area are internally drained, resulting in small playas with surface clays, surface physical soil crusts and increased salinity. The soil depth ranges from deeper alluvial materials to very shallow or non-existent depth over the rocky substrate. The soils are susceptible to accelerated erosion from wind and water, especially when the surface has been disturbed. Portions of the soils have been subject to periodic disturbances due to grazing, mining, agriculture, OHV activity and other resource uses.

The California Desert Conservation Area Plan (USBLM 1980) classified the desert soils based sensitivity to surface disturbance. The three classes of Low, Medium, and High were based on surface texture, slope, rock topography and other factors, which affect soil sensitivity to surface disturbance. The CDCA Plan classified a majority of the soils in the northwest portion of the planning area in the high sensitivity class with most of the remaining soils in the medium sensitivity class. Soils in the eastern and southeastern portions of the NEMO Routes planning area are nearly evenly split between a high and medium classification. There are small sections of low sensitivity soils spread through the entire area.

3.2.6 Water

Groundwater and surface water sources occur throughout the NEMO Routes planning area. A large number of surface water sources exist within the northwestern portion of the planning area, where most mountain ranges reach over 10,000 feet elevation and include numerous streams, springs, seeps, and a lake. Perennial streams exist in Middle Park, Pleasant, Happy, Surprise, Hall and Jail Canyons in the Panamint Mountains, Water, Knight, Revenue, Snow and Thompson Canyons in the Argus Range, Daisy, Craig, Hunter, Beverage, Keynot, McElvoy, Pat Keys and Willow Creek Canyons in the Inyo Mountains and Weyman, Cottonwood, Toler, McAfee and Perry Akin Canyons in the White Mountains. Weyman, Cottonwood, McAfee and Perry Akin creeks all support trout fisheries and are diverted near their mouth for irrigation. Several large springs occur on private land in Deep Springs Valley. Corral Spring has a very large flow and is one of the major sources of water for Deep Springs Lake, which covers nearly 2,000 acres. The associated private wetland includes habitat for the state endangered black toad (*Bufo exsul*). The eastern and southeastern portions of the NEMO Routes planning area have a number of significant water sources including the Amargosa River, Willow Creek, Grimshaw Lake, Salt Creek and Tecopa Hot Springs.

The Amargosa River is the focal hydrological system of the northern and eastern Mojave Desert (NEMO) planning area. The hydrologic systems of the southern Great Basin and northern Mojave Desert are

generally characterized by deep water tables. They are also considered primarily closed groundwater basins. One of only two large rivers in the Mojave Desert, the free-flowing Amargosa River, includes perennial and ephemeral surface flows as well as subterranean flows.

Water runoff from the Bullfrog Hills, Yucca Mountain, Shoshone and Spring Mountains in Nevada, all contribute to Amargosa River water flow in California. Major river tributaries include the aforementioned Lower Carson Slough in the northern reach of the river, China Ranch Wash in the central reach, and Salt Creek in the south. Approximately 94% of the lands along the river in California are in Federal ownership. Portions of this river were determined eligible for the National Wild and Scenic Rivers System (see Appendix O of the NEMO Proposed Plan/FEIS, July 2002).

Groundwater occurs in nearly all of the valley basins in the planning area, varying greatly in depth, quantity and quality. A portion of the water comes from current recharge from the surrounding mountains and old water deposited during the fluvial lake period 10,000 years ago. For many of the basins, the current recharge rate is low. Groundwater withdrawals from these basins can result in large drawdown. Portions of the Amargosa Valley are underlain by a regional carbonate rock aquifer. This aquifer transports large volumes of water under mountain ranges in the area and collects water from many widespread watersheds. Major springs occur along this carbonate aquifer system including Ash Meadows Springs, which annually discharges 17,000 acre-feet of water, and the Furnace Creek springs which produce 5 cubic feet per second (3,500 acre-feet per year). Discharges from this carbonate rock aquifer are the source of water for Devils Hole and the Lower Carson Slough. Water withdrawals from the Amargosa watershed in the Death Valley Junction area could impact the flows at Ash Meadows and Furnace Creek. Currently, commercial ground water pumping is occurring in Fish Lake Valley, Ash Meadows, Pahrump Valley and Ivanpah Valley.

3.2.7 Watersheds

The unified watershed assessment conducted in preparation of the Clean Water Action Plan (1998) classified the watersheds into one of four categories. They are:

- Category I- Watersheds that are candidates for increased restoration activities due to impaired water quality.
- Category II- Watersheds with good water quality that, through regular program activities can be sustained and improved.
- Category III- Watersheds with pristine or sensitive areas on federal, state or tribal lands that need protection, and
- Category IV- Watersheds where more information is needed.

Table 3-3 displays the watersheds as classified within the NEMO Routes planning area.

Table 3-3. Watershed Categories

Category I Watersheds (Impaired)	Category III Watersheds
Eureka-Saline Valleys Upper Amargosa ^a Upper Mojave	Fish Lake – Soda Springs Valleys Ivanpah – Pahrump Valleys Death Valley – Central and Lower Amargosa Panamint Valley

^a This impaired classification may be due to high salinity that is a natural phenomenon. According to the California Regional Water Quality Control Board, Lahontan Region, South Lake Tahoe, California and USEPA Region 9 (2000), in the Amendments

to the Lahontan Water Quality Control Basin Plan, the Amargosa River is a naturally impaired water body in terms of drinking water quality, and has been removed from beneficial use designation.

3.3 Uses

Uses in the planning area are discussed in this section in alphabetical order.

3.3.1 Lands and Realty

Lands are acquired, disposed of, or exchanged in accordance with the Federal Lands Policy and Management Act of 1976 (FLPMA) and other applicable Federal laws and regulations, to assure more efficient management of the public lands, reduce conflicts with other public and private landowners, and facilitate consistency and logic in desert-wide land-use patterns. The existing and proposed land tenure strategy for the planning area is discussed in more detail in Appendix N of the NEMO Proposed Plan (July 2002).

In areas where public and private lands are intermingled, private property owners need access through public lands. However, the casual public may not have the opportunity to cross these same private lands to access public lands. Public easements do not generally exist for routes that cross most private lands, except in many cases where the route serves as right-of-way or easement for a commercial use (e.g., pipeline or transmission line maintenance). The County may make an R.S.2477 assertion to establish the public's right of passage on a route if certain criteria are met.

3.3.2 Livestock Grazing

There are 13 cattle allotments (a designated area suitable for grazing) within the NEMO Routes planning area. Eight allotments are in the Ridgecrest Resource Area, four are in the Needles Resource Area, and one is in the Barstow Resource Area.

Grazing use of perennial vegetation in all allotments is expected to continue for the reasonably foreseeable future. Typically, grazing leases are authorized by the BLM in the planning area for 10 years. A shorter period of time is sometimes issued for special circumstances, such as to accommodate a shorter-term lease of the base property or when the Authorized Officer determines that a shorter term is in the best interest of range management. Additionally, non-renewable grazing authorizations may be issued for special short-term needs such as trailing, or when there is short-term surplus forage available. In the last ten years, lessees have not requested, nor has grazing been authorized for ephemeral forage or temporary non-renewable perennial forage. All leases are subject to modifications and to annual adjustments. These are implemented through consultation between the lessee and the BLM.

The eastern Mojave Desert has been in drought conditions for much of the 1990s and forage conditions have been poor in many places. As a result livestock producers have voluntarily reduced stocking rates and consumption of perennial forage has been lower than the leases allow. Implementations of these grazing leases may require lessees to have collection areas to facilitate the handling of livestock. (e.g., corrals and feed supplements). Other range developments are primarily used to enhance or impede cattle movement or improve the condition of forage (e.g., wells, pipelines, troughs, prescribed fires, fences, spring developments, and reservoirs). Access is needed to various portions of allotments and improvements for management purposes. Few range improvements have been installed in the last ten years. Installation of new improvements would be based on a case-by-case analysis and available funding. Periodic and annual maintenance is required on existing facilities. Maintenance requires the

lessee to visit improvements. There are many range improvements found in wilderness. Ongoing maintenance of existing improvements coupled with minimal additions of new infrastructure, has marginally increased demands for maintenance.

The grazing lease for each allotment identifies the number, kind and/or type of livestock that may graze the allotment and the grazing period, usually with specific beginning and ending dates. Many leases also require adherence to grazing prescriptions in the form of systems such as deferred, deferred-rotation, or rest-rotation. Other authorizations may have conditions pertaining to turnout dates based on vegetation conditions.

Some leases have specific grazing utilization standards and other conditions to protect sites, such as riparian areas, wildlife habitat, special status plant populations, etc. Usually these conditions have been developed in consultation and cooperation between BLM and the livestock operator in the form of an allotment management plan. On allotments where riparian areas exist, the riparian areas, whether lentic or lotic, constitute a very small proportion of the allotment area and are often located in a fragmented pattern throughout each allotment. Although these areas constitute a small amount of the overall forage available for livestock, they are attractive to the animals, because of their proximity to water, shade, and vegetation that remains succulent much longer than adjacent upland vegetation. Consequently, livestock tend to congregate in these areas and can quickly overuse the riparian vegetation. The use of riparian-wetland areas by other ungulates, in conjunction with livestock, makes the problems complex. Wild horses and burros, in particular, present a difficult management problem. These animals also find most riparian-wetland areas attractive and may overuse the vegetation even in the absence of livestock.

Currently, grazing activities within the planning area utilize the fallback standards and guidelines. Assessments for most allotments in the planning area were completed in 1999. A summary of the sixteen allotments, including the results of the most recent assessments, is provided in Table 3-4. Most of the allotments do not have Allotment Management Plans (AMP). Most of the AMP are south of the planning area, where critical desert tortoise habitat exists and routes have been previously designated (NEMO 2002b). Refer to Appendix P of the NEMO Proposed Plan and FEIS (July, 2002) for additional resource related information.

Table 3-4. Grazing Allotment Resource Information for the NEMO Routes Planning Area

Allotment Name	Forage Type ^a	Acres	AUM	MIC ^b	1999 assessment ^c	Standards ^d
Clark Mountain	Per/Eph	97,560	1,303	M	Yes	2
Crescent Peak	Per/Eph	6,719	359	C	Yes	2
Deep Springs	Perennial	43,932	1,250	M	Yes	2 (3)
Eureka Valley	Ephemeral	17,000	0	UC	No	2 (3)
Fish Lake Valley	Perennial	577	52	UC	No	2 (3)
Horsethief Springs	Per/Eph	150,140	2,424	M	No	2
Hunter Mountain	Perennial	53,920	0	I	Yes	2
Last Chance	Perennial	35,532	1,639	I	Yes	1
Oasis Ranch	Perennial	22,968	656	I	Yes	2
Pahrump Valley	Per/Eph	26,952	353	M	No	2
South Oasis	Perennial	15,173	477	I	Yes	4
Valley View	Per/Eph	31,575	849	C	Yes	2
White Wolf	Perennial	13,733	307	M	No	2 (3)

^a Ephemeral and/or perennial are the two forage types that may be grazed on an allotment. Ephemeral forage primarily consists of ephemeral grasses and forbs. Perennial forage primarily consists of perennial grasses and shrubs.

^b There are four Selective Management Categories (M, I, C, UC) for grazing allotments. Category M allotments are in satisfactory resource condition and are producing near their potential under existing management strategies. There are little or no known resource use conflicts or controversies. Category I allotments generally have potential for increasing resource production or conditions, but are not producing at that potential. There could be conflicts or controversy involving resource conditions and uses, but there are realistic opportunities to enhance resource conditions. Category C allotments usually consist of relatively small acreage or parcels of public land. They are often, but not always, intermingled with larger amounts of non-federally owned lands. There are little or no known resource use conflicts or controversies. Usually opportunities for positive economic return from public investments are limited in these allotments. Category UC allotments are not yet classified.

^c This column indicates if a rangeland health assessment was completed in 1999. Prior to determining achievement of standards, a field assessment of resource conditions is to be conducted by a team of field specialists.

^d The Standards column indicates the category based on results from the health assessment or an estimation of resource conditions if the assessment is not completed. The categories are; (1) areas where one or more standards are not being met, (2) areas where all standards are being met, (3) areas where the status of one or more standards is not known, and (4) areas where one or more standards are not being met, but factors other than cattle grazing is the primary contributor to the problem.

3.3.3 Minerals and Mining

The Southern California region, including much of the Mojave Desert, is one of the most highly mineralized areas in the United States. This is due to the variety of geologic terrain exposed in the many mountain ranges and the depositional environments of the intervening basins. A discussion of the geology-energy-minerals data base and preliminary analysis of economic geology, mineral commodities and related socio-economics of the CDCA is contained in Appendix G of the 1980 CDCA Plan. Guidelines for mineral exploration and development may be found on pages 89 to 91 of the 1980 CDCA Plan as amended. Maps 12 and 14 of the CDCA plan show potentials for locatable and saleable minerals, respectively for the CDCA.

The NEMO Routes planning area is situated along the northeastern margin of this mineralized region, and contains many known mineral deposits and potential for the discovery of additional mineral resources as shown in the NEMO Proposed Plan, Chapter 8, Figure 3a (July, 2002). Mineral development is encouraged on public lands outside of specially designated areas and managed under several laws by

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three categories: locatable, leaseable, and saleable. Mineral commodities mined currently or in the recent past include gold, silver, barite, boron, hectorite, bentonite, gypsum, tungsten, talc, zeolites, sodium, limestone, sand and gravel, stone, turquoise, and rare earth elements (e.g., cerium, praseodymium, europium, and yttrium). Gold production occurs at two major mines located in the northern portion of the planning area at the Briggs Mine in the Panamint Range and the Castle Mountain Mine in the Castle Mountains. Gold prospecting has occurred throughout the planning area. Inactive small mines and prospects are scattered throughout the planning area. See the NEMO Proposed Plan, Chapter 8, Figure 3b (July, 2002).

Southern Clay Products Company has applied for a mineral patent on about 225 acres in Section 31, T.27 N., R.5 E, and Section 6, T.26 N., R.5 E. in the Upper Amargosa portion of the planning area. Hectorite clay at this site has been mined since 1974 and occurs southwest of the Amargosa River drainage. In Section 31, the patent application block comes within 700 feet of the Amargosa River and in Section 6 it comes within 1,300 feet. Southern Clay Products has two open pit mines for hectorite clay within the area and is currently mining at a rate of about 5,000 tons per year. The Upper Amargosa portion of the ACEC also contains the access road to the Sidehill Mine.

Talc is mined from a few deposits located in the Inyo Mountains and Kingston Range. Limestone is quarried in the Argus Range and new production can be expected from the southeastern Bristol Mountains and elsewhere. Active gypsum mining has been reported on Mesquite Lake and the surrounding area. Many small-scale intermittent mines exist throughout the planning area for various mineral commodities.

There are no active mines within ACEC, although the access route to a zeolite mine southeast of Death Valley Junction passes through critical habitat for the endangered Amargosa niterwort.

Sand and gravel and other aggregates are produced within the planning area. Although they occur throughout the planning area in alluvial fans and other sedimentary deposits, commercial deposits are limited by transportation costs and therefore are usually located near market areas. These commodities are used primarily for major highway construction and repair, and as aggregate for concrete in urban areas. The Inyo County Transportation Department produces between 500 and 600 tons per year of sand and gravel from a borrow pit within the west boundary of the study area and just northeast of Furnace Creek Road in NW1/4 Section 29, T.21 N., R. 7 E.

Access and water resources are important aspects associated with mineral development, and will be an important consideration for future development.

Minor geothermal resources exist in the Tecopa area. In 1967 an exploratory water well was drilled north of Tecopa. Strong artesian flow occurs from this well near the boundary of the Amargosa River ACEC in SW1/4 Section 28, T.21 N., R.7 E. and just north of Tecopa's hot springs. The water continues to rise to the surface and flow into the marsh. In 1970 the temperature was 100 degrees at the surface and flowing at 150 to 200 gallons per minute. Based on the size and scope of the deposits, further development of geothermal resources beyond the current build out conditions is not anticipated within the planning area. Although oil and gas potential has been identified in some areas, further exploration is not foreseen. There are no current leases for sodium resources.

Future production is expected to be concentrated in the categories of gold (especially if there is a price increase), aggregate, particularly along I-15, and nonmetallic minerals including specialty clays and limestone. Only minor activity is anticipated in lead-zinc-silver deposits so long as commodity prices remain depressed. Mines in the Silurian Hills have produced lead, copper, silver, gold, and talc. In the

Riggs District, the patented Riggs mine, within 1,500 feet of the southern boundary of the area, produced 200,000 ounces of silver up to 1920 and has been idle since then, except for recent drilling. Assays at another claim group in the southeast part of the Silurian Hills identified silver values to 2.85 ounces per ton and copper to 36 pounds per ton. Additional mining claims, located ½ mile south of the area, have been actively worked for silver and lead for many years.

Idle talc mines known collectively as the Patricia-Blue White-Ceramic zone occur in the southeast corner of the Silurian Hills. The Ceramic mine produced up to 1,000 tons from 1940 to 1942. Workings consist of shallow exploratory excavations, several adits, and a 40-foot inclined shaft and several cuts. The patented Silver Lake talc deposits, 3 miles to the south of the area, produced over 160,000 tons from 1915 through the 1950s.

The potential for future development is difficult to assess. Unless commodity prices increase, production of metallic minerals such as lead, silver, and gold would probably be limited to small, two-man operations in underground workings such as adits. Talc production is anticipated to be low based on the lack of production within the area over 50 years, the small volume of past production, and the fact that no plans of operation have been received.

The area has moderate potential for the occurrence of saline, sodium borate deposits based on past production of borax from a spring from 1882 to 1890. The potential for production of borates in this area within the next 25 years is probably low, based on a lack of production over the last 100 years.

3.3.4 Recreation

With expanded leisure time and growing affluence among the general population, the California Desert attracts millions of visitors annually. The desert provides the resources necessary for a variety of recreation. These resources provide natural beauty, solitude, and freedom from the structure and regulations of urban areas. In all recreational opportunities, scenic values are often cited as an important resource to the participants' recreation experience. Virtually all recreation activities are dependent upon availability of access within the planning area. Most visitors travel on previously used or marked motorized vehicle routes. Recreation opportunities are grouped along a continuum of opportunities ranging from intensive vehicle-oriented to resource-oriented activities, although there is often overlap between the two.

In most cases, public recreation use of BLM-administered lands is unsupervised and unorganized. BLM management of recreation activities, facilities and visitor contacts center around activities and services for recreationists that visit the Dumont Dunes OHV area, participate in OHV organized events or other permitted commercial and organized activities (bighorn sheep hunts, other trail rides, vision quests), as well as specific local wildlife conservation sites. Much of the casual use network has not received focused attention or signage unless a problem arises (e.g., washed out route, identification of a resource conflict, etc.), except for primary routes in the network that are located off of major highways.

Nature Study

Wilderness areas and ACEC provide good opportunities to study plants and wildlife including rare or endangered species. Wilderness areas allow nature study in areas protected to maintain their pristine, natural environments. While wilderness areas and ACEC have received special designation to protect their resources, extensive opportunities for nature study are found outside of these areas throughout the planning area.

Hiking Trails

Most hiking trails that lead to historical places are remnant vehicle ways that are grown over with vegetation, wash-out, or no longer open for vehicular travel. Along some of these trails, petroglyphs, archeological sites, and many old mining towns still remain fairly pristine. These remnant trails and canyon washes provide the opportunity for hikers to explore on foot.

Table 3-5. Historic Hiking Trails in the NEMO Routes Planning Area

Name/Field Office	Miles	Resource Values
Burgess Mine Trail - Ridgecrest	7	Historic mining district and Frenchy's cabin
Lonesome Miner Trail - Ridgecrest	4	Heart of historic trail system, Frenchy's cabin, and a mill site
Snowflake Mine Trail - Ridgecrest	7	Best-known and most used trails in the Inyo Mountains, and historical features.
Amargosa Natural Area Trail-Barstow	7	Old Spanish Trail, T&T Railroad, historic mining workings and buildings

Camping and Overnight Accommodations

Most of the camping has traditionally occurred in undeveloped, primitive campsites. In the NEMO Routes planning area there is one RV/trailer campground on public lands that is under lease to Inyo County from the Bureau of Land Management in Tecopa. Tecopa is one of a few towns in the northern half of the planning area, and has a small permanent population and a larger seasonal population during the winter months as a result of this campground. Located immediately north of Tecopa are hot springs that support other resorts and small campgrounds in addition to the BLM site. The larger town of Shoshone is located north of Tecopa. Shoshone is located at the junction of State Highways 127 and 178. Its tourist attractions include its own hot springs located within the town and its location as the eastern gateway to Death Valley National Park. One small bed and breakfast also is located in the NEMO Routes planning area in a remote location, near Tecopa at China Ranch. Many visitors also camp at Dumont Dunes OHV Area. Camping in the planning area mainly occurs in the open desert, within 300 feet of designated routes since there are few designated campgrounds. Public land facilities are not generally available, with the exception of toilets at popular destination locations. Camping is generally associated with other recreation, such as OHV activity, vehicle touring, nature study, rock hounding, and hunting. Wilderness camping may occur anywhere one can walk or access by horseback, except in a few areas that have been closed to overnight use, including the Central Amargosa Canyon.

Both the Amargosa Canyon and Grimshaw Lake Natural Area ACEC are popular hiking and nature appreciation areas, as is China Ranch Wash. China Ranch is a popular tourist attraction at the west end of the canyon, surrounded by the Amargosa ACEC, and includes a date farm and trailed, riparian area. Both ACEC have been designated as national Watchable Wildlife Sites and are listed on numerous maps as

well as in several guidebooks. No active livestock or mining operations occur within these areas. Motor vehicles are prohibited within these natural areas, with the exception of parking areas located at major trailheads. Fire activity is fairly low, and resource advisors address fire suppression activities.

Lakebed Activities

The major dry lakebeds in the CDCA, including in the Northern and Eastern Mojave planning area, have been classified in the CDCA Plan as Open, Closed, or Open with special limitation (Permit Only, use of specified routes only) to motor vehicles. Dry lakebeds that are not specifically classified in the CDCA Plan are available based on the access classification of the area within which they are found. Dry lakebeds provide the basic requirements of open space and smooth surfaces needed for land sailing, model rocket and airplane flying, hang gliding, and stargazing (particularly during celestial events such as the passing of comets). In addition to recreation activities occurring on lakebeds, applications for filming and research are processed annually. Three lakebeds have been classified in the CDCA Plan within the NEMO Routes planning area. Silurian Dry Lake is Open. Vehicle access for Silver Dry Lake is limited within the Wilderness Study Area (WSA) to Approved Routes, whereas outside the WSA vehicle access is limited to Approved Routes or by permit, and in both cases the lakebed itself is Closed. Vehicle access for Mesquite Lakebed and two other lakebeds are classified based on surrounding multiple use class (MUC), and the lakebeds are closed.

Broadwell Dry Lake is located north of Interstate 40 and the town of Ludlow. Use is generally casual in nature due to the uneven surface of the lakebed. Silurian Dry Lake is located on Highway 127 less than 10 miles north of Baker on the east side of the highway. Due to its fairly small size, its primary use is permitted activities such as filming. The management objectives for each dry lake dictate the area's use and special monitoring requirements needed to protect their resource values. Table 3-6 represents the significant dry lakebeds in the NEMO Routes planning area and their recreational availability.

Table 3-6. Vehicle Access on Dry Lakes in the NEMO Routes Planning Area

Dry Lakes	Access
Broadwell Dry Lake	Approved Routes or by permit
Mesquite Dry Lake	Approved routes or by permit
Salt Dry Lake	Approved routes or by permit
Silurian Dry Lake	Open
Silver Dry Lake	Closed within WSA except Approved routes. Outside of WSA, Approved Routes or by permit.

Rock Hounding

Rock hounds from southern California and Nevada heavily use the California Desert. Much of the collecting occurs on BLM lands, with the remainder occurring largely on privately owned land, where it is subject to landowner permission. Collecting is prohibited in the National Parks and National Preserves and on most State Park lands, and on "developed recreation sites and areas," or where otherwise prohibited or posted.

Few direct conflicts between rock hounding and other land uses appear to exist. Most rock hounds prefer areas that are accessible by vehicle on the existing network of roads and trails. Table 3-7 lists the areas where minerals and rocks historically have been collected in the planning area. It does not include wilderness areas that are no longer available by vehicle.

Table 3-7. Rock Hounding Sites in the NEMO Routes Planning Area

Area	Field Office	Site	Materials	Location
Eureka Valley	Ridgecrest	Deep Springs Crystal Area (Crystal Hill) Sulphur Mine Eureka Valley	Smoky Quartz Crystals Variscite Obsidian	T7S, R36E, Sec. 9 (MDM)
Darwin	Ridgecrest	Cerro Gordo Mines Lee Mines	Numerous Minerals Lazulite	T16S, R38E, Sec. 13 (MDM) T17S, R40E, Sec. 23 (MDM)
Panamint	Ridgecrest	Surprise Canyon Panamint City Onyx Mine Ballarat	Lepidolite Idocrase, Diopside, Epidote, Wulfenite “Death Valley Onyx” (Travertine) “Ballarat Marble” (Onyx)	T21S, R45E (MDM) T21S, R45E, Sec. 11 (MDM) T22S, R43E, Sec. 6 (MDM)
Bitter Water	Ridgecrest	Ryan Eagle Peak (Eagle Mountain) Old Ryan (Lila C. Mine) Zabriski Tecopa Pass Eclipse Mine Crystal Spring Mine	Colemantie Agate Jasper Fire Opal Petrified Wood Silver Quartz	T25N, R3E, Sec. 8 (SBM) T24N, R5E, Sec. 24 (SBM) T24N, R4E, Sec. 12 (SBM) T21N, R7E, Sec. 18 (SBM) T20N, R6E, Sec. 18 (SBM) T20N, R9E, Sec. 25 (SBM)
Owlshead/ Amargosa	Barstow	Sperry Wash N. of Denning Springs	Palm Fiber, Root and Limb Sects.	
Kingston	Barstow/ Needles	Kingston Range (Horsethief Springs) Shadow Mountain Toltec Mines (Turquoise Mountain) Mohawk Mine Halloran Spring	Amethyst Azurite Turquoise Cerussite, Galena, Sphalerite, Smithsonite Azurite	T19N, R10E, Sec. 3 (SBM) T17N, R11E, Sec. 5 (SBM) T16N, R10E (SBM) T15N, R10E, Sec. 14 (SBM)
Mojave	Barstow	Ash Hill Black Ridge Bagdad Obsidianite Field	Flower Agate, Jasper, Chalcedony, Sard Chalcedony Roses, Jasper, Onyx, Perlite, Chrysocolla Obsidianite	T7N, R9E (SBM) T6N, R11E, Sec. 9 (SBM)

Shooting and Hunting

The public lands administered by the BLM in the California Desert have always been important to shooting and hunting. Recreational shooting continues to be a popular activity in the desert. The wide-open and seldom visited areas provide an appropriate place for this activity. Residents from Southern California and Las Vegas often visit the NEMO Routes planning area for target shooting, and bring firearms with them to partake in this activity.

The shooting or discharge of firearms is generally permitted on public lands, except in specified areas including wilderness in the planning area, as long as state and local laws permit such activity. Shooting within ½ mile of structures is forbidden. These activities are regulated in order to minimize conflicts and resource impacts.

The California Department of Fish and Game regulates all hunting in the desert. Hunting activity peaks during the upland game bird season, and occurs at a much lower level at other times. During hunting season, there is an increase in use of motorized vehicles throughout the planning area.

3.3.5 Transportation and Utility Corridors Lands and Realty Actions

Other than major transportation and utility corridors, the planning area contains few developments. The most frequent developments are vehicle access routes for residences and other facilities on private lands, connector utility lines, unauthorized rural dumps, and telecommunications sites. The telecommunications sites are primarily on access routes off of major highways. The dumps tend to be small areas for household items and appliances created by rural residents or campers. No permitted landfills are located within San Bernardino County in the planning area. Two permitted landfills are located within Inyo County. One of these is currently accepting only County highway maintenance materials. The other facility is accepting household wastes under permit from the State.

Portions of three major utility corridors transverse the southern third of the planning area: Corridors R, BB, and D. Corridor R is an east-west corridor, which follows and includes lands adjacent to I-40. This corridor contains a telephone line. Corridor BB is an east-west corridor, three-miles wide, which follows and includes lands adjacent to I-15. Near the Nevada state line, the corridor splits in two, and then rejoins at the Stateline. Major utilities located in this corridor include two 131 KV Alternating Current Transmission Line (Southern Cal Edison), two gas pipelines and two fiber optic cables. This corridor also includes Interstate 15. Utility Corridor D (the Boulder Corridor) is another east-west corridor, roughly parallel to Corridor BB and less than ten miles north of it. Major utilities located in this corridor include one 287 KV and two 500 KV alternating current transmission lines, one 500 KV direct current transmission line, one 40 inch gas pipeline and two fiber optic lines.

3.3.6 Vehicle Access

Access to desert resources by the public occurs for many reasons such as economic, recreation, or transportation purposes. Some access involves the use of major roads, maintained gravel and dirt roads, un-maintained dirt roads, trails and accessible desert washes. Average route density in the NEMO Routes planning area is lower than regions of the CDCA that are closer to major metropolitan areas. In 1985 through 1987, routes were designated in the planning area. These route designations have since been modified by the CDPA and the Fort Irwin National Training Center expansion, which decreased the area of BLM-managed lands subject to a casual public use network, and by CDCA Plan Amendments (NEMO 2002). The existing network is shown on Map 2-4. At the current time, approximately 1,509 miles of routes in the planning area are designated Open, in NEMO (2002) approximately 3.2 miles of routes were designated closed. This does not include routes that were already closed through CDCA Plan Amendment, most likely through ACEC plan route designations prior to 1985 at the Ridgecrest Field Office and prior to 1987 at the Needles and Barstow Field Offices.

The vast majority of motor vehicle users are brought into and through the planning area on a few major artery roads. Primary east-west access is provided by portions of National Trails Highway (Route 66) and Interstate 40 on the southern boundary of the planning area, and Interstate 15 through the southern third of the planning area. The major east-west access through the central portion of the planning area provides visitor access to Death Valley National Park. It consists of State Highway 178 which connects the state line, west through the Tecopa/Shoshone area with SH 190; and SH 190 itself, which runs west from SH 127 through Death Valley Junction and the Furnace Creek area within Death Valley National Park, to Lone Pine just west of the planning area on US 395. Primary north-south access is provided by US395 adjacent to the western boundary of the planning area, US 95 which provides access to the southeastern portion of the planning area, SH 127, which spans the central third of the planning area from Baker on I-15 northward to the state line north of Death Valley Junction, and finally, SH 168 which provides access to the northernmost reaches of the planning area.

The desert topography and geomorphic features present in the northern part of the NEMO Routes planning area limit, and sometimes prevent cross-country access. In a few places, occasional snows, rains and flash floods make routes impassable. Physical limitation (slope aspects, etc.) often provides little flexibility of alternative access to desert resources. Access may involve a single road into an area; while in other areas, particularly at lower altitudes and in valleys, several options may exist for the management of a route network. In the southern part of the planning area, desert topography and geomorphic features are relatively different, represented by broader valleys and more gently sloping mountains. This type of desert terrain provides increased opportunities for motorized vehicle access. This results in additional management pressures when attempting to create an appropriate land management balance between access to and use of the California desert. The central and northern portions of the planning area also include large areas have been congressionally closed to casual vehicle access and/or transferred to another federal agency (i.e., NPS or DOD). They do not currently have adequate boundary markings and turnarounds, as appropriate, to assist the public. To some extent, these are more inaccessible areas, but this is not always the case.

All three of the major utility corridors in the planning area include one or more major maintenance roads along the length of the corridor to access utilities that are located on side routes or within the road right-of-way itself. These major maintenance roads are some of the primary casual public access routes within the route network because they are well maintained and relatively well used.

Some parts of the planning area are within designated critical habitat and Areas of Critical Environmental Concern for threatened and endangered species. Land management planning and implementation, including access networks, must be consistent with the recovery strategies developed for the species.

Organized Competitive Vehicle Events

BLM's Multiple-Use Classification (MUC) guidelines allow for competitive OHV events in OHV Open Areas on public lands. There is one OHV Open Area within the planning area. The CDCA Plan as amended by the Northern and Eastern Mojave Plan (December, 2002) limits competitive events outside of OHV open areas to designated courses. Currently, the only designated courses within the CDCA are outside of the NEMO Routes planning area.

Dumont Dunes Open Area

The Dumont Dunes Recreation Area is located off Highway 127 north of Baker in northeastern San Bernardino County. Surrounding the Dumont Dunes Open Area are several sensitive areas, including the

Kingston Range Wilderness Area and Amargosa River ACEC to the northeast, Death Valley National Park to the west on the other side of Highway 127, and the Salt Creek ACEC to the south. The main Dumont Dunes system, though relatively small, exhibits more types of dunes than any other dune system in the California Desert. This makes for excellent OHV recreational opportunities. Since the 1960s, Dumont Dunes has attracted people to the challenge of dune riding. The recreation area attracts over 122,000 visitors annually, and this number has been increasing in recent years. Most visitors are from southern Nevada and the Los Angeles Basin.

Peak use periods in OHV open areas center around holiday weekends and the “spring break” at colleges. The net effect is a general use period from September through May of each year with the greatest use occurring in September-November and March-April. Use levels are lowest during the summer months, with the exception of holiday weekends. BLM active management presence is generally limited to peak use periods.

Through most of the 1990’s, only one permitted event was held at Dumont Dunes each year--the Las Vegas Jeep Club’s annual event over the President’s Day holiday weekend. This event operates within an area of the main dune system to avoid conflict with unrelated activities. Recently, more commercial activities have been occurring at the dunes. These events include the Suzuki Quadzillathon, an ATV hill climb drag race, and the Dune Riders Sand boarding Competition. This latter event has been held at the dunes for the past three years. This is most likely due to the increase in population in the southwestern Nevada area and proximity of the dunes to Nevada, as well as the decreased acreage and changing nature of riding areas in the Imperial Dunes in recent years.

Dual Sports Events

BLM’s Multiple-Use Classification (MUC) guidelines allow for non-competitive OHV events on designated open routes on public lands, unless routes are specifically limited. Each year, the BLM receives requests for organized touring events and other speed-limited organized motor activities. In response to this recreational demand, the BLM has prepared a programmatic NEPA document with terms and consulted with the USFWS on an organized motorcycle/OHV touring program, or dual-sports events in desert tortoise habitat. To fall under the criteria of the relevant biological opinion (USFWS 1991, as amended in 1995) the event must be non-competitive in nature, occur between November 1 and March 1, occur entirely on existing open routes, and have no more than 500 participants.

The Dual Sport Committee of District 37 of the American Motorcyclist Association applies on a regular basis for a recreation permit for use of existing routes of travel through lands managed by the BLM as part of their Dual Sport National Trail Ride. The LA-B-to-V Dual Sport Trail Ride has been a permitted event since 1984 and is limited to no more than 500 participants. The event involves dualsport and motorcycle touring through the NEMO Routes planning area.

Vehicle Touring

Casual-use vehicle touring is one of the most popular forms of recreation in the NEMO Routes planning area. Vehicle touring overlaps substantially the subject of destination recreation and, in many cases, other forms of access. Vehicle touring may be for its own sake (the view, relaxation, to get to know the country, etc.) or it may be related to rock and mineral collection, bird watching, equestrian use, technical OHV touring, historical trail use, wind-driven vehicle use, camping, hunting and hiking. Small informal group events occur on a regular basis throughout the planning area. Their use levels are currently

unknown. Occasionally route proliferation is associated with route widening to avoid difficult passage areas, intersection shortcutting, and visitation to some of the historic mining areas or other interesting locations off the beaten path.

Technical 4-Wheel Drive Touring

The technical 4-wheel drive touring routes generally receive relatively little permitted and other casual recreational use. These are challenging routes for desert touring and exploration. Travel is difficult and rough because there are fewer routes, they are generally steeper and require higher clearance vehicles for passage; include areas that have difficult soils for traction and/or large rocks, and none are maintained.

Historical Trail Touring

The off-road vehicle experience of traveling historical routes (Table 3-8) provides an educational and scenic experience of the natural wonders of a harsh desert region and the elements that the pioneers and founders of the historical route had to endure. Much of the Old Spanish Trail (Mormon Road) has been paved within the NEMO Routes planning area. Tracks of the trail can still be seen at Emigrant Pass just off the Old Spanish Trail Highway as well as at Impassable Pass at the Alvord Mountains and points west. The route leading west from the highway is closed to motorized vehicles to preserve what remains of the Old Spanish Trail. Variations of this route were traveled from 1829 to 1848, all being called the Spanish Trail, making it difficult to trace the original route. Most of the route in California is also known as the Mormon Road and became a commercial trade route between Los Angeles and Salt Lake City.

A portion of Route 66, "Old National Trails Highway," forms the southern boundary of the NEMO Routes Planning area. Route 66 was designated in 1926 and was the Main Street of America. It was the first national highway to connect Chicago with Los Angeles and was known as the "Mother Road." By 1985 however, the federal government deleted Route 66 from the Federal Highway System. Today, Interstate 40 has replaced some of the route in the Mojave Desert. Route 66 still offers travelers an interesting touring opportunity. The recent revival of Route 66 and the fact that more than 80% of the original route is still open has led to a substantial increase in travelers.

From 1905 to 1940, the Tonopah & Tidewater railroad ran from Ludlow to Goldfield, Nevada, and parallels the Amargosa River for a portion of its length in California. The line was very important for the mines, mining companies, residents and employees, even though it never financially flourished. The T&T railroad line was the fastest, shortest, and cheapest route to Los Angeles and San Francisco for all the towns and mines along the Amargosa River and Death Valley regions. The T&T railroad was abandoned and dismantled in the 1940's. Three historic crossings occurred in the high water flow segment of the river between Shoshone and Sperry siding. In order to preserve what remains of the original route, the remnant berm north from Sperry to its junction with the California/Nevada border has been closed to motorized vehicle use, and a pedestrian trail now exists on the T&T railroad, which is breached in many areas between Shoshone and Sperry siding. However, there are adjacent roads along the berm providing vehicular access for most of its length. There is a stretch through wilderness and just north of the wilderness to Tecopa that is only passable on foot through the canyon. The route adjacent to the berm is open to motorized vehicles from Sperry south to Riggs.

Table 3-8. Major Historical Trails in the NEMO Routes Planning Area

Name	Miles	Miles On Public Land ^a	Resource Values
East Mojave Heritage Trail	650	38 miles open from Rocky Ridge to Fenner. 61 miles from Needles to Ivanpah. 97 miles from Ivanpah to Rocky Ridge.	Scenic, historical, Native American values.
Old Spanish Trail/ Mormon Road	1,200	50 miles – California border to Ft. Irwin Military boundary	Scenic, historical, Native American values
Route 66	2,400	Approx. 30 miles – Section between Ludlow and Kelbaker Road	Scenic, historical
Tonapah and Tidewater Railroad	160	75 miles – 20 miles open from Riggs to Sperry	Scenic, historical

^a Miles on Public Land represent miles in the NEMO Routes planning area only.

3.4 Special Designations

Special designations in the planning area include twelve Areas of Critical Environmental Concern (ACEC), three rivers found eligible for potential inclusion in the National Wild and Scenic River System, and numerous wilderness and wilderness study areas.

3.4.1 Areas of Critical Environmental Concern

Table 3-9 shows BLM ACEC within the NEMO Routes planning area. These ACEC provide some of the most concentrated areas of sensitive resources as well as interesting resource-oriented recreation on public lands.

Table 3-9. Areas of Critical Environmental Concern (ACEC) in the NEMO Routes of Travel Planning Area

Name	Field Office	Acres ^a	Resource Values
Amargosa River ACEC	Barstow	19,000	Wildlife habitat, vegetation, outstanding scenery, riparian
Bigelow Cholla RNA	Needles	83	Botanical values
Cerro Gordo	Ridgecrest	9,073	Prehistoric and historic values, vegetation
Denning Spring	Barstow	465	Prehistoric and historic values
Halloran Wash	Needles	1,743	Prehistoric values
Kingston Range	Barstow Needles	19,620	Wildlife habitat
Mesquite Hills Crucero	Barstow	5,002	Prehistoric values
Mesquite Lake	Needles	6,731	Prehistoric values
Mt. Pass Dinosaur Trackway	Needles	628	Historic and paleontological values
Saline Valley	Ridgecrest	1,389	Wildlife habitat
Salt Creek (Dumont)	Barstow	2,205	Wildlife habitat, prehistoric values
White Mountain City	Ridgecrest	32	Cultural and historical values

^a Acres computed using Geographic Information System and include all public lands and private inholdings

Most ACECs have their own management plans, and many of these management plans include route designations within their boundaries. These route designations were taken into consideration in this effort, based on the goals of the particular ACEC. They may be modified in some instances under the various alternatives, based on the same goals as for other routes, with the proviso that consistency with ACEC Plan goals or resource conflicts need to also be examined.

3.4.2 Wild and Scenic Rivers

After completion of the 1980 CDCA Plan, regulations were published in 43 CFR 8350 (7 FR 173, Sept. 7, 1982) addressing designation of waters for the National Wild and Scenic Rivers Systems on public lands. The first step in this process is to identify what river(s) segment(s) are eligible for designation. In the NEMO Proposed Plan and FEIS (July 2002) identified segments of three rivers, the Amargosa River, Cottonwood Creek and Surprise Canyon Creek as eligible for the National Wild and Scenic Rivers System. The process for designation and consideration of the Amargosa River, including its three eligible segments, are further described in Appendix O; Cottonwood Creek and its eligible segment is further described in Appendix S, and Surprise Canyon Creek and its segments are described in Appendix T of the NEMO Proposed Plan. Eligible Wild and Scenic Rivers must be maintained until evaluated for suitability as Wild and Scenic Rivers.

Access through Surprise Canyon is being evaluated through a separate process. The Amargosa Canyon/Grimshaw Lake Natural Area ACEC provides multiple resource and recreational values in the planning area. Both areas are also currently designated as national Watchable Wildlife Sites. The Amargosa Canyon/Grimshaw Lake Natural Area ACEC are listed on numerous maps, as well as in several guidebooks and are near a “snowbird” winter use camping area located at Tecopa Hot Springs. Wild and Scenic corridor route use includes hiking, mountain biking (non-wilderness portions), and casual equestrian use, and adjacent vehicular touring. Cottonwood Creek currently receives relatively light recreational use. Unlike Amargosa Canyon, the main wild and scenic corridor route is currently open to vehicular use.

3.4.3 Wilderness

The NEMO Routes planning area encompasses all or portions of 23 areas of designated wilderness totaling approximately 1 million acres and 8 wilderness study areas totaling approximately 200,000 acres. Wilderness and wilderness study areas are congressionally designated. The Northern and Eastern Mojave (NEMO) planning area has the highest concentration of designated wilderness of any region in the contiguous U.S.

BLM manages designated wilderness and wilderness study areas within the NEMO Routes planning area, including access into those areas, consistent with the California Desert Protection Act (CDPA) of 1994, the administrative instruments (regulations, policies, etc.) from that statute, and other applicable federal statutes. These instruments identified management direction for these lands with respect to specific uses that may occur within wilderness, as well as overall goals for lands designated. Passage of the California Desert Protection Act has withdrawn the mineral deposits and potential areas from mineral entry and development in designated wilderness areas, except for valid existing rights. Access is provided to grazing lessees necessary to manage their allotments, and is usually spelled out in the terms of the lease or an allotment management plan. Congressional intent was clear that wilderness designations not lead to the creation of “buffer zones” around wilderness boundaries. In many cases, existing roads were chosen as boundaries to wilderness areas. In and of themselves, non-wilderness activities visible or audible from wilderness are not to be precluded up to such boundaries. Each wilderness and its values are described in

detail in the BLM Wilderness Booklet - October 1994, available for review at all Bureau field offices within the California Desert District.

In addition, portions of the planning area were withdrawn December 28, 2001 from most public uses and access to provide for the expansion of the Fort Irwin National Training Center, which is located north of Barstow. The total area affected in the planning area is approximately 50,000 acres. It is currently anticipated that mining at the iron deposit northwest of Baker will be able to continue, although it is now part of the Fort Irwin military withdrawal. A Record of Decision outlining limitations on public use and access is anticipated in the near future.

3.5 Regional Socioeconomic Considerations

A report to the California Biodiversity Council by the California Department of Forestry and Fire Protection prepares periodic statewide population forecasts. These forecasts are developed and updated by the Demographic Research Unit of the California State Department of Finance. A single estimate for the state, counties, and major cities is developed based on an extrapolation of the most recent (1997) available data and a specific package of methodologies and assumptions. The economic recession during the mid 1990s produced a number of unexpected changes in the domestic migration that required a significant lowering in future population projections in the most recent estimates. Since counties are the smallest unit for standard population projections, county boundaries rather than the bioregional boundaries were used to define populations of the bioregions for the analysis. In this statewide comparison of population by bioregions defined by county boundaries and the smaller census blocks, the most significant difference found was the shift in residents out of the true South Coast bioregion to the Mojave (San Bernardino and Riverside counties) and the Central Coast (Ventura). The San Joaquin Valley population also increases with the inclusion of portions of the Delta and the Sierra Nevada. With this general growth trend as background, a more focused look at the region in question follows.

The population in the NEMO Routes planning area includes a substantially higher percentage of rural residents than either the high desert (HD) or Southern California and Southwestern Nevada (SCN). The planning area is within the eastern half of San Bernardino County and eastern and southeastern Inyo County, with a very small tip in southeastern Mono County. In general, the area is sparsely populated. In the northern part of the planning area is the village of Shoshone with a population of 52, where public and emergency services are available. The community of Baker is located in the westerly portion of the planning area along Interstate 15 and has a population of approximately 464 within a 2-mile "metro" area. Baker services travelers along Interstate 15, particularly those traveling to Las Vegas. Immediately outside the southeastern part of the planning area is the City of Needles, located near Interstate 40 on the banks of the Colorado River.

Some residents in the Needles area live in the most southeasterly portion of the planning area and population density is approximately 35 people per square mile over the adjacent 26 square miles immediately northeast of Needles including the small area within the NEMO Routes planning area. By contrast, population density within remaining rural areas of the planning area ranges from a high of up to 7 persons per square mile in northern Inyo County to less than 1 person per square mile in the majority of the three counties in the planning area, with an overall average of approximately 2 persons per square mile². The overall rural composition is translated into longer average commutes to work than areas with higher urban populations. The routes of travel network serve as connectors to primary County, State, and Federal highways that serve as the main commuter routes. The major urban centers or clusters in the

² US Census, 2000, Census Summary Files, By State, by County, 100% Data, by 5-digit zip code.

Planning Area and HD, their populations, and growth rates in the most recent decade (1990-2000) include the towns in Table 3-10.

Table 3-10. High Desert Region Population Centers

Locality (CA unless Otherwise Indicated)	Population (1990)	Population (2000)	% Change (1990-2000)
Las Vegas, NV ^a	697,348	1,314,357	+88.5
Ridgecrest city	27,725	24,927	-10.1
Pahrump, NV CDP ^b	7,424	24,631	+231.8
Bishop city	3,475	3,575	+2.9
Laughlin, NV CDP ^b	4,791	7,076	+47.7
Needles city	5,191	4,830	-7.0
Searles Valley (Trona Area) CDP	n/a	1,885	n/a
Sandy Valley, NV CDP ^b	n/a	1,804	n/a
Lone Pine	1,818	1,655	-9.0
Independence CDP ^b	n/a	574	n/a
Baker CDP (within the planning area) ^b	n/a	464	n/a
Olancho CDP ^b	n/a	134	n/a
Tecopa CDP (within the Planning Area) ^b	n/a	99	n/a
Keeler CDP ^b	n/a	66	n/a
Shoshone CDP(within the Planning Area) ^b	n/a	52	n/a
Furnace Creek CDP ^b	n/a	31	n/a
Entire Planning Area^c	26,758	n/a	n/a

^a Urban area, which includes immediately adjacent cities and unincorporated areas outside of incorporated city limits.

^b And immediate vicinity. CDP stands for Census Designated Place and denotes a density settled area that is not an incorporated place. As of the 2000 census, no minimum size exists for CDPs; in 1990 all incorporated towns and CDPs of approximately 2,500 and above were included.

^c For Planning Area estimates, Inyo County (Co.) includes the Death Valley (#7), Block Groups (BG) 1 and 2 of the Independence (#5), and BG 1 of the Lone Pine (#6) Co. Subdivisions; San Bernardino Co. includes the Newberry-Baker Co. Subdivision & Tract 105, BG 1 of the Needles Co. Subdivision. The calculation excludes the small Southern Mono Co. portion of the Planning Area because the smallest census tract includes a much larger area than is within the NEMO Routes of Travel Planning Area, and the relative population in the NEMO Planning Area portion is very low.

As the table indicates, towns and cities in western Nevada, in particular, have been undergoing substantial population growth. This is not just a recent trend. While there has been slow growth over the past century in Inyo County, the following table of regional population trends illustrates towns in some adjacent counties, and in particular, those in western Nevada, and to a lesser extent, San Bernardino County, have shown a long-term growth trend since prior to 1950. A similar, growth trend is also

occurring in some other urban areas of Southern California. The information in Table 3-11 can be used to assist in projecting future vehicular use and demands, and anticipating management needs in the planning area.

As is noted in the latest (2003) census figures showing population changes in the last 3 years, these growth trends are continuing. Nevada is currently growing faster than any other state in the nation, with most of that growth in the southwestern portion of the state. California shows the highest absolute population totals and the 9th fastest population growth in the nation. Population growth in both states is primarily focused in certain fast growing middle- and large-sized urban centers and associated bedroom communities.

Table 3-11. Planning Area Region Population Changes by decade, 1970-2000

County	1970	1980		1990		2000	
	Total	Total	Percent Change	Total	Percent Change	Total	Percent Change
Mono	4,016	8,577	114	9,956	16	12,853	29
Inyo	15,571	17,895	15	18,281	2	17,945	-2
San Bernardino	682,233	895,016	31	1,418,380	58	1,709,434	21
Clark (NV)	273,288	463,087	69	741,459	60	1,375,765	86
Nye (NV)	5,599	9,048	62	17,781	97	32,485	83
State							
Nevada	488,738	800,508	64	1,201,833	50	1,998,257	66
California	19,971,069	23,667,764	18	29,760,021	25	33,871,648	14

Average incomes and major cost-of-living expenses (e.g., average housing costs) overall in the planning area are lower than the HD or SCN, which is typical of areas with more rural populations. Within the NEMO Routes planning area there is a substantial range in average incomes with the highest incomes in the very northern and northeastern portion of the planning area. However, that has not translated into more vehicles in the driveway on average in these areas. Within the planning area, the average resident has 1.5-1.9 vehicles, and has to own a primary vehicle that can navigate through the area where they live. However, within the larger urban areas of the HD and SCN, the average number of vehicles increases by almost one. Some of the additional vehicles may be off-highway vehicles or recreational vehicles for access into backcountry areas such as the East Mojave routes of travel network.

Another factor that may have an economic effect on the routes of travel network is changing land ownership patterns. The recent expansion of the Fort Irwin National Training Center (NTC) (2001) is anticipated to result in more limited public access in the long-term, within the expanded NTC boundaries. These effects are not readily quantified, and NTC has indicated that access will be provided to ongoing operations on a case-by-case basis. Some valid existing rights may be purchased or activities and associated routes may continue for the life of the permits. On the other hand, the expansion may increase NTC job access to residents in the NEMO Routes planning area.

Recent land exchanges on BLM-managed lands to consolidate public land ownership in more remote areas have resulted in improved public access in these areas and the elimination of easement needs.

NEMO-Proposed Route Designation-Plan Amendment and EA

Likewise, areas exchanged to private interests adjacent to freeways and highways could either have more limited or more improved (upgraded) access, particularly as properties are developed.

The route of travel network is being developed for casual use activities. However, subsequent consideration of permitted activities with future access that is not part of the designated route network, if there are more miles of new access route to build, could become more expensive. The cost of doing business, including environmental surveys, and potentially, consultation with federal and state biological and cultural agencies in order to get a permit or approved plan, is moderately to substantially higher for undisturbed ground than existing routes. For previously closed routes, it would depend on the reason for the route closure, the amount of rehabilitation that has occurred (current disturbance levels), and other factors. Cost of doing business for closed routes may be similar to those for open or limited routes or costs may be somewhat higher.

Travel, dining and recreation services also contribute a significant portion of the economies to small towns within the planning area (Runyan and Associates 1998). However, no quantitative studies have been completed in the East Mojave to determine what portion of visitors are driving-through the area or accessing their destinations using major roads, and how many are using the routes of travel network of the East Mojave. The majority of visitors are spending their dollars in towns on major artery routes adjacent to the planning area, on freeways, and at gateways to major destinations, due to the current overall low level of infrastructure services off of primary routes, with a few notable exceptions.

Likewise, several Native Americans reside or have tribal interests in the HD, including a tribe that resides within the Death Valley National Park which is surrounded by the NEMO Routes planning area on three sides. In addition, Native Americans have tribal lands within and adjacent to the planning area, some of which is currently undeveloped and some of which has been developed for reservation gaming open to the public. The majority of visitors to these gaming facilities are primarily spending their dollars at the gaming facilities and in adjacent towns, but the visits may also provide an opportunity for exploration of the area served by East Mojave routes of travel.

There are also internal agency benefits and costs associated with routes of travel designation, including those associated with increased closures, signage, or enhanced maintenance. The economic effects of the routes of travel network on resources and recreation management ultimately are borne by the public. Likewise, the benefits to resources and access are costs foregone by the public. These are addressed under the specific resource values analyzed for the proposed action and alternatives in Chapter 4, and will be further addressed with the development of the implementation plan in terms of the values provided by management strategies selected.

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This chapter relates the direct, indirect, residual, and cumulative environmental consequences of the route designation alternatives on Resources, Uses, and Special Designations in the affected NEMO Routes planning area. The analysis of environmental consequences in this chapter is organized by resource and use element to facilitate comparisons of similarities and differences in affects of the four network alternatives. A summary of impacts is presented in Table 2-3 at the end of Chapter 2.

NEPA and CEQ regulations, as well as BLM procedures for implementing NEPA, specify that an EA should focus only on those resource areas potentially subject to impacts. In addition, these documents stipulate that the level of analysis applied to any given resource area should be commensurate with the level of impact anticipated for that resource. Applying these guidelines to this EA, the following critical elements of the human environment are not further analyzed in this EA.

- **Access for Non-renewable Energy and Mining.** For all of the alternatives, route designation is not anticipated to result in adverse energy or mining impacts. All areas of the planning area are generally accessible under all alternatives and the casual use network will not affect the ability of potential permittees for energy leases or mining plans to submit a proposal for use of a route not within the network, if needed to access specific resource values.
- **Farmland, Prime/Unique.** Significant prime and unique farmlands are not present in the planning area.
- **Floodplains.** Substantial floodplains are not present in the planning area.
- **Indian Trust Resources.** Route designation for casual use will not impact Indian Trust Resources. Existing Indian Trust Resources are accessible from County Roads or the primary route network, and access would be made available to tribes as new Indian Trust Resources are identified.
- **Paleontology.** Route designation for casual use will have minimal impact on known paleontology resources. Any future paleontological or cultural resource discovered during surveys will be evaluated.
- **Transportation, Utility and Communication Corridors.** These corridors will not be affected by route designations for casual use. These corridors have been adopted through the CDCA Plan, and no changes to them are proposed in this plan amendment.
- **Wastes, Hazardous/Solid.** Hazardous or solid wastes from vehicle use are negligible and do not vary by alternative. This planning effort does not designate routes in intensive OHV use areas, staging, or designated camping areas (focal points of hazardous or solid waste impacts from vehicles).

- **Wild Horses and Burros.** Route designation will not affect wild horse and burro management areas, as route density will not significantly increase or decrease in burro or wild horse management areas.

The computations in these analyses assume Geographic Information Systems accuracy, as identified in the mapping source data provided. Limitations in mapping and GIS accuracy may result in small errors on specific routes, but overall network validity has been checked through a combination of on-the-ground fieldwork and historic data. One of the values of this analysis methodology is that clarifications to data can be readily integrated into the analysis.

Route designations apply only to BLM managed lands and do not apply to county and private roads. The majority of the federal lands surrounding the NEMO Routes planning area are managed by the Natural Park Service (Death Valley National Park and Mojave National Preserve). This route designation does not apply to routes on Park lands.

4.2 Resources

This section discusses the environmental impact of the alternatives considered on resources in the affected planning area. Resources are discussed in alphabetical order.

4.2.1 Air Quality

Impacts to air quality are in the form of gaseous and particulate matter emitted into the air as a result of the direct and indirect effects of use of vehicles on routes. All of the pollutants subject to analysis are addressed in federal, state and local laws, statutes, regulations and rules. The federal and state ambient air quality standards define the criteria pollutants that are part of the emissions that are typically analyzed. In addition to the criteria pollutants, there are criteria for air toxics, hazardous air pollutants (HAP), Prevention of Significant Deterioration (PSD), fugitive dust and regional haze.

In the case of the NEMO route designations, there are only a few pollutants that have the potential to be emitted by casual use of vehicles and associated activities. The analysis is further focused to look at changes in emissions that would occur as a result of various alternatives. Most activities that produce emissions would not be impacted by the alternatives and will not be addressed in this analysis. In those cases, the baseline of the No Action Alternative is unchanged (see Chapter 3 for the discussion of the Affected Environment).

The activity associated with the route designations that would have an impact on air quality is route closure and the resultant change in the amount of disturbed soil surfaces and PM₁₀ emissions. The analysis will address particulate matter (PM₁₀) emissions based upon the potential to emit, and emissions most likely to be affected by the NEMO route designations. In addition, this pollutant is important because portions of the plan area are classified as federal non-attainment areas for PM₁₀.

State Implementation Plans (SIP) are prepared for the federal non-attainment areas. These SIP are designed to result in compliance with the NAAQS by federal deadlines. These SIP are implemented through a series of rules. In addition, air quality is highly regulated by a number of additional federal, state and regional regulations and rules.

Planning Assumptions

The level of use of each route is not exactly known, although some routes incur higher use and some routes incur lower use (e.g., evaluation technique in Chapter 3 Cultural route evaluation.) The Eastern Mojave Air Quality Control District estimates PM₁₀ emissions based on 10 cars per day in the planning area on the routes of travel network. Many of the routes proposed for closure have infrequent use. Closure of a route does not necessarily mean a corresponding reduction in the miles of travel within the region. Vehicles may use other open routes instead of a closed route. This analysis assumes no reduction in overall use of the route network with route closures, a somewhat conservative assumption. Thus, it is assumed that there would be no net reduction in vehicle emissions or dust from motorized vehicles use of unpaved routes

PM₁₀ emissions can be due to vehicles using unpaved roads and wind erosion of disturbed surfaces such as dirt roads. The long-term assumption is that closed routes will eventually be reclaimed (by nature and rehabilitation action). PM₁₀ emissions from wind erosion of disturbed surface can be substantial in the planning area. These PM₁₀ emissions due to wind erosion would decrease with time, as the closed routes become less disturbed and eventually reclaimed. This analysis relates the eventual reduction in PM₁₀ emissions as routes are reclaimed. .

Proposed Action

This alternative would result in 128 miles of closed routes. The closed routes would be reclaimed by nature and scheduled for route rehabilitate actions, as needed. USEPA estimates the average emission of PM₁₀ wind erosion of disturbed soils as 1.7 pounds per acre per day. This alternative would result in approximately 186 acres, of land being closed to vehicle traffic (128 miles @ 12' wide) resulting in an eventual reduction of PM₁₀ emissions of 317 pounds per day (58 tons/year). There would be reductions in emissions of particulate matter from BLM managed lands. This would result in corresponding declines in ambient PM10 concentrations. Residual impacts would be similar to all other alternatives. Under all alternatives, reductions would not be enough from OHV closures, planning-area wide, to substantially change the number yearly exceedances of Clean Air Act PM₁₀ standards. However, no increase in exceedances is anticipated as a result of route designation and rehabilitation activities.

Enhanced Recreation Opportunities and Access Alternative

This alternative would result in 17 miles of closed routes and a correspondingly smaller reduction of 1.45 acres of bare ground in the plan area subject to wind erosion. This alternative would result in approximately 25 acres of land that is closed to vehicular traffic and a 42-lb/day reduction per day in PM10 emissions from wind erosion (4 tons/year). Residual impacts are not substantially different than the **Proposed Action**. Exceedances would be greater in number than for the **Proposed Action** on a local level, but planning-area wide the impact would not be substantially different.

Enhanced Resource Protection Alternative

This alternative would result in the most miles of closed routes, and therefore would offer the greatest benefits to air quality from reductions in PM₁₀ emissions in the planning area. The closure of 174 miles of routes would lead to a corresponding reduction of 253 acres of bare ground in the plan area (174 miles @ 12' wide). This would result in a reduction in PM₁₀ emissions of 430 pounds per day (79 tons/year) from wind erosion. There would be reductions in emissions of particulate matter from BLM managed

lands. This would result in corresponding declines in ambient PM10 concentrations. Residual impacts would be similar to the **Proposed Action**.

No Action Alternative

This alternative would result in minimal change in miles of closed routes, bare ground or emissions in the plan area in the near term. There would be minimal changes in emissions of particulate matter or ambient PM10 concentrations from BLM managed lands, in the near term. In the long-term, new-routes identified since previous route designation efforts may be closed with resulting reductions in emissions of particulate matter from BLM managed lands due to decreased wind erosion emissions. This is anticipated to amount to as much as 40 miles of routes, and would occur based on resource sensitivity and as funding is available. Residual impacts would be similar to the **Enhanced Recreation Opportunities and Access Alternative**.

Federal Conformity

A federal conformity analysis is required for any federal action within any federal non-attainment or maintenance area. There are three areas within the NEMO area that meet those criteria. These are the Owens Valley and the Mojave Desert PM10 planning areas and the Mojave Desert modified ozone-planning area. The clean air act and its implementing rules (40 CFR 93) state that federal agencies must make a determination that proposed actions in federal non-attainment/maintenance areas conform to the applicable implementation plan (SIP) before the action is taken. In addition, the action cannot cause or contribute to any new violation of the National Ambient Air Quality Standards (NAAQS), cannot increase the frequency or severity of any existing violation of any NAAQS or delay timely attainment of any standard or any required interim emission reduction or other milestones.

Conformity Analysis and Conclusion

The **Proposed Action** and the **Enhanced Resource Protection Alternatives** result in reductions of PM10 emissions and reduces ozone emissions. The **Enhanced Recreation Opportunity and Access Alternative** and the **No Action Alternative** have small or minimal reductions in the amount of emissions, respectively. None of the alternatives would increase emissions. As a result, no further conformity analysis is necessary and a formal conformity determination is not required.

4.2.2 Biological Resources - Vegetation

Despite the low use, routes by their very nature have some loss of vegetation and compacted soils. Although the total area denuded of vegetation by roads may be small, there are a variety of other effects of vehicle use on the vegetation community. Among these are the following:

- Alterations in surface water flow and percolation, especially where the roadbed is not at grade level (Trombulak and Frissell 2000);
- An increase in overall plant height, plant biomass, and foliage arthropods through "water harvesting" adjacent to compacted roadbeds (Johnson *et al.* 1975, Vasek *et al.* 1975b), yielding an overall increase in vegetation production, even after considering the denudation of the roadbed;

- Providing a corridor of dispersal for some species of noxious weeds (Trombulak and Frissell 2000). In general, noxious weeds are more easily dispersed, grow quickly, and are highly competitive relative to native species--a difference augmented by the existence of many travel corridors. Seeds of invasive plants can be transported by vehicles in tires, windshields, under-carriage components, etc. traveling on the routes;
- Changes in the fire ecology in areas due to associated increases in noxious weeds. Invasive plants spread fires where they would not normally spread in the absence of invasive plants...e.g., the presence of *Schismus* sp. and *Bromus* sp. facilitated the spread of fire in the Mojave Desert (Brooks 1999) across interspaces between shrubs. Designated routes of travel can therefore impact the long-term fire ecology of the area by affecting the relative rates of spread of invasive species and likely areas of occurrence. Generally, the alternative with the lowest density of routes would have the least adverse impacts on vegetation through the spread of invasive plants, whereas the alternative with the highest density of routes would have the most adverse impact on vegetation. Route redundancy also has an impact on fire ecology because it affects route density;
- Loss of native vegetation due to driving off of roads for camping or parking;
- Certain communities that are generally smaller in area, such as Joshua tree stands, Fremont cottonwood stands, and willow stands, are more affected by fragmentation and degradation;
- Increased occurrence of fires started by visitors.

Several annotated bibliographies address the effects of roads on vegetation and natural communities; among these are Boorman 1999, Rowland 1980, and Spellerberg and Morrison 1989. Trombulak and Frissell (2000) reviewed the literature on ecological effects of roads, and Lovich and Bainbridge (1999) reviewed a variety of degrading activities, including roads. These bibliographies and literature reviews elaborate on the effects listed above, provide additional literature, and describe other effects of roads.

The compaction and loss of vegetation that has already occurred on the more heavily used roadbeds as a result of past route use may prevent natural re-vegetation of native species consistent with the surrounding area. Therefore, designating heavily used routes of travel will have minor direct effects to the vegetation on the route, at least in the reasonably foreseeable future, although direct impacts to vegetation off-route due to associated parking and camping may have an impact, particularly adjacent to recreational destinations. However, the majority of the routes within the routes of travel network enjoy light to moderate use at the present time, depending upon location and vehicle capability requirements (e.g., 4-wheel drive route).

Many of the wetland and riparian habitats are rated under Proper Functioning Condition assessments as already at-risk or non-functional due to vehicle use, camping, parking, route proliferation, and indirect impacts that may be associated with casual access by vehicles such as some exploratory mining activity or distribution of invasive plants (*Tamarix* sp., *Arrundo donax*, etc.). Disturbance of wetland areas can lead to the introduction of spread of invasive plants. Moreover, invasive plants decrease the diversity and abundance of wildlife species that would otherwise be high in riparian areas. The impacts associated with open routes in wetland and riparian areas may range from minor, where they are fenced and have limited visitation, to substantial, where they have no fencing to control vehicular access and overnight activities are occurring, taking into consideration access to at-risk or non-functional wetlands.

Proposed Action

The UPA consisting primarily of mesquite bosque found in the Denning Spring ACEC would be protected by a partial route closure from the north, as there would be a set back from the spring covering the UPA, and the route to Denning Springs from the south to Fort Irwin National Training Center would be closed. In addition, a few wash routes would be closed under the **Proposed Action** based on resource conflicts. The lower density of routes and avoidance of sensitive riparian areas would result in a positive direct effect on vegetation, in that it would maintain the integrity of these plant communities as a whole by decreasing erosion impacts, compaction, and an indirect loss of vegetation due to driving off of roads for camping or parking. Portions of routes leading to sections of the Amargosa River drainage would also be closed, offering increased protection of these riparian habitats. Routes of travel to some developed springs in the Valley View grazing allotment would be changed from “open” to “limited” use under this alternative. Access to Mineral Spring would be “limited” under the **Proposed Action**. Under this alternative, the route leading to Badwater (a non-potable water source) would be closed. Overall riparian and wetland impacts under this alternative are low, given the sensitivity of riparian and wetland areas with vehicle access and the **Proposed Action** would offer beneficial impacts to riparian and wetland areas. The **Proposed Action** would also result in a positive benefit to vegetation due to reduced opportunity for spread of invasive species. Some redundant routes were closed in areas with problems with invasive species. However, maintenance of network and recreation access and resource limitations precludes treatment of all known areas with non-native species infestations. Residual impacts would include increased potential for noxious species along open routes in areas that already have problems with non-native invasive species, and associated long-term increasing fire management risks in these areas.

Enhanced Recreation Opportunities and Access Alternative

Under the **Enhanced Recreation Opportunities and Access Alternative**, there would be little change to the current network, and therefore no measurable benefit to vegetation resource. In the long-term, there may be decreased potential for re-vegetation on moderately used routes if anticipated casual use continues to increase as forecast, consistent with population growth, into the middle of the next century. Lightly used routes may begin satisfactory re-vegetation of native species in a fairly short amount of time, given the right environmental conditions, or it may take several years in drought conditions.

Overall riparian and wetland impacts under this alternative are moderate, given the sensitivity of riparian and wetland areas that currently have vehicle access.

An excess of routes facilitates the spread of invasive noxious weeds over time. Under the **Enhanced Recreation Opportunities and Access Alternative**, there would be little change to the current network, and no change to the current impacts to noxious species and fire ecology from the existing network. Currently, invasive species are a persistent problem in various areas of the eastern Mojave Desert, both in riparian areas and uplands; therefore, the affects of the **Enhanced Recreation Opportunities and Access Alternative** would be moderately adverse.

Routes through the Carson Slough ACEC would be open under this alternative. This includes an additional existing route not designated in the 1987 that would be open for access just within the western boundary of the Carson Slough ACEC.

Residual impacts include loss of vegetation due to driving off of roads for camping or parking, including T&E species and riparian vegetation. As with the **Proposed Action**, there would be increased potential

for noxious species along open routes in areas that already have non-native invasive species, and associated long-term increasing fire management risks in these areas.

Enhanced Resource Protection Alternative

The impacts of the **Enhanced Resource Protection Alternative** are similar to those of the **Proposed Action**. This alternative would result in the lowest density of routes and the avoidance of the most riparian areas and washes, and therefore has the greatest net benefit to vegetation communities. Both the north and south routes to the Denning Spring ACEC would be closed under this alternative, resulting in the protection of a riparian UPA, not only from vehicular access but also from non-vehicular access. Elimination of routes (regardless of the reason for the route closure) and in particular closures of routes within washes or riparian areas would have a positive effect on vegetation, in that it would maintain the integrity of the plant community as a whole by decreasing erosion impacts, compaction, and loss of vegetation due to driving off of roads for camping or parking. The impacts on riparian/wetlands would be similar to those listed under the **Proposed Action**, except additional routes in the Amargosa drainage would be closed and a route segment leading to Mexican Spring would be closed under this alternative. The lower density of routes and avoidance of sensitive washes and riparian areas of the **Enhanced Resource Protection Alternative** would also result in the most positive benefit to these resource values as well as due to reduced opportunity for spread of invasive species of any of the alternatives.

Routes through the Carson Slough ACEC and routes that access the ACEC from the south would be closed under this alternative, which would be a beneficial impact to the habitat of the federally endangered Amargosa niterwort. Residual impacts from noxious species would be somewhat lower under this alternative than the **Proposed Action** due to the greater number of redundant route closures.

No Action Alternative

Impacts would be similar to those described for the **Enhanced Recreation Opportunities and Access Alternative**. Under the **No Action Alternative**, there would be little change to the current network, and therefore no measurable benefit to vegetation resource. In the long-term, there may be decreased potential for re-vegetation on moderately used routes if anticipated casual use continues to increase as forecast. Overall riparian and wetland impacts under this alternative are moderate, given the sensitivity of riparian and wetland areas with current vehicle access. Currently, invasive species are a persistent problem in various areas of the eastern Mojave Desert, both in riparian areas and uplands; therefore, the affects of the **No Action Alternative** on vegetation and fire ecology from invasive species would be moderately adverse.

Routes through the Carson Slough ACEC would be open under this alternative. This includes an additional existing route not designated in the 1987 that would be open for access just within the western boundary of the Carson Slough ACEC. Residual impacts would be similar to the **Enhanced Recreation Opportunities and Access Alternative**.

4.2.3 Biological Resources - Wildlife

The **Proposed Action** would result in a net increase of 50 miles in the designated route network as compared to the **No Action Alternative**, including the closure of 128 miles of routes and the **Enhanced Resource Protection Alternative** would result in a net increase of 4 miles in the designated network, including the closure of 174 miles of routes. Wildlife would benefit from the closure of routes that

impact wildlife behavior (i.e. feeding, breeding, nesting, watering sites, migration corridors). Reductions in the number of redundant routes would consolidate habitats that would otherwise be fragmented under the conditions of a dense route network and that otherwise would be more vulnerable to invasive species with resulting lower diversity and generally lower wildlife values. Protection of unique habitats, such as riparian areas and certain plant communities, would also be a positive impact on wildlife for this alternative. Residual impacts would primarily include direct mortality to small critters of all types (bugs, reptiles, mammals, and birds) and an occasional larger mammal from casual and permitted users of the designated route network. In addition, increased potential for noxious species along open routes would result in lower quality wildlife habitat in those areas, as non-natives do not meet most wildlife nutritional needs as well as native species. The Enhanced Resource Protection Alternative would have the lowest residual impacts due to having the fewest open miles in that alternative route network.

The **Enhanced Recreation Opportunities and Access Alternative** would result in a net increase of 161 miles in the designated route network as compared to the **No Action Alternative**, including the closure of 17 miles of routes. Impacts to wildlife from the routes of travel network under these alternatives would depend on frequency of route use by vehicles, time of year, species density near the route, and species behavior associated with the route. Many animal species can easily cross routes of travel; nevertheless, routes with moderate to high use patterns may eventually result in habitat fragmentation and decreased diversity over time, particularly under the Enhanced Recreation Opportunities and Access Alternative. Residual impacts are similar to the Proposed Action, and slightly higher in the Enhanced Recreation Opportunities and Access Alternative because of the increased miles of routes.

Wildlife Special Status Species

The impacts of the route designation alternatives on special status wildlife species are discussed in the following section on a species basis.

Amargosa vole

There are no routes of travel within the habitat of the federally and state endangered Amargosa vole, therefore route designation under all alternatives would have no effect on the Amargosa vole or the portions of its critical habitat that contain the constituent elements of Amargosa vole habitat, which is “wetland vegetation present in disjunctive ‘pockets’ along an isolated riparian segment of the Amargosa River” (U.S. Fish and Wildlife Service 1997).

Least Bell’s Vireo and Southwestern Willow Flycatcher

Least Bell’s vireo would likely benefit from any decrease in human disturbance as it is very sensitive to noise, night lighting, and consistent human presence in an area; excessive noise can cause least Bell’s vireo to abandon an area (51 *Federal Register* 16474), whereas disturbance is expected to disrupt nesting of the southwestern willow flycatcher only when human activities are continuous, intrusive, and adjacent to the vegetation that supports a nest (60 *Federal Register* 10694).

The federally and state endangered least Bell’s vireo and southwestern willow flycatcher forage in the Amargosa River drainage, including Grimshaw Basin, Amargosa Canyon, and Willow Creek. The species is suspected to nest in this general area, although no positive proof has been provided to date (Bureau 2003a, Southern Sierra Research Station 2002). There are no routes within the central canyon

area because of its status as an ACEC starting in 1983, and its inclusion in a larger pan-Amargosa ACEC implemented under the CDCA Plan Amendment (NEMO 2002). None of the alternatives would change this existing situation in the Central Amargosa Canyon area. It is anticipated that no alternatives would have any residual effects on either species, given current information. Vireo nests found in additional locations could trigger future seasonal or permanent route closures, given sensitivity to human disturbance. These would be addressed when nests are discovered, based on proximity to the route network, per identified criteria.

The **No Action** and **Enhanced Recreation Opportunities and Access Alternatives** do not change the existing 1985-1987 route network as it exists now in the other portions of the action area in which least Bell's vireo or southwestern willow flycatcher may migrate or forage (no nesting by these species is known to occur within the remainder of the action area). Therefore these two alternatives do not alter the amount of access provided by routes to these migratory bird species, and the potential for human disturbance.

The **Proposed Action** and **Enhanced Resource Protection Alternatives** close one, and some routes, respectively, adjacent to riparian habitat far removed from the Amargosa River drainage where least Bell's vireo or southwestern willow flycatcher have been sighted. Although it is unlikely that least Bell's vireo nest outside of the Amargosa River drainage, if nesting pairs of this species do exist where route closure would occur under this alternative, or closure provides the opportunity for such nesting, substantial benefits to the species could occur.

Inyo California Towhee

The federally threatened and state endangered Inyo California towhee's habitat is very limited within the action area (Argus Range); its designated critical habitat comprises an even smaller portion of the planning area. **All four alternatives** leave the amount of routes designated as open, closed, or limited within this species habitat unchanged from the 1985-1987 network; in the 1985-1987 network designated routes were located such that they do not travel to or by springs in this area, and some roads are barricaded at their ends sufficient distances from springs occupied by species that vehicles are unlikely to disturb the species (U.S. Fish and Wildlife Service 2003). No residual impacts are anticipated.

Desert Tortoise

Common to All Alternatives

The federally and state threatened desert tortoise is found throughout the southern two-thirds of the action area except in certain sand dunes and portions of the Baker sink which lack viable habitat. By definition, habitat in the action area is Category III, which has lower population densities and generally lesser quality habitat. The following discussion is from the Bureau's biological evaluation (2004b) on the effects of the Proposed action. The discussion is based in large part on the U.S. Fish and Wildlife Service's effects analysis found in the biological opinion on desert tortoise for the Western Mojave Planning Area route designation project effects analysis (USBLM 2003c).

Roads can have both direct and indirect effects on desert tortoises and their habitat. The primary direct effect is that vehicles that are driving on routes of travel can strike desert tortoises. As is usually the case, hatchling desert tortoises are the most difficult individuals to detect and may be inadvertently struck by vehicles. However, they may be at somewhat less risk than sub-adult and adult desert tortoises because

their territories are presumably smaller, they may move around less and therefore are less likely to encounter a road. Their propensity to be more active during cooler times of the year may extend the periods during which they are at risk from vehicle strikes.

Although larger individuals can be seen on roads more readily than the younger, smaller ones, vehicles can travel at speeds that reduce the ability of drivers to detect and avoid desert tortoises. Rises and turns in roads also decrease the ability of drivers to detect desert tortoises. The actual level of mortality that would occur along a specific road will be influenced by many variables and is difficult to predict; the level and type of use of the road by vehicles and the number of desert tortoises present during periods of heavy use are primary factors that are difficult to predict. Mortality associated with vehicle strikes will be greatest in the spring and fall, in areas where desert tortoises are most common. Along heavily used roads, the number of desert tortoises is depressed for some distance from the edge of the road; along lightly used roads, Von Seckenforff, Hoff and Marlow (2002) did not detect any significant difference in the distribution of desert tortoises.

The extent of mortality of desert tortoises will increase as the density of roads and the number of animals increase. At some point, vehicle use on roads (and other activities that accompany vehicle use) would likely reduce the number of desert tortoises to a point where the level of mortality also decreases, simply because fewer desert tortoises live in the region. At the present time, desert tortoises seem to have become so rare in areas where they were formerly abundant that they are unlikely to be struck by vehicles.

Some routes of travel are located in washes. Washes can provide important resources to desert tortoises because they often support forage plants at times when upland areas do not; desert tortoises also frequently use the banks of washes to construct their burrows. At times, desert tortoises may use washes to move through their territories; they may travel along washes more frequently in extremely rugged terrain. Consequently, vehicle use in washes has the potential to have a relatively greater degree of impact on desert tortoises than the use of roads. Adverse effects would be greatest in more narrow, vegetated washes where vehicles do not have room to maneuver around shrubs or avoid riding partially up banks; the ability of drivers to see desert tortoises in these washes is also diminished. In wide washes, where flooding causes relatively frequent disturbance and few shrubs are present, vehicles can be used with little or no effect on desert tortoises or their habitat.

The human activities that routes of travel accommodate may pose a greater threat to desert tortoises than being struck by a moving vehicle because of the variety of indirect effects they can pose. Routes of travel through the desert increase the frequency at which people can interact with desert tortoises. These interactions can lead to uninformed or malicious interactions that result in injury, mortality, or collection of desert tortoises. Unauthorized handling or restraint of a desert tortoise could induce physiological stress that reduces the animal's ability to withstand high temperatures. Additionally, desert tortoises may seek shelter in the shade of vehicles parked along a route of travel and be crushed when those vehicles are subsequently moved. Improper disposal of food wastes and trash left by users of routes of travel can attract predators of the desert tortoise, especially common ravens. Pet dogs brought onto public lands by people using routes of travel could disturb, injure, or kill desert tortoises.

The Bureau's program guidance allows cars and trucks to drive and park up to 300 feet from a route of travel. This authorized off-road use can crush desert tortoises, which would be more difficult to see away from roads, destroy their burrows, crush shrubs that they use for cover, and disturb soils and allow invasion by non-native plant species. In some areas, the density of vegetation precludes most off-road travel; in other areas, vehicles would likely become mired in soft substrates. However, recreation users

seem to prefer specific sites at which they can congregate. In the planning area, these sites are generally located adjacent to major highways, including SR 127 near Tecopa and SR 95 near Needles. This frequent use degrades habitat to the point that desert tortoises would be unlikely to forage or burrow in these areas.

Routes of travel also serve as corridors by which non-native plant species can more easily invade habitat of the desert tortoise. Brooks (1998 in Boarman 1999) found that the number of non-native plant species increase near roads. At least two mechanisms seem to be at work in the process of invasion. First, vehicles may transport seeds of non-native species along routes of travel on their wheels and undercarriages. The existence of a network of routes may result in seeds of invasive plants being carried far from the sites where they were originally introduced.

Secondly, many non-native plant species tend to colonize disturbed areas more readily than native species; road beds and berms along routes of travel are highly disturbed and therefore provide ample opportunity for these species to become established and spread. Some disturbance of soils adjacent to routes of travel likely occurs. Such disturbance can be caused by routine maintenance, drivers leaving the roadbed to pass another vehicle or to avoid a wet or sandy area, and recreation users pulling off routes of travel to camp or park; unauthorized cross-county travel that is facilitated by routes of travel also contributes to soil disturbance.

Disturbance of soils can accelerate the spread of invasive non-native plant species by destruction of soil crusts and cryptogams. These non-native species, in turn, can compete with the native plant species (Lovich and Bainbridge 1999); non-native species are often better competitors than native species and may reduce the abundance of important forage plants that the desert tortoise requires for nutrients and shelter. Generally, the relatively few species of non-native plants do not contain the variety of nutrients that desert tortoises obtain from numerous species of native plants; over time, this decrease in available nutrients places desert tortoises under physiological stress.

Non-native plants can also increase the ability of the desert to carry wild fires (Lovich and Bainbridge 1999, Brooks and Esque 2002). Neither desert tortoises nor the plant species upon which they depend are adapted to fire; consequently, fires could result in a substantial loss of desert tortoises and severely alter the plant community structure within their habitat (Brooks and Esque 2002). Finally, the increasing abundance of non-native species may have a synergistic effect with human activity; most fires in the western Mojave Desert likely start as a result of human recreational activity (Franklin, pers. comm.). Even relatively few fires can transform diverse desert scrub habitat into grasslands of non-native species with low diversity.

Most observations such as those described in the previous paragraphs have been describing the result of cross-country travel or heavy use of roads. However, regarding "light" use by vehicles, Boarman (1999) notes that "very little data are available to evaluate those impacts" because most studies have been conducted in areas of heavy use. Boarman (1999) acknowledges that light use can affect habitat but that "(v)ery light, basically non-repeated vehicle use probably has little long-term impact."

Most routes of travel in the East Mojave currently are not used on such a frequent basis that they would fragment habitat of the desert tortoise. Most use of routes of travel involves recreational activities, which generally occur at higher levels on weekends and holidays. However, some routes of travel are maintained such that the bed of the road is lowered and side berms raised so much, that when desert

tortoises enter that roadway, they couldn't exit. These animals are subsequently threatened with predation, exposure to extreme temperatures, collection, and collision with vehicles.

Each alternative presents route networks that allow access to most regions of the action area to an extent that does not prevent the conservation and recovery of the desert tortoise. It follows then that since desert tortoises can be killed or injured by vehicles and access routes introduce other direct and indirect effects on the species and its habitat, the networks that provide for the largest expanses of undisturbed habitat for the desert tortoise would impact the species least. However, the U.S. Fish and Wildlife Service notes that neither the Bureau or the Service (USFWS 2002a) has definitive information on how differing route networks affect the desert tortoise; obviously roadless areas would have the least adverse effect on desert tortoises and their habitat; it follows that with increasing amounts of open routes within the action area, the greater the impact to the desert tortoise and its habitat. However, the use patterns on the open route network may be as important, particularly in areas where tortoises are more likely to be found.

Two of the these four alternatives provide for measurable reductions in the amount of identified open routes within the route network and thus are likely to provide some level of benefit to the desert tortoise greater than that provided by the No Action Alternative. The **Enhanced Resource Protection Alternative** provides a net decrease in Open Routes when compared to the No Action Alternative. Approximately 88% of routes would be designated open. The **Proposed Action** provides a small net increase when compared to the No Action Alternative; and 90% of routes would be designated open. The **Enhanced Recreation Opportunities and Access Alternative** would result in a substantial net increase in designated open routes of and 99% of routes would be designated open. The No Action alternative would provide the existing designated route network, and the 7% of newly identified routes would be designated on a case-by-case basis. For the No Action Alternative, the result would be that between 93% and 99% of the identified route network could be designated open over the long-term.

Under the **Proposed Action**, **Enhanced Recreation Opportunities and Access**, and **No Action Alternatives** there would be no prohibition on opening new routes in washes, per application of the regulatory criteria, and specific alternative criteria. The **Enhanced Resource Protection Alternative** prohibits new open routes within washes unless they are essential to the route network or no alternative exists to reaching specific destinations. Under all alternatives, residual direct and indirect impacts would occur to desert tortoise. Direct and indirect mortality would continue on and adjacent to the open route network from OHVs. Adverse effects from OHVs on wash habitat and the desert tortoise using those washes would continue, most especially under the **Enhanced Recreation Opportunities and Access**, and **No Action Alternatives**. The increased potential for non-native species would continue to adversely affect habitat along open networks under all alternatives, with relative impacts dependent upon number of open routes through areas with invasive species in desert tortoise habitat. These effects are occurring in Category III desert tortoise habitat, which is primarily lower density habitat.

Black Toad

An interdisciplinary BLM team evaluated the wetland habitat of the source waters of the state-threatened black toad at Deep Springs Lake and found the area in Proper Functioning Condition. Routes do not cross the wetland area nor facilitate cattle using the vegetation around the lake. Team members observed black toads using the area. Under **all alternatives**, the same numbers of open routes traverse riparian habitat (near Antelope Spring) on BLM lands suitable to the black toad.

Swainson's Hawk

Two nesting pairs of the state-threatened Swainson's hawk are known to inhabit Fish Lake Valley (Novak, pers. comm. 2000). Route F0036, which is near these nests is designated open under the **No Action** and **Enhanced Recreation Opportunities and Access Alternatives**. Route F0036 would be closed in the **Enhanced Resource Protection Alternative** and the **Proposed Action**. Although the nesting pairs have tolerated occasional vehicle access for many years, the additional solitude and lesser amount of vehicle noise that would be provided by closing F0036 would be beneficial to the species.

Bats and Myotis

California leaf-nosed bat, fringed myotis, long-eared myotis, western small-footed myotis, pallid bat, spotted bat, Townsend's western big-eared bat, and the western mastiff bat: are known to exist variously in the Inyo, Avawatz, Panamint, and White mountains. Natural features that the bats may use are generally inaccessible by vehicle, but bats use many readily accessible man-made features, especially active mines and abandoned mines and appurtenant buildings. Route designation under the **No Action Alternative** currently designates a number of existing routes as open within the mountain ranges just mentioned. In addition, the Amargosa River and its tributaries, (the Kingston Mountain-Silurian Hills-Kingston Wash) provide zones of bat concentration that have routes currently open for use. Many of these routes are quite rough, and thus receive relatively little use. Route designation for these designated open routes would continue under the **other three alternatives** except for a few routes closed in the **Enhanced Resource Protection Alternative** that are within the southern boundary of the Silurian Bat Area in the Silurian Hills. However, in an area such as the Silurian Hills, which is near a busy State Highway (127) and has many small active mines, route designation per se (to close or limit currently open routes would only present direct positive benefit to the bats where routes do not lead to currently active mines or mining claims that would remain open or limited until the mining sites are rehabilitated (as needed). The **Enhanced Resource Protection Alternative** would prevent many additional desert washes from being designated open, which would benefit the California leaf-nosed bat, which forages in desert washes.

Desert Bighorn Sheep

The route through Pleasant Canyon is the major route into the Panamint Range, which provides access to Death Valley National Park as well. This would remain open under **all alternatives**. Other routes with potential impacts to bighorn sheep that would remain open under all alternatives are the western N/S access into the Kingston ACEC off of Smith Talc Road, Goler Canyon and South Park Canyon. Also under **all alternatives except the Enhanced Resource Protection Alternative** an additional 4-wheel wash route in the interior of the Kingston's Wash in Bighorn Sheep habitat would remain available for use.

Western Burrowing Owl

Under the **No Action Alternative**, open routes traverse habitat in the Panamint Valley and Fish Lake Valley used by the western burrowing owl. In Fish Lake Valley, Route F0036 is designated open under the **No Action Alternative** and the **Enhanced Recreation Opportunities and Access Alternative**. Route F0036 would be closed in the **Enhanced Resource Protection Alternative** and the **Proposed Action**. Although western burrowing owls have tolerated the current levels of occasional vehicle access for many years, closing F0036 would provide the following benefits to the species: additional solitude,

decreased noise from vehicles, elimination of threat to burrows by vehicles pulling over to park, and elimination of potential for increased threat to owl habitat from anticipated future increased vehicular use.

Le Conte's Thrasher

The Panamint Mountain Range in the Ridgecrest portion of the action area may provide occupied suitable habitat for the Le Conte's thrasher. Route designation under **all alternatives** would leave routes within this habitat designated open. Impacts can be anticipated to be similar to those anticipated to least Bell's vireo near human disturbance under all alternatives.

Mojave Fringe-toed Lizard

The Mojave fringe-toed lizard generally inhabits a limited area within the Dumont Dunes OHV Area, outside of the action area where routes of travel are being designated. However, some Mojave fringe-toed lizards may occasionally move north or northwest out of the OHV Area. Under the **No Action Alternative**, routes are designated open within this potential habitat of the Mojave fringe-toed lizard. The **Proposed Action** and the **Enhanced Recreational Opportunities and Access** and **Enhanced Resource Protection Alternatives** would close a portion of Route D1612 from immediately east of the OHV area south to the Kingston wilderness; although D1612 would remain open from the west (across the north end of the OHV Area), through traffic would be eliminated, which should provide modest benefit to the species.

4.2.4 Cultural and Historic Resources

A proposed revision of the Programmatic Agreement between the Bureau of Land Management of California and the California Office of Historic Preservation has been developed to guide cultural resource management decision making concerning the use of off highway vehicles (OHV) on public lands. That portion of the revised Programmatic Agreement relating to OHV is comprised of three phases which together are designed "to identify, evaluate, assess effects, and make recommendations for resolution of adverse effects to historic properties which could result from continued use of routes of travel and their associated stopping, parking, and/or vehicular camping areas within the California Desert Conservation Area (CDCA)." Phase 1 is a study of a sample of known or potentially eligible historic properties, which coincide with areas of use by the public. Phase 2 will use a predictive model to locate historic properties along routes where such information is absent from the database. Phase 3 is an inventory of routes of travel that bound and traverses Areas of Critical Environmental Concern (ACEC) and National Register Districts. Aspects of Phase 2 and Phase 3 may be developed and implemented concurrently with Phase 1, as staffing and funding allow. Land surveyed to implement Phase 3 will be reported as work accomplished to meet BLM's requirements under Section 110 of the National Historic Preservation Act and commitments in the CDCA Plan.

A cultural resources records and literature search was conducted on lands in the NEMO Routes planning area that are transected by routes of travel. The records search included archaeological data in the California Historic Resources Inventory System (CHRIS). Using this CHRIS database and Arc Map software, GIS specialists ran an analysis of cultural resources recorded within a 600-foot corridor (300 foot on each side of the centerline of a route) of routes of travel for each alternative. The routes of travel include both improved (paved or mechanically graded), and unimproved roads. The purpose was to identify areas of potential conflict with NEMO route alternatives. The following list summarizes the route designation alternatives and their potential affect on cultural resources.

1. Proposed Action	This action calls for the closure of several, but not all, of the same roads as Alternative 3. Some routes that would remain open may have cultural resource values.
2. Enhanced Recreation Opportunities & Access Alt	This alternative calls for the enhancement and maintenance of some portions of certain roads to increase accessibility.
3. Enhanced Resource Protection Alt	This alternative would result in the closure of certain routes with cultural resource values.
4. NEMO No Action Alternative	Routes of travel would remain the same as they are at present.

In addition to cultural resources intersected by the routes of travel, Cultural Resources and Recreation specialists identified the level to which the general public uses routes within the planning area. Use level was identified as high, medium, or low according to criteria developed under Phase 1 of the Programmatic Agreement with the California Office of Historic Preservation

Common to All Alternatives

The route designation and implementation activities that may affect cultural resources include:

- (1) Implementing actions such as construction of fences or culverts, placement of signs and kiosks, and rehabilitation and restoration of routes or larger areas,
- (2) Designation of routes of travel as open to vehicle use inside or in the vicinity of cultural resources, and
- (3) Eligible or Listed properties that are transected by, or immediately adjacent to, routes of travel will continue to receive impacts by OHV use. Properties within 300 feet on either side of routes of travel may be subject to impacts due to parking, camping, or vehicular traffic.

For many of these activities, effects would be evaluated when specific actions are proposed for specific locations. Specific actions would be subject to compliance with cultural resource statutes and regulations, Section 106 of the National Historic Preservation Act, and associated consultation with the State Historic Preservation Officer and Native American tribes.

The northern portion of the planning area (to the north and west of Death Valley National Park) contains medium to low usage BLM-managed routes and consequently direct and indirect impacts on cultural resources resulting from OHV use are not substantial in this area at present. The section of the Panamint Valley south of State Route 190 (SR-190) is the most heavily used part of the NEMO Routes planning area. The routes of medium to high use in the Panamint Valley south of SR-190 (based on the route usage levels of the Programmatic Agreement with SHPO) are the regularly maintained County Roads that are not a part of this route designation effort for BLM managed lands. These include the road that crosses the valley from Panamint Valley Road to Ballarat, and the north/south Nadeau route along the west side of the Panamint Valley. These roads facilitate access to a set of medium use routes managed by the BLM that lead to the piedmont of the Argus Range, to Lookout Mountain, and canyons to the east.

To the north of SR-190 are low use level routes that are found in the Cerro Gordo, Chocolate Mountain, and White Mountain Wasa regions. These latter routes tend to be relatively short in length and typically connect to, or are seriously affected by, drainages that are sufficiently active that cultural resources, if present, are not preserved in their original depositional context. In contrast to the relatively heavily used Panamint Valley County Roads and their route offshoots on public lands, the area between Darwin Falls and Piper Peak in the northwest is more remote and receives less visitation, resulting in limited impacts on cultural resources.

Vehicle access in the central portion of the planning area south of the Death Valley National Park and north of I-15 is characterized by the full range of high, medium, low and no use. On average, the designated off-highway vehicle area (Dumont Dunes) and nearby locations (Amargosa, Salt Creek, and Kingston Mountains) receive the highest amount of public use. The Los Angeles to Barstow to Las Vegas dualsport event route also has a moderate to high use level, particularly the major linear route within the Boulder Corridor that is a wide touring route parallel to I-15. Other utility access roads and areas less accessible from County Roads and state highways generally have low and moderate vehicle use. A number of significant cultural properties have already been damaged by intense off-highway vehicle activity (i.e. Riggs Town site, large portions of the Tonopah & Tidewater Railroad) and continue to deteriorate as a result of vehicle access and other factors. Vehicle closure to a portion of the Tonopah & Tidewater (T&T) Railroad in the Central Amargosa has eliminated vehicular damage to a section of the T&T, as well as potential damage to other nearby sites.

The amount of vehicular travel on routes in the southern portion of the planning area, south of I-15 and north of SR66, is characterized by high, medium, low use, with highest use concentrated in the southern portion Needles Resource Area, adjacent to Route 66 and the Dead Mountains Wilderness Area in the vicinity of the City of Needles. The routes of travel included both improved (paved or mechanically graded), and unimproved roads. Graded and maintained utility access roads, constructed within utility corridors and rights-of-ways, provide visitors greater access to large expanses of public lands. The archaeological record reveals that no utility access roads have had a direct negative impact on eligible historic properties' nomination to the National Register as a consequence of utility access road construction.

Proposed Action

Closing the routes identified under the **Proposed Action** would enhance the preservation of cultural resources along these routes. The total extent, or number of cultural resource sites that would be protected under this alternative is not known because of the lack of cultural resource inventory (and existing analysis of impacts) along the route closures. The rehabilitation of closed routes (including unauthorized routes of travel adjacent to closed routes) will require archaeological survey, inventory, mitigation, and/or avoidance of identified eligible properties.

An active campaign of public education and law enforcement patrolling would help mitigate the potential for adverse impacts to cultural resources within, or adjacent to, rehabilitated roads and unauthorized routes of travel within the NEMO Routes of Travel Planning Area, as funding permits.

Enhanced Recreation Opportunities and Access Alternative

The **Enhanced Recreation Opportunities and Access Alternative** would not substantially change the current impacts on cultural resources. The majority of the NEMO routes of travel have not been archaeologically surveyed, inventoried, or evaluated for cultural resources. The existing routes scheduled for enhanced maintenance under this proposal pass through areas where the effects of active drainages make *in situ* preservation of cultural resources unlikely or the routes are already maintained; thus, no new disturbance is likely from enhanced maintenance activities. Enhanced maintenance under this proposal would be preceded by archaeological survey, and adverse impacts, or effects, will be mitigated as appropriate per compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, or the Protocol Agreement between the BLM and the California State Historic Preservation Officer.

Enhanced Resource Protection Alternative

The affects of route closures under the **Enhanced Resource Protection Alternative** would be similar to the **Proposed Action**, but this alternative would further enhance the preservation of cultural resources on routes closed or limited to protect cultural values. By closing additional routes with cultural resource values, potential for future loss of cultural resource values would be minimized on those routes. Potential for unauthorized use of routes would potentially increase in more popular areas, which could have adverse affects on cultural resources.

No Action Alternative

The **No Action Alternative** would not substantially change the current impacts on cultural resources by OHV use, and therefore has similar affects to cultural resources as the **Enhanced Recreation Opportunities and Access Alternative** in the near term. Case-by-case evaluation of newly identified routes may result in additional route closures or mitigation to protect cultural values.

4.2.5 Soils

The alternatives will have varying levels of impacts on soils. Impacts to soil would be primarily from presence of the roadbed itself and the action of the wheels on soil of the existing roads. The different alternatives have different lengths of routes open for vehicle use, thus the different levels of impact. The impacts of route usage on soil will be somewhat more in the northwestern portion of the planning area because the soils in that area are more sensitive to disturbance. Impacts will be generally greater under the **No Action and Enhanced Recreation Opportunities and Access (EROA) Alternatives** than the **Enhanced Resource Protection Alternative**, with the impacts from the **Proposed Action** in-between the ERP and the other alternatives.

Routes adjacent to riparian areas would have more impacts on the remaining soils because of the destabilizing nature of motorized traffic on the soil and vegetation. Roads in riparian areas can result in greater erosion during flooding. Potential problem areas include the routes in the northern part of the Planning Area, primarily in canyons on the east side of the White Mountains bordering the US Forest Service land. Under the **Enhanced Resource Protection Alternative**, some of these routes would be closed. The route through Denning Springs would be closed under the **Enhance Resource Protection Alternative** and **Proposed Action**.

The indirect disturbances to soil associated with roads are more difficult to quantify and include activities that involve stopping along roads and engaging in some activity that affects the soils. This could include camping, picnicking, hunting, unloading equipment or animals, and simply parking off the route for any reason. The impacts from this activity will be greater in areas with soils that are sensitive to disturbance, steeper topography, and wetlands and riparian areas.

4.2.6 Water

The primary impacts of the route network will be on those surface waters where the routes cross or traverse the stream flow. This is the case in Pleasant Canyon and for a number of other perennial and ephemeral stream flows in the planning area, and will form the primary differences in the impacts for the four alternatives. In some cases the routes lead to or may parallel the water course, but do not traverse the actual surface water. In these cases human impacts to the water quality may take place but will be difficult to quantify on a site-specific basis for this NEPA document without monitoring data. These impacts would take the form of any human activity that affects the quality and quantity of the water. This could include camping, fishing, hunting, bird watching, and picnicking with the potential for litter and human waste getting into the water. Another activity often associated with camping is the construction of small rock dams for swimming or bathing. Dogs are often brought along and may help reduce the quality of the water. In general, the level of direct and indirect impacts increases with increased route use. In most of the planning area, use is low to moderate and therefore these secondary impacts would not have measurable long-term effects. Infrequent route use will produce negligible, short-term impacts in the absence of other sensitive resource values. High route use can produce persistent, localized impacts near heavily used, popular areas.

At favorite places along creeks for camping, fishing, etc, this can lead to a lack of streamside cover, degraded stream banks, trash buildup, and a loss of other factors that maintain channel stability at these heavily used areas. These changes all contribute to poor water quality. Creeks like Cottonwood Creek also have the additional impacts of cattle grazing. There is no data on the impacts of human disturbance on most of these creeks but many of these have been evaluated for the impacts of cattle grazing by an interdisciplinary team. In this case, the team found that a cattle grazing was the major issue, rather than casual vehicular access and associated recreational use.

In Table 4-1 we have tried to give the reviewer an idea of the relative impacts of routes on specific waters listed in the Affected Environment. Based on this comparison, there are not substantial differences in impacts between the alternatives. It is a comparison of impacts to water quality and quantity. A thorough survey has not been completed for all the drainages with routes and jeep trails in them. This is partly true for the east slope of the White Mountains and other remote areas of the NEMO Routes planning area. Designations of these areas should be reevaluated if future monitoring reveals perennial surface water impacts would occur or are projected beyond the limits of acceptable change.

Table 4-1. A comparison of the Relative Impact on Water Resources of NEMO Route Designation Alternatives

Name of Water	Alternative			
	Proposed Action	Enhanced Recreation Opportunities and Access	Enhanced Resource Protection	No Action
Middle Park	Low	Low	Low	Low
Pleasant	Moderate	Moderate	Moderate	Moderate
Happy	Closed	Closed	Closed	Closed
Surprise	**	**	**	**
Hall	Low	Low	Low	Low
Jail	Low	Low	Low	Low
Water, Knight, Revenue, Snow, Thompson	Low	Low	Low	Low
Pat Keyes, Willow, McElvoy	Low	Low	Low	Low
Daisy, Craig, Hunter, Beverage	Low	Low	Low	Low
Wyman Creek	Low	Low	Low	Low
Cottonwood Creek	Locally Moderate	Locally Moderate	Locally Moderate	Locally Moderate
Toler Creek	Moderate	Moderate	Moderate	Moderate
McAfee and Perry Akin	Low	Low	Low	Low
Indian Garden Creek	Moderate	Moderate	Moderate	Moderate
Furnace Creek	**	**	**	**
Miscellaneous creeks on East Slope of White Mountain	Unknown	Unknown	Unknown	Unknown
Deep Springs Wetland Area***-	Low	Low	Low	Low
Amargosa River (outside Central Canyon-closed)	Locally Moderate	Moderate	Low	Moderate
Grimshaw Lake	Low	Low	Low	Low
Tecopa Hot Springs	Low	Low	Low	Low
Willow Creek	Low	Low	Low	Low
Salt Creek	Locally Moderate	Locally Moderate	Low	Locally Moderate

** To be determined under a separate NEPA document

*** Deep Spring Lake is fed by Corral Springs (Private Land), Buckhorn Springs (Public and Private), Bogmound Springs (Private), and other un-named springs

4.2.7 Watersheds

A unified watershed assessment conducted in preparation of the Clean Water Action Plan (1998) classified the watersheds into one of four categories. Category I watersheds are candidates for increased restoration activities due to impaired water quality while Category III watersheds are pristine or sensitive areas on federal, state or tribal lands that need protection. Table 4-2 presents the impacts in relative terms to the planning area watersheds of the four alternatives considered.

Table 4-2. Relative Impacts to Watersheds of NEMO Route Designation Alternatives

Watershed	Category	Alternative			
		Proposed Action	Enhanced Recreation Opportunities and Access	Enhanced Resource Protection	No Action
Eureka-Saline Valleys	I	Low	Slightly Higher	Low	Slightly Higher
Upper Amargosa ¹	I	Low	Higher	Low	Higher
Upper Mojave	I	Low	Low	Low	Low
Fish Lake – Soda Springs Valleys	III	Low	Low	Low	Low
Ivanpah – Pahrump Valleys	III	Low	Slightly Higher	Low	Slightly Higher
Death Valley – Central and Lower Amargosa	III	Low	Slightly Higher	Low	Slightly Higher
Panamint Valley	III	Low	Low	Low	Low

In the Eureka-Saline Valley watershed, the **Enhanced Resource Protection Alternative** and **Proposed Action** are nearly identical in routes open but in both cases the routes do not traverse the slopes and do not affect the watershed. The **No Action** and **Enhanced Recreation Opportunities and Access Alternatives** each allow 4- 5 more short routes onto the lower slopes, allowing a slight increase in potential impacts to the watershed.

The Upper Amargosa watershed would experience a substantial reduction in routes under the **Enhanced Resource Protection Alternative** and **Proposed Action**. It is difficult to quantify the differences because many of the changes are on the valley floor, but given the level and types of area activities watershed benefits are anticipated to occur.

There is little difference in the alternatives for the Upper Mojave watershed.

Fish Lake – Soda Springs Valleys- There is little difference in the alternatives with only 1- 3 routes in the bottom of drainages being closed under the **Proposed Action** and **Enhanced Resource Protection Alternative**.

The different alternatives would result in minor differences in affects to The Ivanpah – Pahrump Valley watersheds. A few more routes are open under the **No Action** and **Enhanced Recreation Opportunities and Access Alternatives**.

¹ This classification is due to salinity that is a natural phenomenon. According to the California Regional Water Quality Control Board, Lahonton Region, South Lake Tahoe, California and USEPA Region 9 (2000), in the Amendments to the Lahonton Water Quality Control Basin Plan, the Amargosa River is a naturally impaired water body in terms of drinking water quality, and has been removed from beneficial use designation.

The watershed in the Central and Lower Amargosa Valleys has a fairly low density of open routes under the **Enhanced Resource Protection Alternative** with one major and a few smaller routes open under the **Proposed Action**. There are about dozen routes that would be open under the **No Action** and **Enhanced Recreation Opportunities and Access Alternatives**. There is one key closure under the **Proposed Action** and **Enhanced Resource Protection Alternative** that provides access to several routes down the slopes leading to the Amargosa from the northeast, and an additional closure under the **Enhanced Resource Protection Alternative** of a main wash system accessing the Central Amargosa Canyon from the east. Closure of both of these routes would reduce impacts to the watershed.

There is little difference among the alternatives for impacts on the Panamint Valley watershed. The differences in closures are on the valley floor so there will be little difference in impacts to watersheds.

4.3 Uses

The environmental consequences of alternatives considered on uses within the planning area are discussed in this section.

4.3.1 Lands and Realty

The route designations as proposed in all of the alternatives would have no affect on land acquisitions and disposals, as these actions would continue as identified in approved land use plans.

None of the alternatives will affect valid existing rights of approved land use authorizations and future authorizations granted by the U.S. Government to specific parties. Authorized use of public lands is through the issuance of right-of-way grants, leases and permits. The route designation process does not affect existing authorized users, as they already have the permitted right of access that is subject to certain conditions to limit damage to resources. Future authorized users would be directly affected, as their proposed use of the public lands can be permitted through separate and independent analysis and decisions containing specific provisions for the protection of resources. These provisions generally provide for the use of the designated route system, where it is available, to minimize impact to BLM-managed resource values. Future users may also be indirectly affected due to variable costs of doing business under the alternatives. These costs would be anticipated to be higher where no designated route exists to a potential permit site. There are no anticipated impacts to authorized users of designated utility corridors.

Access across public lands for the use and enjoyment of private lands would be addressed on a case-by-case basis where private landowners are adversely affected by route designation decisions. The decisions will not affect any right of access that may be determined to exist to private lands, including any Revised Statue 2477 right-of-way. Such access rights and specific requests for access would involve separate and independent analysis and decisions.

4.3.2 Livestock Grazing

Cattle grazing would not be affected by the **No Action**, the **Enhanced Recreation Opportunities and Access Alternatives** or the **Proposed Action**. Under the **No Action Alternative**, no changes in the existing 1985-1987 inventory of routes would be made with respect to access to existing range improvements for cattle allotments, which would leave the status quo in place for the management of

cattle grazing in the action area. This would also be the case under the **Enhanced Resource Protection Alternative** and the **Proposed Action**.

Under the **Enhanced Resource Protection Alternative**, some routes would be designated closed to eliminate duplication of routes that access the same springs. Otherwise this alternative is the same as the Proposed Action (access still available to ranchers in some areas, but not casual public use).

4.3.3 Minerals

No substantial direct or indirect impacts to access to minerals (locatable, leasable or salable mineral-construction-materials) or mineral development would result from the **four alternatives**. There is no significant difference between any of the NEMO Plan alternatives regarding vehicular access for mineral exploration and development. For all alternatives, open vehicular access is available to at least the general area for existing mineral interest. In areas with no current routes or open routes, operators, can obtain authorization for vehicular access through exploration and development plan approvals (the exception is special circumstances such as wilderness). For example, access to mining claims and mineral deposits can be provided under an approved Plan of Operations or Notice (43 CFR 3809.11), or to deposits of construction materials such as sand and gravel under a Free Use Permit or Contract for the Sale of Mineral Materials (43 CFR 3602).

Because most route closures occur in the **Enhanced Resource Protection Alternative**, this alternative would have a somewhat larger impact on prospecting and claim staking compared with the other alternatives. Although vehicular access can be authorized in areas closed to motor vehicles through a Plan of Operations or Notice, the paperwork and bonding requirements and costs tend to discourage many prospectors, especially small miners, from obtaining the necessary authorization. The overall impact on prospecting from this alternative is considered small because most route closures eliminate redundant routes rather than curtailing access to a general area of mineral interest.

There is no significant difference between alternatives regarding vehicular access to abandoned mines. Likewise, there is no significant difference among the four alternatives regarding safety issues such as vehicle operators being attracted to abandon mine sites or vehicles falling into mine shafts. If new vehicular access is required to reach an abandoned mine site, this can be authorized, in most situations, through the NEPA process.

4.3.4 Nonrenewable Energy

No substantial impacts to oil and gas, geothermal, or uranium/thorium development are anticipated from the proposed route network in **all alternatives** because the potential for the discovery and development of these resources is classified as low. Should there be future interest in exploration for these resources, it is anticipated that access can be provided through exploration and development plans such as an Application for Permit to Drill (oil & gas) or a Plan of Operations or Notice (uranium/thorium). An area with limited potential for the occurrence of geothermal water (for heating bath houses) in Tecopa is subject to a "no surface occupancy" stipulation in designated critical habitat for the Amargosa vole (Appendix H-2, Proposed NEMO Management Plan and Final EIS). The no-surface-occupancy stipulation would be imposed if the impact analysis supports that surface disturbance will adversely affect the vole or wetlands habitat, and USF&WS supports that jeopardy opinion would occur if surface activity were allowed. Geothermal exploration and development would not be affected by route designation in the four alternatives.

4.3.5 Recreation

This section relates the impacts of the four alternatives on recreation in the planning area.

Proposed Action

The Northern and Eastern Mojave Desert would continue to offer a variety of areas and types of routes that would meet the needs of recreational users. The regional recreational needs of the public were carefully taken into account as they were weighed against other resource concerns. As a result the proposed route network largely meets public recreational access needs. The proposed route network would maintain access to a wide variety of recreational opportunities such as vehicle touring, OHV recreation including the Dumont Dunes Open Area, dual sport events, historical trail touring, wind-driven vehicle use and other dry lake bed activities, equestrian use, camping, picnicking, photography, hunting, target shooting, hiking, wildlife watching, nature study, historical site visitation, and rock and mineral collection.

The **Proposed Action** would result in a net increase of 50 miles of open and limited routes in the designated route network as compared to the **No Action Alternative**, including the closure of 128 miles of routes. Because the designated open route system consists of 1,527 miles, or 90% of the entire inventoried network (including non-designated “volunteer or legacy” routes), visitor use on these designated open routes would increase. Recreational users who cannot participate in their desired activity in one location may seek an alternate site elsewhere. The result may be “spillover” into areas adjoining or nearby the original destination of the visitor. This increases the chances of random travel, perhaps by using closed routes or cross-country, in search of a new site. In order to minimize travel on closed routes or the creation of “volunteer routes”, additional signs and other informative media can be used to direct recreational users to other locations, via designated routes, where the desired type of recreation exists. This would, however, increase workload demands on BLM staff to maintain signs along designated routes. Given the known levels of current route use, this may not yet be a route network-wide problem. However, it may become one in the future.

Visitors would still be able to experience solitude in a number of natural areas due to the size of the area and the extensive open route network that would be provided. Examples of where this solitude can still be experienced occur in the wide-open expanses of the Saline Valley area.

The proposed network provides for relatively undiminished camping opportunities throughout the planning area. Campsites in the Panamint Valley, Fish Lake Valley, Sullarian Hills, Turquoise Mountains, and Amargosa Valley, as well as a number of other areas would still be largely accessible to the public. The staging areas, trailheads, and campsites would remain available for activities such as equestrian endurance rides, rock hounding, hiking, birding and hunting.

Abundant opportunities for both dual-sport motorcycle and 4WD touring still exist throughout the planning region. These recreational route opportunities traverse a variety of landscapes and provide a variety of route conditions for varying vehicle types and skill levels. More challenging or more technical routes were left in place wherever possible, such as those located in the mountainous terrain of the Panamint Valley and Nopah Range. The network provides connectivity of routes enabling long touring routes to be created that would enable visitors to travel over large areas. Thus, a visitor, whether on a dual-sport motorcycle, ATV, or SUV may engage in multi-hour to multi-day tours or travel along the many old historic roads that lace the planning area, such as the Mojave Road, the Spanish Trail, and some

segments of the Tonopah & Tidewater railroad. Many of these historic roads and railways are noteworthy for the distance and variety of terrain that they allow the experienced desert visitor to travel.

The needs of specific recreational interest groups would be met. These include:

Rock hounds and gem collectors. Access to a number of sites and destination areas identified as important during the planning process was retained. Some of these sites included spots in the Eureka Valley, Kingston Range and Owlshead area.

Equestrians, including endurance race riders. Access to staging areas is provided, and motorized routes that parallel equestrian endurance courses were, in many cases, retained as open routes. For example routes paralleling the Argus Range and Inyo Mountains Wilderness Areas often serve equestrians entering these wildernesses, and the Amargosa trail network serves equestrians in the Amargosa Valley area. This factor weighed prominently in keeping some of these routes open.

Upland game hunters. Routes that would enable volunteers (such as Quail Unlimited) and CDFG to maintain guzzlers were retained, as were other routes that served to access hunting areas that are only utilized during the fall hunting season.

Informal and formal historic sightseeing societies. Access was retained to many old routes, mining sites, and homesteads that are of special interest to these organizations. This is important because guidebooks, maps and magazine articles publicize these sites, making them popular destinations.

Special Recreation Permittees. Access to designated routes and staging areas would still be maintained through the route designation process for such permit holders as guided sheep hunts, vision quests, and guided horseback rides.

The proposed route network would have few unmet recreation access needs. Although some areas, particularly those identified as having higher than average resource values, may have fewer routes than other areas, those routes that do remain open would provide access to meet inventoried needs. In a few areas where alternative routes may no longer be available, specific recreational opportunities would be constrained due to resource concerns

Enhanced Recreation Opportunities and Access Alternative

The **Enhanced Recreation Opportunities and Access Alternative** shares many of the same beneficial and adverse affects on the motorized route network as the Proposed Action, although many fewer routes are closed, including fewer of the newly inventoried routes. The **Enhanced Recreation Opportunities and Access Alternative** closes 17 miles of route allowing for substantially more miles of accessible routes. **This Alternative** would result in a net increase of 161 miles in the designated route network, for a total of 1661miles of designated open routes and 9 miles of limited routes. This increased number of miles of routes would lead to increased opportunities for dispersed camping and exploration relative to the other alternatives. However, it is not anticipated to provide a substantial increase in opportunity as most of the routes that would have otherwise been closed are considered duplicative, access private lands but do not provide substantial network connections, or access active mining activities and do not offer recreation opportunities that are substantially different from those offered by the Proposed Action. There are also some routes that the **Enhanced Recreation Opportunities and Access Alternative** includes based on the changes to the network brought on by the passage of the CDPA that either were not

considered in 85/87 or were closed at that time. Most, but not all, of these were also included in the **Proposed Action**.

Enhanced Resource Protection Alternative

The **Enhanced Resource Protection Alternative** would result in a slight increase of 4 miles in the designated network as compared to the **No Action Alternative**, including the closure of 174 miles of routes. The resulting network would include 1,485 miles of designated open routes, fewer than the other alternatives, but still 88% of all inventoried routes in the network. The **Enhanced Resource Protection Alternative** shares many of the same beneficial and adverse affects on the motorized route network as the Proposed Action. The **Enhanced Resource Protection Alternative** would close more routes of travel than the Proposed action. The additional route closures include wash routes, routes that access riparian areas, additional trailheads to wilderness or routes adjacent to wilderness, and routes to historic mines, and routes with other sensitive resource values. These additional closures would impact recreational users to some degree by reducing the opportunity for dispersed camping, hunting, rock hounding, and exploration.

No Action Alternative

If the **No Action Alternative** were chosen, no changes would be made to the 85/87 route designations, except for those made as a result of the California Desert Protection Act of 1994 and NEMO (2002) or other CDCA plan amendments. The **No Action Alternative** shares many of the same beneficial and adverse affects on the motorized route network as the Enhanced Recreation Opportunities and Access Alternative, except that, as a baseline designation it does not consider changes to the network since the last designation effort on a programmatic basis. Each route would be evaluated on a case-by-case basis and may be determined to be unauthorized, appropriate for plan amendment, specific to a permit and its existing rehabilitation conditions, and/or subject to evaluation at the end of the permit terms. This network would provide opportunities for dispersed camping and exploration. However, it is not anticipated to provide a significant increase in opportunity as most of the routes that would have otherwise been closed are considered duplicative, access private lands but do not provide substantial network connections, or access active mining activities and do not offer recreation opportunities that are significantly different from those offered by the Proposed Action. This is due in part because the **No Action Alternative** does not provide additional open route designations for newly inventoried routes, and therefore the overall open route network is fairly similar to the **Proposed Action**.

Since the 1985-87 route designations, several routes have been either created or identified and inventoried that have not yet been through the plan amendment process and these routes would not be part of the designated route network under the **No Action Alternative**. The routes would be treated on a case-by-case basis. Some routes would be reclaimed, some routes would likely continue to be used for the time being until a lease or permit expires and they are reclaimed or their fate is re-examined, and some routes may be individually proposed for plan amendment at some future time.

4.3.6 Vehicle Access

This section relates the impacts to motorized vehicle access of the four alternatives.

Proposed Action

The Northern and Eastern Mojave Desert would continue to offer a route network that largely meets public motor vehicle access and transportation needs. Connectivity of the route network would be maintained and the public would still be able to access all vehicle accessible areas within the Northern and Eastern Mojave Desert without difficulty. Most routes proposed for closure under **this Alternative** are considered duplicative and do not provide substantial network connections, and the **Proposed Action** includes routes that are not identified in the **No Action Alternative**. The regional access needs of the public were carefully taken into account as they were weighed against resource concerns and commercial and private property interests. As a result, the proposed route network largely meets public recreational and commercial motorized access needs.

The **Proposed action** would maintain access to a wide variety of public recreational opportunities such as vehicle touring, OHV recreation including the Dumont Dunes Open Area, dual sport events, historical trail touring, wind-driven vehicle use and other dry lake bed activities, equestrian use, camping, picnicking, photography, hunting, target shooting, hiking, wildlife watching, nature study, historical site visitation, and rock and mineral collection. Motor vehicle access and transportation needs for recreational permittees that utilize open routes would be maintained.

The route network has taken into consideration commercial interests in the development of the casual use network, including the following:

- Public safety and protection of valid existing rights associated with railroad rights-of-way, utility easements such as electrical transmission lines, communication towers (both public and military) and underground communication lines, pipeline corridors, support facilities, and the life of support and maintenance roads that may also serve public purposes;
- Protection of ranching facilities including outbuildings, corrals, water tanks, wells, and service roads, and maintenance of access to public watering facilities; and,
- Public safety and protection of valid existing rights and patented property associated with mining facilities including tunnels, pits, buildings, service roads, patented mining claims, and maintenance of public access to community pits.

Private property access would be provided to each known privately held parcel. Private property interests have been considered and balanced against public access needs, to the extent feasible in a programmatic document. Some site-specific follow-up agreements may be necessary; to provide assurances that private property and public access interests will continue to be balanced. Factors that were taken into consideration in determining the appropriate level of access were the size and remoteness of the parcel, proximity to other areas of development and/or occupancy, topographic features (e.g. canyons or ridgelines) that might bisect the property and thereby necessitate two or more points of access, safety issues, and connectivity to the overall routes of travel network and the need for the public to have through access. Routes were designated for limited access both for safety reasons and to eliminate trespass issues, as feasible. For network routes designated open that go through rather than dead-end on private lands, the potential need for easements was identified.

The **Proposed action** would have few unmet motor vehicle access and transportation needs. Although some areas, particularly those identified as having higher than average resource values, may have fewer

routes than other areas, those routes that do remain open would provide access to meet inventoried needs. In some areas, however, access needs (primarily recreational) would be constrained due to resource conflicts or would result in a short hike to a recreational destination (e.g., a spring). These shortfalls in access would be compensated by available access for similar opportunities elsewhere.

Enhanced Recreation Opportunities and Access Alternative

Like the **Proposed Action**, the **Enhanced Recreation Opportunities and Access Alternative** would continue to offer a route network that largely meets public motor vehicle access and transportation needs. Connectivity of the route network would be maintained and the public would still be able to access all vehicle accessible areas within the Northern and Eastern Mojave Desert without difficulty. The 143 miles of additional routes would lead to increased opportunities for vehicle access in some remote locations. However, it is not anticipated to provide a substantial increase in opportunity as most of the routes that would otherwise be closed are considered duplicative and do not provide important network connections.

Enhanced Resource Protection Alternative

Generally, the route network provides a similar level of connectivity and access as the **Proposed Action**. Higher numbers of duplicate routes have been eliminated allowing fewer choices of routes to access any particular part of the region. This will cause some inconvenience to visitors as they may be required to travel a farther distance to access the same point as compared to the **Proposed Action**. Additionally, the **Enhanced Resource Protection Alternative** offers a reduced opportunity for solitude provided by primitive dispersed car camping. The **Enhanced Resource Protection Alternative** includes 135 miles of routes that are not identified in the **No Action Alternative**.

This alternative would close three routes that impact the access network in the central portion of the planning area, north of I-15 and a fourth in the northern portion of the planning area. The first is a section of the road on or adjacent to the historic T&T Railroad bed between Val Jean and Dumont Dunes. This section of road is an important connection in the route network in this region. Off-highway visitors traveling from the area northeast of Baker to the Tecopa area rely on this route for access. The second closure is a portion of the Old Traction Road (AR381), the northwest boundary road of the Resting Springs Range Wilderness Area. This road provides access to the northwestern portion of the Resting Spring Range Wilderness from both the California and Nevada. Also, the **Enhanced Resource Protection Alternative** does not provide a connection between AR162 and AR0411 in the California Valley region. Again this is an important travel corridor for the region. Finally, the **Enhanced Resource Protection Alternative** closes the Wild and Scenic River route corridor along Cottonwood Creek near the Mono/Inyo County Lines. This 4-wheel drive route is lightly utilized, and provides the only motorized access to this area for non-motorized water-based recreation (fishing, camping, etc).

No Action Alternative

If the **No Action Alternative** were chosen, no changes would be made to the 1985-87 route designations, except for those made as a result of the California Desert Protection Act of 1994 and NEMO (2002) or other CDCA plan amendments. This increased number of miles of routes would lead to increased opportunities for vehicle access in some remote locations; however many are also duplicative adjacent routes. The No Action Alternative is not anticipated to provide a substantial increase in opportunity as most of the routes that would have otherwise been closed do not provide substantial network connections.

Since the 1985-87 designations, approximately 168 miles of routes have been either created or identified and inventoried that have not yet been through the plan amendment process and these routes would not be part of the designated route network under the **No Action Alternative**. The routes would be treated on a case-by-case basis. Some routes would be reclaimed, some routes would likely continue to be used for the time being until a lease or permit expires and they are reclaimed or their fate is re-examined, and some routes may be individually proposed for plan amendment at some future time.

4.4 Special Designations

There are no national recreation areas or National Trails affected by this plan amendment. Fourteen Areas of Critical Environmental Concern are potentially affected, and are discussed below. Specially designated hiking trails are discussed in the recreation section, as are nationally recognized trails. California Backcountry Discovery Trail System has not yet been designated in this area, but portions of four backcountry trail systems have been identified on BLM-managed public lands in the entire NEMO planning area (2002) and are under consideration. These are addressed in a section below. Eligible wild and scenic rivers within the planning area are potentially affected and are also discussed below.

4.4.1 Areas of Critical Environmental Concern

Proposed Action

The **Proposed Action** will enhance the conservation of resources within the Areas of Critical Environmental Concern (ACEC) by closing routes, increased monitoring and law enforcement, and public education, particularly Denning Springs, Carson Slough, Upper Amargosa, and Central Amargosa. See Table 4- 3 at the end of this Section for specific ACEC differences by Alternatives. Some OHV activity will continue through the Upper Amargosa and the Central Amargosa on designated open routes. These routes are currently lightly used, with the exception of Sperry Wash on the southern boundary of the Central Amargosa, which provides a primary gateway to the Dumont Dunes OHV Area. A wilderness area separates this route from direct access to the Central Amargosa, and provides a natural buffer to impacts on resource values in the Central Amargosa from its use.

Enhanced Recreation Opportunities and Access Alternative

The **Enhanced Recreation Opportunities and Access Alternative** makes the assumption that additional routes and enhanced maintenance under this proposal would provide for additional vehicular access that would not substantially impact sensitive resource values. Impacts may be mitigated, as appropriate, consistent with federal law. Overall, this alternative would be expected to have similar impacts to the **No Action Alternative**, and the most potential for adverse impacts overall. These potential impacts would increase in the future due to increased use in popular, including sensitive, areas consistent with anticipated population growth. It should be noted however, that all actions approved herein would be consistent with site-specific protection strategies in approved ACEC Plans, or would entail follow-up analysis (see Table 4-3 for specific ACEC differences).

Enhanced Resource Protection Alternative

The **Enhanced Resources Protection Alternative** will have a similar effect on resources within the ACEC as the **Proposed Action** but will be slightly more beneficial since vehicular access to sensitive resources would be the most limited (see Table 4-3 for specific ACEC differences).

No Action Alternative

The **No Action Alternative** would not change the potential level of impacts on sensitive resources by OHV use and or vehicular traffic within the ACEC. Some ACEC have already undergone route designation to minimize effects to sensitive resources, while other ACEC have not (generally those that do not yet have an ACEC Plan). The **No Action Alternative** would have some negative impacts on ACEC. Some effects, while minor with present levels of use, could become problematic as use increases with anticipated population growth into the future (see Table 4-3 for specific ACEC differences).

Table 4-3 presents a summary of specific ACEC in the Eastern Mojave Routes Planning Area with a focus on their values and potential impacts from the various alternatives.

Table 4-3. Areas of Critical Environmental Concern (ACEC) in the NEMO Routes Planning Area

Name & Size	Values	Impacts	Discussion
Carson Slough*	T&E plant	Beneficial impacts to Amargosa Niterwort under ERP Alternative, also to a lesser degree under PA. No change under No Action Alternative and impacts from additional casual use of the route are minor. EROA Alternative impacts are also minor, since it is an existing route, not well used, that does not connect to the network.	No substantial differences in open routes in Proposed Action and Enhanced Resource Protection Alternative within the ACEC. ERP also closes routes to limit access Alternative from the south to the ACEC. No Action and Enhanced Recreation Opportunities and Access Alternatives make no changes and one existing route remains open in Amargosa Niterwort habitat that provides access to a mine. In addition, a newly inventoried route on the western boundary of the Amargosa Niterwort habitat is open under the EROA Alternative.
Central Amargosa*	Riparian & T&E, Prehistoric and Historic values, including mining: Non-motorized recreational; Geologic; Wild & Scenic River; Wilderness Values (part).	ERP Alternative has beneficial impacts, other alternatives no change.	No substantial differences in open routes in no action, Enhanced Recreation Opportunities and Access Alternative and Proposed Action. Enhanced Resource Protection Alternative eliminates vehicle traffic into Willow Wash that drains into the Amargosa from the east.
Cerro Gordo 9,073 acres	Extensive prehistoric and historic values, including mining resources; public interpretation and scientific use; Biological Resources.	No substantial impacts to biological or cultural resources.	No substantial differences in open routes.

NEMO-Proposed Route Designation-Plan Amendment and EA

Name & Size	Values	Impacts	Discussion
Denning Spring 465 acres	Mesquite Bosque, Spring, Prehistoric and historic values. Prehistoric resources include temporary habitation, intaglio(s), lithic manufacture sites and historic mining. Scientific use.	No substantial impacts to biological and cultural resources under ERP Alternative or Proposed Action. No Action and Enhanced Recreational Opportunities and Access Alternatives could have adverse impacts that would require additional resource outlays to effectively mitigate.	Enhanced Resource Protection alternative closes entire routes to Denning Spring and Proposed Action provides access up to and eliminates vehicle traffic through Denning Spring UPA and points south to Fort Irwin NTC.
Halloran Wash 2,500 acres	Prehistoric and historic values. Halloran Spring site located on historic transportation route. Lithic procurement localities and rock art present within Halloran Wash region. Native American values and scientific use.	No known differences or substantial impacts to biological or cultural resources.	Archaeological inventory necessary to adequately evaluate existing cultural resources within boundaries of existing ACEC.
Kingston Range 19620 acres	Sp. status plants & Valuable WL & Habitat. Prehistoric and historic values.	No substantial impacts to portion South of Smith Talc Road. North of Smith Talc Road, Enhanced Recreational Opportunities and Access and No Action Alternatives could have adverse impacts to wash and cultural resources that would require mitigation measures to mitigate adverse impacts to cultural resources.	Non-wilderness portion of ACEC has no difference between alternatives. Primary N/S route open under all alternatives. Enhanced Resource Protection Alternative would limit vehicular access to fragile cultural properties north of Smith Talc Road.

NEMO-Proposed Route Designation-Plan Amendment and EA

Name & Size	Values	Impacts	Discussion
Mesquite Hills/ Crucero 5002 acres	Prehistoric and historic values. Prehistoric Crucero Barstow habitation; faunal, floral, and lithic reduction, rock alignments/features, historic transportation and mining. Scientific use.	Most routes in ACEC have been closed. No substantial impacts to cultural or biological resources.	No substantial differences in alternatives.
Mesquite Lake 7251 acres	Limited prehistoric values and Traditional Cultural Property. Mesquite trees around old lakebed provided abundant plant food resources to Native Americans during Prehistoric and Protohistoric Periods. Native American Traditional Cultural Property and scientific use.	No substantial impacts to cultural or lakebed resources within ACEC.	No substantial differences in alternatives.
Mountain Pass 628 acres	Paleontological values. The Dinosaur Trackways represents the only known occurrence of fossil Mesozoic reptile tracks in California. Three Bipedal and 4 quadrupedal reptile species Tracks have been recorded on-site. Public interpretation and scientific use.	No substantial impacts to paleontological resources within ACEC	Under all alternatives, road closure of entrance to resources, and planned fencing/gating/parking and interpretative trails will minimize unauthorized off-road access from OHV traffic east of ACEC, consistent with the existing ACEC Plan.
Saline Valley	Biological Resources	None	Bulk of area transferred to DVNP, remainder in Wilderness

Name & Size	Values	Impacts	Discussion
Salt Creek Hills 1,743 acres	Riparian and Spring values, Prehistoric and historic values. Prehistoric resources include temporary habitation sites, food procurement sites, lithic manufacture, historic mining and historic transportation routes. Scientific use and resource interpretation for general public.	No significant impacts	No differences in open routes. Fencing has been erected to minimize unauthorized off-road access from OHV area to the north.
Upper Amargosa*	Biological & Cultural Resources	ERP Alternative would result in beneficial impacts to cultural and riparian resources. Proposed Action would result in minor beneficial impacts to biological resources.	Proposed Action and ERP Alternative have a few and several more routes closed in and through the ACEC.
Warm Sulphur Springs	Biological Resources	Low from all alternatives	No Plan written, scheduled for 2004/5. Single major route passes to east of the ACEC, open under all alternatives.
White Mountain City 32 acres	Prehistoric and extensive historic values. Prehistoric values include significant habitation sites, rock shelter(s), pictographs and petroglyphs, and remnants of a 19 th Century mining town. Native American values, public interpretation and scientific use.	No substantial impacts.	No differences in open routes.

4.4.2 California Back Country Discovery Trail System

Under all of the alternatives, most of the routes that are also identified in the proposal for the California Backcountry Discovery Trail system would be designated open. In those cases where certain routes were recommended for closure under one or more alternatives due to resource concerns, alternative open routes are available to maintain the continuity of the backcountry touring system. This includes portions of four

proposed CBDT Routes: These are CBDT Routes 5, 6, 7, and 9. Together they offer a comprehensive look at the California Desert, its resources and its history.

Proposed CBDT Route 5 enters the NEMO Routes Planning area in the Panamint Valley. Route 5 turns and heads through Darwin and then northwest of Death Valley on the east side of the southern Inyo Mountains, ending after traveling through the Historic Mining town of Cerro Gordo. CBDT Route 6 follows the Historic Mojave Road. The Mojave Road, also known as the Old Government Road, also began as an Indian trading route. In the late 1800's, the U.S. Cavalry began using the route as western settlement began to move through this area. The road is rich in natural resources, history and prehistory. Proposed CBDT Route 7 enters the NEMO Routes Planning area west of Baker. Route 7 works its way to the Kingston Corridor and then heads through Tecopa on its way to its final destination, Death Valley Junction. Proposed CBDT Route 9 enters the NEMO Planning area (2002) north of the Sacramento Mountains after crossing under I-40 and continues northwest to Piute Springs where it links with CBDT Route 6.

The CBDT routes are expected to be more heavily used than surrounding open routes due to the additional maps, publicity and signage associated with them. This trail system would result in more adverse affects to resources on these routes and fewer adverse affects to avoided resources in other areas, as the CBDT routes are not likely to appreciably increase overall touring beyond that already anticipated. Rather, the California Backcountry Trail System will provide an additional recreational opportunity that provides a relatively safe and accessible scenic touring experience to the diverse audience already anticipated in the future.

4.4.3 Wild and Scenic Rivers

Proposed Action

The routes within and in the vicinity of the area of potential affect of the Amargosa River segments that have been found eligible for the National Wild and Scenic Rivers System would not be affected under the **Proposed Action**. The Central Amargosa Canyon was closed to vehicular traffic prior to the CDCA Plan. In addition, route designation that occurred at the time of the development of the Amargosa Area of Critical Environmental Concern Plan (1983) covered the remaining Wild and Scenic River area that is potentially affected by NEMO Routes of Travel. The area within the Dumont Dunes OHV Open Area will not have routes designated within its boundaries, consistent with the CDCA Plan. One route on the boundary of the OHV area adjacent to Sperry Wash is proposed for closure and would result in minor benefits to the Amargosa and its watershed.

Cottonwood Creek would be available for use under the **Proposed Action**, which would result in continued 4-wheel vehicular access to the diverse recreational and excellent scenic "outstandingly remarkable values" that contributed to the eligibility and potential recreational classification. The rich diversity of wildlife, and in particular bird species, and associated habitat, may be adversely affected by vehicular use, particularly in the vicinity of potential nesting habitat. These impacts are not substantial, given the difficulty and relative isolation of the Cottonwood Creek route, which results in a relatively low level of use.

The Surprise Canyon Route is being analyzed through a separate environmental document, and is not part of this designation effort or planning area. There would be no affect under the **Proposed Action**.

Enhanced Recreation Opportunities and Access

The **Enhanced Recreation Opportunities and Access Alternative** would have the same effects on Wild and Scenic Rivers as the **Proposed Action**.

Enhanced Resource Protection Alternative

The **Enhanced Resource Protection Alternative** would have the same effects on Wild and Scenic Rivers as the **Proposed Action** except that Cottonwood Creek would not be available for motor-vehicle use under the **Enhanced Resource Protection Alternative**, which would result in elimination of vehicular access to the water-based recreational and scenic outstandingly remarkable values (ORV) that contributed to the eligibility and potential recreational classification. The segment would still be eligible under the National Wild and Scenic Rivers Act for its recreational and scenic ORV, given the non-motorized activities and values within the river segment. The rich diversity of wildlife, and in particular bird species, and associated habitat, would benefit by the elimination of vehicular use, particularly in the vicinity of potential nesting habitat, as would equestrian and other non-motorized trail use. These benefits are not substantial, given the relative isolation of the Cottonwood Creek route that currently results in a relatively low levels of conflict, but may increase in the future with increased vehicular use or with the verification of impacts to nesting T&E birds.

No Action Alternative

The **No Action Alternative** would have the same effects on Wild and Scenic Rivers as the **Proposed Action** except the route on the boundary of the OHV area adjacent to Sperry Wash would not be designated closed and would not result in minor watershed benefits to the adjacent Amargosa Wild and Scenic River segment and its watershed.

4.4.4 Wilderness and Wilderness Study Areas

All routes in federally designated wilderness areas were closed to vehicle use with the designation of the areas as wilderness by signing of the California Desert Protection Act in 1994. Therefore, all alternatives do not include the designation of any routes of travel (either open or closed) within wilderness for casual public use. All routes within wilderness were closed with their designation as wilderness under the California Desert Protection Act (1994). There may be a few routes within wilderness that show up on NEMO route designation maps as closed, such is the case with route number NN 0398 in the Mesquite Mountains Wilderness. However, this is just a correction to inventory data and not an actual change in designation or management.

The route designation process may help to reduce illegal vehicle use in wilderness by further educating the public on where open routes are located and where vehicle use is allowed and prohibited in the planning area. There are several routes under the **Enhanced Resource Protection Alternative** proposed for closure that provide access to National Park Service and BLM wilderness areas and boundaries because they provide multiple trailhead access points from a similar direction to the wilderness, have resource sensitivities, and/or have proven difficult to manage in the past with existing and anticipated future resources. A few of these were also selected for limitation or closure under the **Proposed Action**.

Wilderness Study Areas (WSA) was not a consideration for closure under the **Enhanced Recreation Opportunities and Access Alternative** and was not the primary consideration for closure under the

Proposed Action. Routes may have been limited or closed for other reasons under the **Proposed Action**. The fact that a route is located in a WSA was taken into consideration in the final analysis, based on WSA guidance of 43 CFR 8342.1(a). Under the **Enhanced Resource Protection Alternative**, positive steps were taken to enhance an area's potential wilderness values by decreasing route density in WSA if the overall route network would not be compromised. Therefore, the **Proposed Action** and **Enhanced Resource Protection Alternative** both have a net benefit of reduced miles of routes in WSA, and the **Enhanced Resource Protection Alternative** makes the greatest reduction of routes within WSA.

4.5 Socioeconomics

The following summarizes the socioeconomic impacts of the four alternatives

4.5.1 Proposed Action

The **Proposed Action** would meet the access needs of the resident and visitor population to the East Mojave for transportation, work, visiting, and recreation for the reasonably foreseeable future. Economic effects include small increases in the cost of doing business in some more remote areas, and decreases in other areas, as compared to the **No Action Alternative**. The beneficial economic effects of the alternative include indirect benefits to tourism.

4.5.2 Enhanced Resource Protection Alternative

The **Enhanced Resource Protection Alternative** would meet access needs of the resident and visitor population to the East Mojave for transportation, work, visiting, and recreation for the reasonably foreseeable future. Economic effects include moderate increases in the cost of permittees doing business in some areas, and decreases in other areas, as compared to the **No Action Alternative**, and moderate increased recreation management costs. Other economic effects of the alternative include indirect benefits to tourism.

4.5.3 Enhanced Recreation Opportunities and Access Alternative

The **Enhanced Recreation Opportunities and Access Alternative** would meet the access needs of the resident and visitor population to the East Mojave for transportation, work, visiting, and recreation for the reasonably foreseeable future. Economic effects include small decreases in the cost of permittees doing business in some areas, as compared to the **No Action Alternative**, and moderate increased resource protection costs. The beneficial economic effects of the alternative include indirect benefits to tourism.

4.5.4 No Action Alternative

The **No Action Alternative** would meet the access needs of the resident and visitor population to the East Mojave for transportation, work, visiting, and recreation for the reasonably foreseeable future. Economic effects include small increases in the cost of doing business in some more remote areas, and decreases in other areas, and moderate increased resource protection and recreation management costs. The beneficial economic effects of the alternative include indirect benefits to tourism.

4.6 Environmental Justice

Executive Order 129898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires each federal agency to “Identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low-income populations”. Following CEQ guidance, the BLM analyzed the effect of its actions on human health which include bodily impairment, illness, infirmity or death, and environmental effects which include ecological, cultural, human health, economic or social impact. General socioeconomic impacts are addressed separately.

The analysis of the environmental consequences of the alternatives, including the Proposed Action, did not demonstrate or reveal any direct or indirect effects on human health. The alternatives have inconsequential effects on air and water quality and do not result in production of toxic or hazardous products. The **Proposed Action** results in minor loss of recreational opportunities such as hunting, camping, vehicle driving and rock hounding and overall provides casual access throughout the planning area. There is no evidence to indicate that the minority and/or low-income populations would be disproportional consumers of these recreational opportunities. The Proposed Action or any potential decisions that would result from the Proposed Action or other alternatives do not affect the travel, dining and recreational services and associated employment, which customarily involve low-income workers.

Within the NEMO Routes planning area, the population was invited to participate through the mass media, and mailings to organization and to individuals. Public meetings and/or workshops were conducted in Ridgecrest, Tecopa, Yucca, Lone Pine and Las Vegas. There were consultations with the Fort Mojave, Chemehuevi, Las Vegas Piute, and Timbisha tribal representatives and issues from these meetings, consultations and from written (including email) comments were addressed in this plan (see Chapter 5).

4.7 Cumulative Impacts

Bureau of Land Management regulations implementing NEPA require that the cumulative impacts of a proposed action be assessed. CEQ regulations implementing the procedural provisions of NEPA define cumulative effects as: “The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” (40 CFR 1507)

This cumulative analysis tiers off of the Cumulative Analysis found in the Northern and Eastern Mojave Proposed Plan/Final Environmental Impact Statement (July 2002). The cumulative analysis in this document therefore does the following:

- Briefly summarizes the previous cumulative analysis as it relates to access issues;
- Focuses on the relationship of the overall cumulative effects already discussed in the 2002 document and the specific analysis in this document for the NEMO Routes of Travel planning area; and
- Clarifies and/or modifies the previous cumulative analysis with new information from this analysis as appropriate.

Where there has been no change in the previous analysis the conclusions of the previous document are briefly summarized and the reader is referred to the NEMO Proposed Plan/FEIS for more detail.

The NEMO Proposed Plan/FEIS (2002) cumulative analysis lists and briefly describes many of the other activities and plans occurring in Southern California and Southwestern Nevada that impact various activities and uses within the NEMO Routes planning area. The NEMO Proposed Plan discusses these and other factors that affect access in the NEMO Routes planning area and the cumulative effects of access changes in the cumulative effects region (CER) and relates both of these to past, present, and reasonably foreseeable actions that would occur as a result of designation of routes in NEMO. The CER for which effects of route designation for the NEMO Routes of travel area and other past, proposed, and reasonably foreseeable actions that would be cumulatively recorded or experienced varies by resource as noted herein, but generally includes the entire California Desert Conservation Area (CDCA) and southwestern Nevada, and, where appropriate, a wider regional context. Therefore, there are two main analytical frameworks considered in this cumulative effects analysis of route designation for the NEMO Routes of travel area:

- Route designation activities or activities with similar impacts to route designation (loss or gain of public or other vehicle access to areas) that are occurring within the NEMO Routes planning area and the CER.
- Other activities within the current planning area that similarly affect (as do access changes) resource values and uses.

The cumulative analysis within the Northern and Eastern Mojave Proposed Plan/Final Environmental Impact Statement addresses cumulative effects for the following resources and activities/uses which may be affected by or may affect access in the planning area: vegetation and wildlife; air quality; cultural resources and Native American values; recreation resources and activities; minerals and mining; vehicle access; and socioeconomic resources. The analyses for these issues are adequately addressed² and would not be substantially modified by the **Proposed Action** and **Alternatives** except with respect to vehicle access and recreation resources and activities. Therefore this cumulative treatment will focus on how the adoption of the **Proposed Action** as the **Proposed Plan** would modify the cumulative effects with respect to these two factors. In addition, the socioeconomic analysis provides additional local context for regional analytical framework.

4.7.1 Major Past, Present, and Reasonably Foreseeable Actions.

As stated in the NEMO Proposed Plan/EIS (2002), one of the CDCA Plan (1980) decisions included designations of Routes of Travel in limited use management areas. These were to be accomplished later. In 1985 this was accomplished in areas of public lands overseen by the Ridgecrest field office and in 1987 in areas of public lands overseen by the Barstow and Needles field offices. Route designation was accomplished in the same time framework in other parts of the CDCA to implement the CDCA Plan.

² One modification would be to amend the importance of the continuing urbanization and growth in areas immediately adjacent to the planning area, Pahrump, NV, and the greater Las Vegas, including the Stateline area as a potential threat to vegetation and wildlife habitat in the Amargosa watershed. Potential loss of habitat, including sensitive habitats, may come as a result of the loss of water from depleted watersheds, as groundwater is redirected across the Stateline to feed the fastest growing communities of the nation, those in southwestern Nevada. Many of the species in this basin are water-dependent, and dewatering the Amargosa aquifer may have as yet unanticipated indirect affects on wetland habitats. Ongoing aquifer studies are underway to better understand the capacity and linkages between the groundwater and surface waters in the area, and the limits of acceptable change to the system.

There have been several substantial actions and proposals since these route designations that affect access in the desert. These actions have resulted or have the potential to add to cumulative impacts for one or more resources being affected by the NEMO Routes of Travel designations. A listing of the most significant of these follows. Whether or not these are individually mentioned in the sections, they have or have the potential for substantial effects, based on the amount of land base they may affect or change in land use they could produce, not only within their boundaries, but regionally (at least indirectly).

- **Bioregional Plans:** West Mojave (WEMO), Northern & Eastern Colorado Desert (NECO), Northern & Eastern Mojave Desert (NEMO), Coachella Valley, and Imperial Sand Dunes Plans collectively encompass most of the California Desert Conservation Area. Las Vegas RMP encompasses southwestern Nevada adjacent to the NEMO planning area (2002), and the Colorado River Multi-species Conservation Plan encompasses a strip along the Colorado River in northwestern Arizona adjacent to the CDCA. All of these have recently been approved or are anticipating approval shortly to address protection of sensitive and listed species, and other goals as identified in each plan.
- **Route designation plans.** WEMO, NECO, NEMO (part), WECO, Imperial Sand Dunes Plan and LVRMP all have included or updated routes of travel designations for all or part of the planning areas, often in conjunction with the above mentioned bioregional plans.
- **Route Closures pursuant to Lawsuit:** Various vehicular closures (eleven in all) put in place pending completion of specific bioregional plans or otherwise fulfilling lawsuit requirements that have resulted in interim loss of access in low-use to high-use areas throughout Southern California for multiple years.
- **Fort Irwin Military expansion Act of 2001:** Legislation approved in 2001 expanded the Fort Irwin boundary south, east and west by about 130,000 acres, including approximately 50,000 acres that were within the 1987 NEMO Routes of Travel designation area. BLM administered, state, and private lands were transferred to the U.S. Army. Impacts of the action are subject to mitigation, to be identified in an ongoing Congressional EIS.
- **California Desert Protection Act of 1994 (CDPA):** Legislation that established 69 wilderness areas, including nearly 3.8 million acres of BLM managed lands, the Mojave National Preserve (MNP), and expanded Joshua Tree and Death Valley National Monuments and redefined them as National Parks. With this act, half of the CDCA was included in military reservations, national parks, or wilderness areas. The remaining lands are equally split between private and BLM-managed public lands.
- **California Wild Heritage Act of 2002 (Pending S 2535):** A Senate bill to establish additional wilderness areas in California, including up to approximately 350,000 acres of lands within the CDCA that are primarily BLM-managed lands.
- **Wildlands-Catellus Acquisition and Exchange:** Approximately 322,500 acres of land that recently were added to the lands managed by the BLM.
- **Urban expansion and Population Growth:** The expansion in population and supportive developments within and adjacent to the NEMO Routes planning area. The most notable areas are Las Vegas and Pahrump Nevada and adjacent areas of southwestern Nevada. A secondary

urban expansion phenomenon is occurring in areas of Southern California, including parts of San Bernardino and Riverside County that provide visitors to the NEMO Routes planning area.

- **Interstate I-15 Expansion** – Features include a third lane in both directions to handle increasing traffic.

4.7.2 Vehicle access

The list of cumulative effects on vehicular access is substantial and were analyzed in the NEMO Plan/FEIS (2002, p.4-144), which concluded the following with respect to casual vehicular access within the CDCA,

“taken together with reasonably foreseeable actions, cumulatively significant impacts to access have occurred by a foreclosure of substantial portions of the public access network on public lands that is no longer available by motor-vehicle or has significant restrictions to access, and route designations further contribute to those impacts by providing some limitations to access on the remaining public route network. These impacts are somewhat offset by the provision of a reasonable public access network, that is usable and meets public needs.”

The NEMO Plan/FEIS (2002, p.4-144) analyzed cumulative effects of route designation in the CDCA in conjunction with the identification of a process for route designation in the planning area, and the specific designation of routes within NEMO desert tortoise bioregions³. Table 4-4 summarizes the miles of route designation (and area designation for the Imperial San Dunes Recreation Area Management Plan) in the CDCA.

Table 4-4. Summary of Miles of Open, Limited and Closed Routes within the CDCA

Plan Name	Plan Status	OPEN Route Miles	LIMITED Route Miles	CLOSED Route Miles	Planning Area (acres)
NECO	ROD 12/20/02	4,739	4	239	5,500,000
NEMO— In Desert Tortoise Bioregions	ROD 12/20/02	651	66	70	400,000
Outside Desert Tortoise bioregions	This Plan Amendment	1,527	32	128	2,900,000
WECO	DR 01/31/03	1,116	279	922	475,000
West Mojave Routes	DR 06/30/03	5,054	51	2,391	9,500,000
ISDRAMP	Final EIS 05/03	99,581 ac.	33,289 ac.	26,202 ac.	160,000
Coachella Valley Plan Amendment	ROD 12/27/02	47	0	71	1,200,000

Note: DT= Desert Tortoise, ROD = Record of Decision, DR= Decision Record, EIS= Proposed Plan and Environmental Impact Statement

³ Desert tortoise bioregions are comprised of USFWS critical habitat, and BLM designated Category I and II habitat.

This analysis focuses on the additional designation of routes within the NEMO Routes planning area (areas outside desert tortoise bioregions) and whether the **Proposed Plan** or other Alternatives incrementally result in a substantial change in the previous NEMO analysis.

Approximately 24 percent of the public land acreage within the CDCA (about 2.3 million acres) is within the NEMO Routes Planning area. About 55% of this is non-wilderness, and is addressed in this **Proposed Plan** Amendment. Some of the area designated under this amendment includes wilderness study areas that were not designated as wilderness, and are awaiting Congressional action to either designate or release lands. Additional loss of access through future Congressional wilderness designations could have substantial incremental effects on vehicular access and the route network, including routes that provide the remaining connector routes between areas, with notable exceptions.⁴

Interim closures have affected approximately 1 million acres of land in the CDCA pending the outcome of route designation analyses, ranging from closures in habitat, wash areas and camping closures for desert tortoise that provide for some vehicular access through areas, seasonal route closures in bighorn sheep habitat, and partial OHV open area closure to all vehicular access. These are not located in the NEMO Routes planning area and would not be directly affected by this plan amendment.

Approximately thirty percent of these closures have now expired. Interim closures in two of these areas, covering approximately two-thirds of the routes in desert tortoise habitat within West Mojave, and approximately 49,300 acres (36.7%) of Pierson's milkvetch habitat in the Imperial Sand Dunes OHV Recreation Area are still in effect. All of the interim closures have resulted in loss of vehicular access for a period of approximately three years on average except in these latter two areas that will be available when decisions are signed, anticipated later this year.

Route networks adopted during subsequent planning analyses have incorporated interim route closures to some extent and modified and/or adopted other strategies elsewhere. The loss of access from interim closures in portions of San Diego County (ISDRA) has been one of the factors contributing to increased recreational use within and adjacent to the Dumont Dunes OHV Open Area in the NEMO Routes planning area in the last few years, as discussed in the NEMO Proposed Plan/FEIS (2002).⁵

Based on this analysis, route designation within the NEMO Routes area could potentially have a substantial incremental effect on cumulative vehicular access and the CDCA route network depending on the answers to the following two questions:

- How much is vehicular access constrained on its face value?
- Are there specific aspects of vehicular access that are substantially further limited or substantially more available than previously as a result of this designation effort?

⁴For example, the DV17 WSA that separates Death Valley National Park from Fort Irwin National Training Center does not provide any substantial public lands access network access, although it may provide local access if the adjacent jurisdictions make routes into the area available.

⁵ Routes are not designated within NEMO OHV Open areas. Some routes within open areas continue outside of open areas, and some routes serve as the major access points into and out of OHV Open Areas.

All alternatives provide a serviceable and useable system of routes of travel for casual vehicular use within public lands. Each alternative provides a different balance of access versus protection of sensitive resource values, and consideration of non-casual route user needs⁶. All regional routes (459 miles) in the network are open under all alternatives. Under the **Proposed Plan**, 1,527 miles (90%) of routes would be open including 85 percent of the new routes not previously designated in 1985 and 1987; 128 miles would be closed (8%), and 32 miles would be limited (2%). The **Proposed Plan** takes into consideration the large-scale land ownership and vehicular access changes that have taken place since the mid 1980's, as well as local resource sensitivities and conflicts with other uses.

Under the **No Action Alternative**, 1,509 miles of routes are available for use. Under both the **Proposed Plan** and the **Enhanced Recreation Opportunities and Access Alternative**, the route network mileage designated open would increase. This is the result of newly identified routes since the last route designation effort. Many of these routes currently may be available for use, but some action to close, rehabilitate or evaluate and take further action on them will take place in the reasonably foreseeable future if the **No Action Alternative** is selected, depending upon each route's specific history.⁷ The **Enhanced Resource Protection Alternative** would decrease the open routes in the network by 24 miles or about 2%. This decrease would not substantially impact vehicular access overall.

Some route closures, and therefore localized access restriction would occur under the **Proposed Plan** and the **Enhanced Resource Protection Alternative** to specific areas that are no longer readily accessible by motor vehicle. Overall, vehicle access for most recreational activities and other exploratory activities would not be substantially affected in the network. Under the **Enhanced Resource Protection Alternative**, the elimination of a popular north/south "dualsport" route would result in further costs to this permitted activity, which is currently limited under the existing biological opinion with US Fish & Wildlife Service to designated open routes.⁸ This loss would be somewhat offset by potential use of newly designated open routes as "dualsport" routes. However, few long-distance routes exist in the NEMO Routes planning area that avoid wilderness and other sensitive areas to provide "dualsport" route alternatives. Overall decrease in competitive and "dualsport" opportunities and increased costs has occurred regionally, in conjunction with previously mentioned wilderness legislation, expansion of parks, urban growth, bioregional plan strategies to protect sensitive species, and interim closures. Therefore, the **Enhanced Resource Protection Alternative** would result in a measurable, if relatively small, addition to these affects.

4.7.3 Recreational Activities

As with vehicular access, the list of cumulative effects on recreational resources and activities is wide ranging and substantial because by their very nature these activities are closely tied to vehicular access, and the NEMO Plan/FEIS (2002, p. 4-142) concluded that:

⁶ Private land owners, patented lands and facilities, and routes to facilities associated with permitted activities.

⁷ A few routes are limited to specific rights-of-way holders, particularly those built for accessing facilities. The closure plans for the facilities may also include rehabilitation plans for routes under No Action. Since the No Action Alternative does not make a determination on whether newly identified routes were existing in 1985/1987 (i.e., errors), are associated with permits, are unauthorized, are reroutes in response to wilderness boundaries, or have another purpose, and does not designate these routes it is an incomplete alternative.

⁸ After additional analysis and consultation with USFWS and other appropriate agencies, permitted activities may be considered for routes that are not designated open. Timeframes would be substantially longer and costs would be higher.

“Recreation opportunities within designated wilderness and units of the NPS system were moderately to substantially modified, in particular those on wilderness lands....Taken together, the cumulative impacts to competitive event-related recreation, since the late 1980’s, is significant, based on these, as well as NEPA analysis of existing routes. The effects to non-competitive events are moderate, based on the change in status of these lands from WSA to wilderness. The current wilderness legislation under consideration (SB 2535) would remove motor-vehicle use, including potential dualsport events, along a popular section of the Tonopah & Tidewater Railroad (T&T) south of the Dumont Dunes OHV Area. The section in question runs from Salt Creek ACEC, south to approximately the Riggs siding.”...All opportunities would be further limited if (sic) the Ft. Irwin expansion occurs....

Vehicular access and recreational opportunities are inextricably linked, since users generally ride their vehicles to access desert resources, even many non-motorized (e.g., hiking and horseback riding areas) resources, based on the climate and time constraints. Based on the previous analysis for vehicle access, route designation within the NEMO Routes area could potentially have a substantial incremental effect on cumulative recreational opportunities and the CDCA recreational opportunity spectrum depending on the answers to the following two questions.

- How much are recreational opportunities constrained overall?
- Are there specific types of recreational opportunities that are substantially further limited or substantially more available than previously as a result of this designation effort?

The Bureau does not have long-term records on the level of recreation-related casual use activities in Southern California over extended time periods except at El Mirage Cooperative Management Area. Casual use at this OHV Open area near the Victor Valley metropolitan area, after briefly leveling off in the mid 1980’s, is increasing at a modest pace along with the population increase in the Valley. Based on this data and recent data from Dumont Dunes OHV Area in NEMO that reflects similar trends, modest growth in the use of the primary route network and associated high-use recreation destinations is anticipated in the planning area in the reasonably foreseeable future. The OHV event permits authorized within NEMO routes of travel network has been increasing at a moderate pace in recent years, as has the activity in the West Mojave, which is assumed to be typical of Southern California. It is anticipated that permit activity will continue to moderately increase in the reasonably foreseeable future, consistent with the continued population growth in the region and the aging of the population.

Under this scenario, all alternatives provide a serviceable and useable system of routes of travel for casual vehicular use to accommodate recreation activities within public lands. The **Proposed Plan**, and the **No Action** and **Enhanced Recreation Opportunities and Access Alternatives** would allow for recreation opportunities and activities on BLM administered lands. This conclusion is based on a look at each of the alternatives and the analysis of impacts for each alternative. Present and future recreational needs are met with these alternatives.

The **Enhanced Resource Protection Alternative** would limit access to specific areas or for specific activities (e.g., along some washes, along sections of the T&T in WSA, surrounding ACEC, adjacent to wilderness areas, for “dualsport” events) that, if access were available, would enhance the local network in specific areas as well as making specific recreational destinations or activities more available to the casual as well as permitted users. With the exception of the T&T, the routes identified are secondary routes in the system, and some require four-wheel drive. The T&T is limited by natural barriers but is a

more popular route that provides access to historic sites, other network routes, the Dumont Dunes OHV Area from the south as well as providing a north/south OHV access in areas between wilderness and SR247, and provides a frequently used route of permitted “dualsport” events. Vehicular access adjacent to wilderness areas provides scenic touring and non-motorized recreational opportunities to a subset of almost 1 million acres of the NEMO Routes planning area (i.e., that portion of wilderness areas which a hiker or equestrian is able to access, given time and resource constraints) that would be more or less limited in local areas under this alternative.

4.7.4 Socioeconomic Resources

While the current resident population within the NEMO Routes planning area is at less than 200,000, approximately 76,000 jobs are associated with those residences⁹, and historic economic growth hovers at approximately 1 to 3 percent depending on the area (US Census, 1990 and 2000), none of the alternatives would significantly impact the NEMO economic area. The relevant question is whether any of the alternatives would substantially better position the NEMO economic area to partake in some of the phenomenal growth that is currently occurring and is projected to continue in adjacent counties to the east. If the growth persists as anticipated, better vehicular access to and from the planning area to key points in Nevada would improve the area’s opportunities for growth and would further allow the area to partake of additional visitor dollars.

For remote private lands, county governments had been projecting limited growth due to lack of water and infrastructure. However, several valleys include deep aquifer reservoirs that may be tapped, and the growth in Nevada may provide additional future mechanisms for infrastructure development. With that in mind, the **Enhanced Resource Protection Alternative** has the potential for minor adverse impacts in some areas. The other networks provide additional flexibility for growth and commercial enterprises with respect to access of private lands, along County Roads, and in additional California-Nevada connectors for commercial transport and recreational tourists that enhance future potential socioeconomic opportunities in the planning area.

Growth would include additional costs, such as those associated with maintaining roads to accommodate additional vehicular traffic, addressing additional infrastructure needs, and other indirect costs associated with development and human use. Given the relative economic conditions in the planning area, the benefits from increased growth would outweigh increased costs and could provide additional diversity in the economic opportunities available to residents of the NEMO economic area.

4.7.5 Summary

What follows is a brief summary of cumulative impacts for Routes of Travel, CDCA-wide and conclusions relative to the effects of the NEMO Routes of Travel designations on the cumulative impacts. As other plans continue to be developed and the picture becomes further clarified, discussions of cumulative impacts can be updated.

The **Proposed Plan** provides a route network for the casual user and includes route closures for sensitive resource values, in consideration of the moderate level of growth anticipated over the 20-year life of the plan, consistent with 43CFR8342.1. The additional protection or buffering of sensitive areas under the

⁹ Dean Runyan Associates – Northern and Eastern Mojave Planning Area; Economic Impact Analysis, 24 June 1998, prepared for the National Park Service.

Enhanced Resource Protection Alternative provides one strategy to hedge against an unexpectedly substantial increase in use of the route network if accompanied by an associated increase in impacts, and the incremental decrease in route mileage proposed by these closures is relatively small. However, data does not support the level of route impacts anticipated under this alternative, and unanticipated impacts can be addressed by modifications in the route network, with additional public input. The effects from the increased closures would be added to the previous adverse effects experienced in recent years in many areas of the CDCA.

The **Enhanced Recreational Opportunities and Access Alternative** provides a network for the casual user that includes the minimum of route closures for sensitive resource values, consistent with 43CFR8342.1. It also focuses its review of sensitive resource values on previously designated special areas (e.g., critical habitat, ACEC, wilderness, eligible or listed property locations). Finally, adjacent area growth was not a significant factor considered in route designation decisions, based on the low levels of growth within the NEMO Routes planning area. Although no studies were conducted for this planning effort to determine how many public land users are from the planning area and how many are from adjacent areas, based on past on-the-ground interviews it is likely, based on recent growth of use, that faster growing areas of Southern California and southwestern Nevada are contributing a measurable percentage of users, and will continue to do so.

Off Highway Vehicle (OHV) use will continue to be focused in OHV open areas. Access on routes of travel, including navigable washes, will be designated as open, closed, or limited use as required in the CDCA Plan and CFR regulation. The nature and array of designations vary from plan to plan according to routes inventories, access needs of stakeholders, planning criteria, and distributions of sensitive species. Since uses and needs change over time, it does not necessarily follow that all routes are equally needed today and in the future. Executive orders and regulations require BLM to make judicious review of access for needs, evaluate conflicts and make decisions. As a result of route designation, the number of currently available routes will probably be reduced by modest levels. Route designations do not directly affect current or future access granted under specific use authorities, and indirect effects (e.g., monetary) are generally modest.

In some areas valued for hobby rock and mineral collecting, camping, and hunting and areas near urban centers, washes would be available for motorized-vehicle use. Wash routes may be limited or closed to enhance sensitive resources consistent with 43CFR8342.1 in DWMA and other areas identified as critical to species recovery; areas eligible or listed on the National Register of Historic Places; and in areas previously designated under ACEC plans. Strategies have been developed to survey cultural resources along the designated route network and survey results may indicate the need for additional limitations or relocations of routes in specific locations. Routes designations made in the CDCA plan and amendments thereto will not affect the resolution of RS2477 claims. Stopping and parking will continue to be 300' throughout public lands except 100' inside desert tortoise DWMA and other sensitive areas, as identified. Unauthorized new proliferation of routes on federal lands will be addressed. Opportunities for competitive vehicle events outside open areas will be reduced due to natural resource concerns and cultural values.

BLM's 1980 CDCA Plan resolved issues of use and protection and continues to guide management in the NEMO Routes planning area. Today, however, large areas of the CDCA have been designated as wilderness and additionally critical habitat has been identified for about 30 species, including the desert tortoise. In addition, huge areas of the desert have been identified as Areas of Critical Environmental Concern, some in conjunction with the critical habitats and some extending far beyond these boundaries

and unrelated to biological resources. Finally access to approximately 1 million acres has been temporarily limited due to interim closures for an average of approximately 3 years—these closures are all expired or due to expire this year. While special designations and current plans have contributed to the conservation of resource values, fundamental recovery and conservation of a total of 150 species and prevention of the slow loss of the cultural heritage on public lands remains to be resolved in further land use planning, CDCA-wide.

Some public scoping comments on the NEMO Routes proposed plan amendment/EA indicated that closure of any route would contribute to significant adverse cumulative effects, particularly to access and use of desert resources. There have been significant adverse effects to these resources already, desert-wide. However, in light of past actions and the potential for cumulative change from all current plans, BLM analysis shows that NEMO Route decisions would be cumulatively small and spread across several programs. A concerted effort was made under the **Proposed Plan** to be consistent with 43CFR8342.1 and to still provide as much access as feasible within those constraints, given the pockets of sensitive resource values and conflicts with other uses that are found in the planning area (e.g., critical habitats and ACEC, listed properties, active mines, and routes through riparian areas).

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CHAPTER 5

CONSULTATION AND COORDINATION

5.1 Introduction

At the end of March, 2003, a notice was sent to the public, media, agencies, other organizations on the BLM California Desert District NEMO mailing list (about 1,500 names), and others interested in routes of travel within the CDCA describing the purpose of the current Routes of Travel plan amendment to designate routes within undesignated areas of the NEMO planning area. This notice invited participation in the planning effort and announced public scoping meetings. On April 18, 2003, a Notice of Intent was published in the Federal Register announcing the beginning of the planning process and preparation of an Environmental Assessment (EA).

The NEMO Routes planning area is located within portions of Mono, Inyo, and San Bernardino counties. During the preparation of this EA over the past one and a half years, BLM personnel have met periodically with federal, state, and local agencies, Native American tribal representatives, local and regional boards representing the public, interest groups and individuals to identify issues, develop the range of alternatives, and develop this analysis. Specific coordination activities continue. Planning Issues and Coordination Activities are summarized in this chapter, followed by a list of persons who receive the mailings for the NEMO Routes of Travel Planning effort and concluding with a list of Preparers of the NEMO Routes of Travel Plan Amendment and associated Environmental Assessment, to date.

5.2 Issues Summary

From May 5 through May 15, 2003, BLM conducted five public meetings to scope the NEMO Route Designation plan amendment and EA. These public meetings were held to get recommendations on the designation of vehicle routes within the NEMO planning area and the environmental assessment. Meetings were held in Yucca Valley, Las Vegas, Tecopa, Ridgecrest and Independence. During these meetings, members of the public provided both verbal and written comments to BLM for use in identifying issues, designing alternatives and conducting the environmental analysis. BLM received a rich array of comments during the scoping comment period, which ended June 2, 2003. Hundreds of comments were received by the public, county representatives, and other agencies, representing dozens of themes that broadly fell in three categories (planning, technical or analysis, and coordination issues. Table 5-1 summarizes the breadth and variety of scoping comments and relates how they are integrated into the planning process and environmental assessment. This table does not include route-specific comments that were received as the result of on-the-ground field trips after the end of the scoping period.

**Table 5-1. NEMO Routes Scoping Period Comments and Resolution
(April 18 – June 2, 2003)**

¹ C=Coordination; P=Planning; T=Technical

#	Cat ¹	Sub-category	Comment	Resolution
1	C	Process	Have you coordinated your route designation planning with the Counties with regards to accessing via R.S. 2477 law? This should occur prior to any designations.	County coordination is occurring. RS 2477 assertions through a separate process.
2	P	Analysis	BLM should address routes of travel through the County, including R.S. 2477 routes in a way that would not negatively affect local communities' socio-economic structure.	Considering local communities in socioeconomic impacts analysis to the extent feasible
	T	Previously Addressed	BLM should get input on R.S. 2477 routes within a reasonable timeframe before route designation	BLM is implementing CDCA Plan of 1980, and will coordinate with counties (See also #1).
4	T	Information/ Opinion	NEMO Routes of Travel should be an EIS.	EA analysis will determine if EIS is appropriate.
5	P	Analysis/ General Issue	NEMO Routes of Travel designation affects State, County, and Private lands. Therefore CEQA is warranted.	The State lead would make this determination.
6	T	Information	Information regarding NEMO routes of travel (maps/photos) is not being shown in a manner that meets NEPA standards.	The route network includes both overview network maps and 7.5 min. quads, which are standard for analysis. Would like additional info on how maps can better meet public needs.
7	P	Access	NEPA calls for a No Action plan. Current 1985-1987 Maps (No Action) misses several R.S. 2477 and does not constitute a (viable) no-action.	In EA, include reasonable range of alternatives to 1985-1987 route designation baselines. Identify errors on maps. Additional specificity needed in comment—what route is not included in range of alternatives? No Action designates fewer routes than all other alternatives.
8	C	Process	Maps should be provided in a timely manner to the public. Request 90-day scoping period to reach public in meaningful way.	A “public scoping period” is specific to the EIS process. Maps were provided to attendees of meetings based on requests for additional time to study and field-check the maps, and provide additional input. BLM will continue to obtain input until the EA is published for public review. The public has had 6 months to request maps and provide route-specific input.

**Table 5-1. NEMO Routes Scoping Period Comments and Resolution
(April 18 – June 2, 2003)**

¹ C=Coordination; P=Planning; T=Technical

#	Cat ¹	Sub-category	Comment	Resolution
9	P	Private Property Rights/ Data (Gen Issues)	The baseline, as now shown, does not provide access to private property located in the planning area.	Need more specific comments to adequately incorporate into alternatives. Will address on a thematic basis.
10	T	Data / Issues (General)	The baseline, as now shown, does not provide residents in this area with access to water.	Unspecific comment – water for what in the desert? Is that the role of the BLM on backcountry routes? Is there a specific route? Water resources will be generally addressed as scarce resources, to be considered for protection unless need to a specific water is identified.
11	P/T	Data Issues (General)/ Maps/ Outside Scope	The baseline, as now shown, does not provide connectivity between WEMO, NEMO, NECO, and Park Lands, and many routes in DVNP and Ft Irwin are missing, including parts of S. Hwy 190, Panamint and Saline Valleys, Inyo & Choc Mountains, Homewood Canyon, and Talc City.	In EA, address issue of connectivity in all alternatives; Include overview map(s) to show overall network. Use GIS and adjacent plan maps to address connectivity. Routes not on public lands are outside the scope of this EA. Overall regional network connectivity as it relates to the public network will be shown.
12	T	Data Issues (General)	Under FLPMA and other legislation, valid rights of way or easements are not identified under NEMO Routes of Travel	Address in EA Purpose and Need/ authorized vs. casual users and ROT designations.
13	T	Information / Issues	NEMO ROT does not address the loss of economic, historic, or mining cumulative effects to the respective counties.	EA to address and tier analysis to existing NEMO analysis, particularly cumulative impacts.
14	T	Information / Issues	The only BLM office in Inyo County is in Bishop, CA, which is under the Bakersfield FO jurisdiction. WEMO and NEMO ROT are both out of SBCO. Interface for residents in Inyo County is difficult.	Ridgecrest would be the closest point of contact for information on the plans, and all information on the NEMO ROT planning effort should be available through email, website, or onsite at all involved Field Offices, including Ridgecrest Field Office. Future meetings will include Ridgecrest meetings, and periodic updates at the Inyo County Collaborative Planning Meetings, generally held in Lone Pine or Independence.

**Table 5-1. NEMO Routes Scoping Period Comments and Resolution
(April 18 – June 2, 2003)**

¹ C=Coordination; P=Planning; T=Technical

#	Cat ¹	Sub-category	Comment	Resolution
15	T	Information / Issues	I have seen the extensive impacts by off road vehicles, proliferation of trails, soil erosion, loss of vegetation, colonization & spread of invasive species, and in some habitats, the conversion that results from fires that are the result of an unnaturally high fuel source.	These will be addressed through the application of the route designation criteria, the decision tree which provides a mechanism for determining whether specific routes should be open, closed or limited, and the analysis of impacts, including cumulative impacts.
16	P	Access	Further reduce adverse impacts through route designations. Routes provide access into remote areas and therefore facilitate cumulative uses that combine eventually to cause serious impacts.	The range of alternatives, impact analysis and cumulative impacts analysis will address this concern.
17	T	Information / Issues	BLM should make route designation decisions that reflect not only the impacts of the physical route itself, but also the impacts over a much larger area that occur from the access that the route provides.	These impacts are the combination of many different factors, including levels and type of uses and sensitivities in adjacent areas. The issue will be addressed in the cumulative effects section, but some information will be the result of subsequent monitoring and adaptive management.
18	P	Outside Scope	I understand the primary driver for this current route designation process is to ensure adequate protection for the threatened DT under the ESA...	No. CDCA Plan goal to designate routes, NEMO Plan & lawsuit (timelines only) are drivers---BLM will clarify in Purpose and Need.
19	T	Access/ Analysis	Maintain routes as open if they serve a specific valid existing lawful right, such as inholder access, ROW, etc. Routes are also needed to important facilities or destinations (buildings, mines, campgrounds, etc.). Close redundant, unnecessary, and/or "braided" routes with little or no legitimate, legally required, or compelling reason to keep them open.	The range of alternatives will address these concerns, to the extent they can be linked to resources vs. values: (legitimacy may be in the eye of the beholder).

**Table 5-1. NEMO Routes Scoping Period Comments and Resolution
(April 18 – June 2, 2003)**

¹ C=Coordination; P=Planning; T=Technical

#	Cat ¹	Sub-category	Comment	Resolution
20	P	Analysis	Route designation process must carefully document the specific purposes for each route as well as its cumulative impacts so that an objective comparison is possible. Where impacts outweigh purposes, route should be closed; where purposes clearly outweigh impacts, the impacts should be mitigated and the route may remain open. This would simplify a confusing and complex process for the public.	See #15, we are documenting rationales using a Decision Tree process (modified West Mojave decision tree) that we anticipate will be easier to follow. Weighing is value-laden—see #19—in the eyes of the beholder, and will be reflected as feasible in range of alternatives, consistent with 43 CFR 8342.1
21	P	Analysis	A highly complex, confusing route designation process may allow arbitrary and inconsistent route decisions. This could uphold the status quo and/or undermine process.	Ibid #20 The maps and the draft plan amendment provide opportunities for feedback to minimize opportunities for specific route decisions to be inconsistent, based on incomplete information or error. The public should provide feedback, including rationales for decisions for route changes to make the final network as error-free as it can be.
22	P	Information	The outcome of the route designation process will ultimately be judged by how well the decisions protect sensitive resources and balance resource impacts with legitimate public purposes.	BLM will address the goals of Routes of Travel designation process in Purpose & Need – and tier then to the NEMO Plan (2002). See also range of alternatives and Proposed Action Alternative.
23	P	Analysis/ Planning Criteria	Route density (mi.) per square mile should be a consideration when evaluating the recommended status of a particular route. (See West Mojave decision tree as it addresses redundant routes, but some areas still had high densities after redundant routes addressed.)	Route densities would be arbitrary and capricious. The Decision Tree will determine to what extent there are there conflicts between sensitive resources (43 CFR 8342.1) and recreational opportunities for a route. If there are none, there would be no basis for closure. If there are conflicts, the Decision Tree would indicate whether they are best addressed through means other than closure or if the route should be closed. A high density of routes may provide other options, including future designation of non-motorized routes (e.g., mountain biking, equestrian) in high use areas for those activities.

Table 5-1. NEMO Routes Scoping Period Comments and Resolution
(April 18 – June 2, 2003)

¹ C=Coordination; P=Planning; T=Technical

#	Cat ¹	Sub-category	Comment	Resolution
24	P	Analysis/ Planning Criteria	In addition to the existing decision tree criteria, a quantitative limitation of route density should be included (a common goal is 2.0 miles per square mile) and that the route closure recommendations meet this goal.	At this point, no facts or evidence are provided for the 2 miles of routes per square mile criteria. Without a strong foundation it would be arbitrary and capricious. Would BLM need or be able to justify this kind of inflexibility in our process, when a few areas are very sensitive and many areas are to varying degrees, somewhat to substantially less sensitive?
25	T	Information/ Opinion	It is imperative that these lands be left open to the public...as they provide a safe, relaxing and enjoyable experience in this age of drugs and gangs and other negative youth-related activities.	In EA, address in Range of Alternatives (Enhanced Recreation Opportunities & Access Alternative).
26	T	Maps	The maps need to be annotated by hand for the names of the canyons and mountain ranges where they are missing due to clipping the frame or border of the map.	In EA, Edit maps to respond to comment where they are essential to understand route network. Also, e these overview maps will be augmented by 7.5 minute quadrangle maps which will include the canyons and mountain ranges.
27	T	Access/ Outside Scope	Since 1985-1987 designations, desert tortoise (DT) has been listed. Since the DT can not swim, all routes where there are perennial streams should be reexamined to allow access.	The area we are designating routes does not include desert tortoise recovery areas (DWMA) or category I habitat, although the lower two-thirds is desert tortoise habitat and therefore DT is a sensitive resource value. DT is not the primary issue driving route designation in the area we are evaluating—it is one consideration among many, including riparian and other water related resources.
28	P	Access/ Resources/Out side Scope	Keep Surprise Canyon route open to provide access to historic route; protect route washed out in the early 1990's; consider access before the washout; this route is very controversial and deserves an EIS...	The BLM agrees that this route has become a focal point of interest and it therefore is being analyzed through a separate EIS planning process. The route was designated as open in 1985 and is currently closed through a Federal Register notice until the current plan amendment and EIS are complete. This EA will not affect either the FR Notice or the outcome of the Surprise Canyon EIS. This EA will designate routes that access the canyon at its west end from the west, north and south.

Table 5-1. NEMO Routes Scoping Period Comments and Resolution
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#	Cat ¹	Sub-category	Comment	Resolution
29	P	Access	Provide access to the T&T railroad, including through the Amargosa Canyon	All sections of the T&T railroad will be evaluated for designation outside of the Amargosa ACEC. Within the Amargosa ACEC, non-motorized trails approved in 1983 will not be eliminated. This area was identified for non-motorized use because of its unique attraction for hiking, its habitat for unique endemic and migratory bird species, cultural resources, and the fragile state of the T&T in this area. These reasons have not changed and some of the unique species have now been listed.
30	P	Access/ Coordination	Furnace Creek Road should not be closed just because the Forest Service is closing their portion. BLM should evaluate their portion on its own merits, and it is not "riparian".	After discussion with the US Forest Service, BLM agreed to become a cooperator on their plan for all of Furnace Creek Road, including from the semi-circular cutoff (F0890) to the USFS boundary. Directed this comment to their planning team.
31	T	Access	Keep all R.S. 2477 roads open.	BLM is implementing CDCA Plan of 1980, and will coordinate with counties. To the extent that R.S. 2477 assertions are made and processed, these assertions will be addressed as a factor in the alternatives.
32	P	Outside Scope	BLM has sold off all BLM shooting areas and should provide land through land sales to build ranges.	This issue is outside the scope of the NEMO Routes of Travel EA.
33	P	Outside Scope	BLM should build wildlife guzzlers as big cities lower their groundwater table.	This issue is outside the scope of the NEMO Routes of Travel EA.

Table 5-1. NEMO Routes Scoping Period Comments and Resolution
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#	Cat ¹	Sub-category	Comment	Resolution
34	P	Access	Prevent the pioneering and proliferating of ORV routes by providing routes that are maintained when needed, cross a variety of terrain, and critically important, provide opportunities for loop trails and links between trails so they comprise a complete trail system—with the opportunity to ride extended distances on fun trails without backtracking the need to proliferate routes will not be there. This is a more effective approach than closing routes, for which BLM does not have the resources to effectively patrol or keep signed.	In EA, address in Range of Alternatives with regards to opportunities, “closure”, and with decision include compliance strategies to increase effectiveness of proposed action. Also address the issue of anticipated effectiveness of route network by alternative in impacts discussions.
35	P	Information/ Issue/ Planning Criteria	Designated routes should be kept out of riparian areas which should be fenced off if need be.	Address in criteria for the range of alternatives—include a variety of thresholds for riparian area from 43 CFR 8342.1 (EROA) to no riparian area routes unless they are major network connectors, to the extent feasible (Enhanced Resource Protection Alternative), with increasing flexibility for each alternative.
36	P	Information/ Issue	Defacing the desert with redundant routes must be eliminated.	In EA, address in range of alternatives
37	T	Information/ Issue	Closed routes must be eliminated from use and view in whatever way necessary and rehabilitated through vertical mulching or other organic structure installation techniques.	In EA, discuss under closed route: strategies/ techniques for implementation to be included with decision
38	T	Information/ Issue	Educational notices for the public user should instruct at the beginning of each trailhead that users can only use those areas marked OPEN to them. BLM must clearly mark open trails.	In EA, discuss route signing strategies/ techniques and rationale—signing strategies to be included with proposed plan.
39	T	Information/ Issue	Motorized vehicles must be forbidden to use hiking and horse trails.	Have we clarified that we are only designating motorized routes of travel? Non-motorized trails are not addressed. Some undesignated trails are used by both types of users.

Table 5-1. NEMO Routes Scoping Period Comments and Resolution
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#	Cat ¹	Sub-category	Comment	Resolution
40	T	Information/ planning criteria	Routes should be located to minimize damage to soil, watershed, vegetation, air or other resources on public lands.	43 CFR 8342.1 criteria for route designation — will be included in EA.
41	T	Information/ planning criteria	Routes should not be located in officially designated wilderness or primitive areas.	43 CFR 8342.1 criteria for route designation — will be included in EA.
42	T	Information/ Issue	Enforcement of designated route integrity is important and can perhaps be conducted more economically and in more public-friendly ways by park rangers and maintenance staff instead of Law Enforcement personnel. But, whichever works best, it should be used by BLM.	In proposed plan/decision address opportunities, compliance and include strategies to increase effectiveness of proposed action.
43	P	Information/ Issue	Wildlife and wildlife habitat must be protected. See also Comment #15.	These will be addressed through the application of the route designation criteria, the decision tree which provides a mechanism for determining whether specific routes should be open, closed or limited, consultation with USFWS for potentially affected listed species, and the analysis of impacts, including cumulative impacts.
44	C	Process	Thank you for preparing and sending out CD-ROMs of the NEMO route maps. I appreciate your quick response to the clamor of requests for maps.	No response needed.

Scoping issues for NEMO Routes of Travel include the following:

- Issues concerning how decisions will be made related to the designation of Routes of Travel
- Issues related to providing materials for feedback in time to have their concerns on routes considered
- Issues related to resource sensitivities, definitions of redundancy, and cumulative effects of route designations
- Issues concerning maintenance of network access to casual users
- Concerns about County and adjacent jurisdiction coordination

Several scoping issues came up multiple times in the public meetings that are outside the NEMO Routes of Travel planning effort and fall broadly into five categories. These are not included in the table, except to further clarify how they are specifically addressed in the planning document or EA:

- Issues related to RS2477 assertions, specific land use permits, and mineral exploration and development permits which are handled through separate processes
- Issues that are not related to the designation of Routes of Travel within undesignated portions of the NEMO planning area
- Issues related to designation of Surprise Canyon Road or Furnace Creek Road, which are being handled in separate planning processes
- Issues related to the passage or implementation of the California Desert Protection Act or the Fort Irwin Military Land Withdrawal Act of 2001
- Issues that are larger in scope than the NEMO planning area and which can only be addressed at another level (e.g., CDCA wide, Bureau-wide) and this amendment (see Chapter 1 Purpose and Need) will not be analyzing effects or making decisions for any areas outside the NEMO Routes planning area.

Briefings on the development and status of the NEMO Routes plan amendment were regularly provided for interest groups. These briefings included opportunities to review and comment on the route inventories and maps that showed the various alternatives route networks. Various interest groups have been directly included in this process, including the California Desert District Advisory Council, Searles Valley Community Services Council, Owens Peak Group of the Sierra Club, and the Ridgecrest BLM Steering Committee. Individuals and groups went on field trips to provide route-specific input to the alternatives during the spring and autumn of 2003, culminating in a set of alternatives for preliminary review and analysis in the fall of 2003.

Intergovernmental and Interplan Coordination

BLM has met with representatives of all three counties during the planning process. These briefings included the EA process, route inventories, the range of alternatives and the Proposed Action, and update briefings on the status of the EA. Representatives that were briefed and consulted included the County boards of supervisors, County planning departments and County collaborative planning teams.

Native American consultation was initiated on June 5, 2003 with the Timbisha, Fort Mojave, Las Vegas Band of Piute, and Chemehuevi tribes. The SHPO survey strategy discussed in the next paragraph and Chapter 1 of the EA is also being applied as appropriate to Native American sites. The three phased survey strategy for routes of travel includes ongoing tribal consultation when surveys include tribal finds.

State Historic Preservation Office consultation was initiated on October 8, 2003 consistent with Section II C of the state protocol agreement between BLM and SHPO for the NEMO planning area in conjunction with routes of travel designation. SHPO was asked to provide comments on issues and alternatives specific to historic and prehistoric properties in the planning area and a specific Routes of Travel survey strategy was developed. Information received from SHPO has been taken in to account in our analysis,

route designation decision tree, and decision-making process. Impacts to cultural resources are also considered in the context of the National Environmental Policy Act, and conservation measures have been developed as part of the Proposed Action to avoid or mitigate impacts, where appropriate.

Wildlife agencies have been consulted during the planning process on federally and State-listed species under the Endangered Species Act of 1973, amended, and the California Endangered Species Act, respectively.

The BLM has determined that the threatened desert tortoise may be adversely affected by the proposed Routes of Travel designation. The Bureau has requested formal consultation with the Service on the effects of the proposed action on the desert tortoise. Similarly, the Bureau is consulting with the Service, and has requested the Service's concurrence with the Bureau's determination that the Routes of Travel Proposed Action may affect, but is not likely to adversely affect, the least Bell's vireo and the southwestern willow flycatcher. The Bureau has determined that the proposed action would not affect the following species:

- Inyo California towhee (threatened)
- Ash Meadows gumplant (threatened) and critical habitat, and
- Amargosa niterwort (endangered) and its critical habitat.
- Amargosa vole (endangered) and its critical habitat.

Given the court timeline for this plan amendment, meetings were not held with all adjacent planning teams for comparisons of networks across planning areas. Existing GIS layers and maps from recently published Plans were used to determine if routes continued into adjacent jurisdictions, without ground-truthing all routes and phone discussion with adjacent planning team leads was used to confirm findings.

5.3 List of Preparers

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	C TAD	GRAVES	CA	92845-2116
CA DEPT OF TRANSPORTATION	VICTORIA	GREEN	CA	92401-1400
	PAUL H.	GREENBERG	CA	92347-9534
	MIKE	GROSS	OR	97329-0768
	MS KATHY	GROSS	CA	93522-0009
CALIFORNIA WILDERNESS COALITION	KEITH	HAMMOND	CA	95616-3073
THE NEWBERRY PRESS	MR NORMAN E	HANCOCK JR	CA	92365-9487
AMERICAN HIKING SOCIETY	GAIL W	HANNA	CA	92109-6217
	MS KATHRYN L.	HANSON	CA	92649
NEVADA DIVISION OF WILDLIFE, SO REGION	BRAD	HARDENBROOK	NV	89108

ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
SKY ISLAND ALLIANCE	TREVOR	HARE	AZ	85717-1165
SIERRA CLUB KERN KAWEAH CHAPTER	STANLEY & JEANIE	HAYE	CA	93555-4404
	GARY	HAYES	NV	89120-2636
WESTERN MINING COUNCIL	MR MERWYN H.	HEMP	CA	91325-1563
WILDERNESS TRANSITIONS INC	DR & MRS JOHN	HENDEE	CA	94965-1721
	DR. JOHN	HIATT	NV	89123
	DR GENE A	HIEGEL	CA	92831-2014
	MR & MRS REGINALD	HILL	CA	92311
QUADSTATE COUNTY GOV COALITION	GERALD E	HILLIER	CA	92402-0480
	JAQUE	HILLMAN	CA	93545-0870
	JAMES	HINES	CA	93006-6058
	ANDY	HIPPERT	CA	90630-4163
PUBLIC LANDS FOR THE PEOPLE INC	MR GERALD	HOBBS	CA	92405-4711
NATIONAL PARK SERVICE	MR JIM S	HOLLAND	NV	89005-2426
	SHIRLEE	HORA	CA	92342-2476
	HENRY F	HOWISON	CA	93221-9729
	RONALD D	HUGHES	AZ	86402-6697
	MR JERRY J	HUTCHINS	CA	92138-4899
	JON	INSKEEP	CA	91011-1616
	THOMAS	JACKSON	AZ	86401
	DON	JACOBSON	CA	95945-2167
	SERGIO M.	JARAMILLO	NV	89512
INYO COUNTY PUBLIC WORKS	JEFFERY	JEWETT	CA	93526
	KAREN	JOHNSON	IN	46660-6516
	MOLLY	JOHNSON	CA	93451-9527
	TAMRA	JOHNSON	CA	93555
WILDERNESS COALITION	BRYN	JONES	CA	92501
	MR WILLIAM	JONES	CA	90014-1907
	ROBERT & BARBARA	JORGENSEN	CA	92252
ECOLOGY & ENVIRONMENT, INC	AARTY	JOSHI	CA	94104
	DOUG	KARI	CA	92651
CITY OF INDIAN WELLS	CURRIE D	KATES	CA	92210-7497
DESERT ADVISORY COUNCIL	RON	KEMPER	CA	92346
	JIM	KENDALL	CA	92626-1610
	PATRICIA	KENOWSKY	CA	92285-0087
	ZEV	KEPPLEMAN	CA	94117-1262
	JOHN	KERBER	CA	91007-7769
THE DESERT CMTE (SIERRA CLUB)	JIM	KILBERG	CA	90045-3917

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ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
	R DAVID	KIMBREL	CA	92806-4941
	JERRY L.	KING	NV	89137
	MR KEN C.	KIRIN	CA	92553
	MYEUNG	KO	CA	92389
CORVA	MR PAUL	KOBER	CA	91402-5419
UNIV OF CALIF RIVERSIDE	MARILYN	KOOSER	CA	92521-0423
	MR CHARLES R	KOPENEC	CA	91365-0038
CA DEPT OF TRANSPORTATION	DANIEL	KOPULSKY	CA	92401-1400
SAN BERNARDINO COUNTY	PHILIP	KRAUSE	CA	92415-0763
	HARRY J.	KRUEPER	CA	92407-3728
	MR AND MRS DENNIS C	KUEHL	CA	92345-0499
TOWN OF APPLE VLLY	MR CHARLES K	LACLAIRE	CA	92307-3052
LAKE MINERALS	PAUL	LAMOS	CA	93545-0037
	PETER	LANCHIOU	AZ	85716-3809
	JOHN	LAND	NV	89123
	JACQUE	LAWHEAD	CA	92389
PEGMATITE	SHIRLEY	LEESON	CA	91942-4312
	DENNIS	LEETCH	CA	92311-5841
	MR DAVID J	LEGTERS	CA	91767-5623
DESERT ADVISORY COUNCIL IMPERIAL COUNTY SUPERVISOR	WALLY	LEIMGRUBER	CA	92243
CYCLE WORLD MAGAZINE	JIMMY	LEWIS	CA	92663-2752
	ROBERT	LICHTY	CA	95405-5146
	MR DONALD E	LINDSLEY	CA	92123-3554
	WES	LINGERFELT	CA	93444-0176
	MR ED C	LITTY	CA	91006
	RAYMOND V.	LOPEZ	CA	91030-4613
	ROBERT & RUTH	LOPEZ	CA	92363
	JIM	MACEY	CA	93530
	CAROLINE DIANE	MADDOCK	CA	92660-6844
	RUSS G	MADSEN	CA	90808-2095
	RAY DAN	MARTIN	AZ	85258-5200
SAN MANUEL BAND OF MISSION INDIANS	DERON	MASQUEZ	CA	92369
	DAVID A	MATHEWS	CA	93555
UNIV OF CA COOP EXTENSION AGRI & NATURAL RESOURCES	KARL	McARTHUR	CA	92415-0730
	MR JOHN D	McCARTY	CA	91006-1844
	STEPHEN P.	McDERMOTT	CA	90631-6222
FRIENDS OF THE INYO	PAUL	McFARLAND	CA	93541-0064
	GERALD & PEGGY	McINNES	NV	89060
DESERT SURVIVORS	DAVID R	McMULLEN	CA	94703-2304
	JEFF	McNAIR	CA	92843-3136

ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
	JERRY	McNIGHT	NV	89049-0153
DESERT ADVISORY COUNCIL KERN COUNTY SUPERVISOR	JON	McQUISTION	CA	93301-4639
US FISH & WILDLIFE SERVICE, SO NV FIELD OFFICE	PHIL	MEDICA	NV	89130-2301
	RENE L	MENDEZ CAO	CA	93526
HI DESERT MULTIPLE USE COALITION	SAM	MERK	CA	93555
	CHARLES D.	MILLER	CA	91024-2123
SIERRA CLUB	JON	MILLER	CA	92345-2150
WILDERNESS SOCIETY	SALLY	MILLER	CA	93541-0442
	MACK	MITCHELL	CA	92373-6839
NEVADA UNITED FOUR WHEELERS ASSN (NUFWA)	BLAKE	MONK	NV	89108
EARLY BRONCOS LIMITED	MR JOE	MONROE	CA	92064-2928
	RICHARD R.	MOON	CA	90630-2008
SAN DIEGO OFF ROAD COALITION	MR RICHARD L	MOORE	CA	92020-3027
	TONY	MORIN JR	CA	93555
	DR MRS ORVILLE	MULLENNIX	CA	92029-4442
	ED	MURPHY	CA	92887-3333
	CHARLES D.	MUSSER	NV	89102-3819
	FRED	NATALY	NV	89109-1495
TIERRA DEL SOL FOUR WHEEL DRIVE CLUB	PETE	NELSON	CA	92117
	BILL	NELSON JR	NV	89061
INLAND EMPIRE NEWS RADIO	JIM	NESS	CA	92507-6324
	TERESA	NEWETH	CA	95050-4250
	THELMA E.	NEWMAN	CA	92313-5908
BUREAU OF INDIAN AFFAIRS	MR WAYNE C	NORDWALL	AZ	85001-0010
	MR JAMES M	NORRIS	CA	93105-4449
		OCCUPANT	CA	92389
	ERIK	OLAFSSON	CA	94516
	JIM	ORNDOFF	NV	89149-1391
COLORADO RIVER INDIAN TRIBES	BETTTY	ORNELIUS	AZ	85344-9704
	ROBERT J	ORR	CA	95814
	NANCY L.	OTT	CA	92345-6536
KERN COUNTY PLANNING DEPARTMENT	LORELEI	OVIATT	CA	93301-2323
	THEO C	PACKARD	CA	91604-3719
	DOUG	PARHAM	CA	93590-3241
	VIVIAN	PARKER	CA	95667-7422
	MARVIN	PATCHEN	CA	92036

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ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
CENTER FOR BIODIVERSITY	MR DANIEL	PATTERSON	CA	92549-0493
	HERMAN A	PAULK	CA	92407-2213
	ALAN	PECKHAM	NV	89120-3304
	ANDREW	PEKARY	CA	92240-6928
	NOELLE	PELLOWSKI	OH	45133-9324
	ALEXANDRA	PHARMAKIDS	RI	02906-5711
	KEN & PAT	PIERZINA	CA	92356
URS	DR JOSEPH	PLATT	AZ	85718-5876
	WILLIAM G.	POOLE	CA	90265-3755
CA STATE LANDS COMMISSION	JIM	PORTER	CA	95825-8202
CSU FULLERTON COLLEGE DESERT ADVISORY COUNCIL	DR WILLIAM	PRESCH	CA	92834-6850
	GARY	PRESTON	CA	91790-2539
CA DEPT OF FISH AND GAME	DENYSE	RACINE	CA	93514
CALIFORNIA PORTLAND CEMENT CO	JOHN W	RAINS	CA	91741-4692
US BORAX	MR MICHAEL H	RAUSCHKOLB	CA	91355-1846
	PARRELL	READMOND	CA	91390
	CHERYL	REIFF	CA	92104
	KENNETH M.	REIM	NV	89134-7814
	FRANCIS L	RELAFord	CA	91976-0098
NEEDLES DESERT STAR	MR ROBIN L	RICHARDS	CA	92363-2935
	DON	RICHARDSON	NC	28712
	RANDY	RISTER	CA	92243
	JULIE	RITTER	MI	48808-9711
DESERT ADVISORY COUNCIL	RICHARD	ROBINSIN	CA	93726-5594
DIRECTOR, MOUNTAIN DEFENSE LEAGUE	PANDORA	ROSE	CA	92065-3543
	MR STEPHEN	ROSS	CA	91107-1638
	WILLIAM B.	ROY	CA	92706-2030
	JANN	RUCQUOI	CA	92389
	KATHARINE E	RUDOLPH	CA	91030-4906
	CORNEL	RYLAARSDAM	CA	90706-6732
AMA DIST 37	BOB	SACKETT	CA	92807
MONACHE ASSOCIATES	DION	SALFEN	CA	91361-4118
	WILLIAM G.	SANDERS	CA	91343-1830
	GERALD	SAUER	CA	94028
	DR. JOHN H.	SAWYER	CA	95521
CORVA	BUD	SCHICK	CA	90250-8404
HI DESERT MULTIPLE USE COALITION DESERT ADVISORY COUNCIL	RON	SCHILLER	CA	93556-1167
	ROBERT A.	SCHLATTER	CA	90260-2313
DEATH VALLEY 49ERS	MR EARL F.	SCHMIDT	CA	94301
CSU FULLERTON COLLEGE	DR ALLAN A	SCHOENHERR	CA	92832

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ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
	JERRY	SCHULT	NV	89041
SBCO CHIEF OF ENV DIV -- PLANNING	RANDY	SCOTT	CA	92415-0182
	BRUCE	SEATON	CA	90630
	BILL	SEFTON	CA	92108
MEROPLITAN WATER DISTRICT	MRS DELAINE W	SHANE	CA	90054-0153
	MR THOMAS B	SHARPE	CA	92404-2406
HOOVED ANIMAL HUMANE SOCIETY	MR ARTHUR G	SHELBUR	CA	92504-4333
	MEL	SHOCKLEY	CA	92404-5117
	MERCY	SIDBURY	CA	95472-2017
CALIFORNIA INSTITUTE OF TECHNOLOGY	DR LEON T.	SILVER	CA	91125-0001
	DAVID	SLATER	CA	93555-2412
INYO CO -- PLANNING DEPT	ATTN: COURTNEY	SMITH	CA	93526
DEPT	c/o JERRY	SMITH	CA	92277
DESERT ADVISORY COUNCIL	PAUL	SMITH	CA	92277
	SKYLER AND DEBBIE	SMITH	CA	93555
SORRELS & KEEFER	CHUCK	SORRELS	NV	89101-7020
DEPT OF MATHEMATICS WASHINGTON UNIV	EDWARD	SPETZVOGEL	MO	63130
	RICHARD	SPINING	CA	90622
	MR RICHARD	SPOTTS	UT	84770-6009
KVMR-FM	ALAN A.	STAHLER	CA	95959
SILVER VALLEY REALTY	FRED	STEARN	CA	9235-9716
	MS JOAN	STEINER	CA	92606
BUREAU OF LD MGT LVFO	JEFFREY G.	STEINMETZ	NV	89130
	ED A	STEVENS	CA	90815-2035
GREG STEWART PHOTOGRAPHY	GREG	STEWART	CA	92651-3125
UNITED FOUR WHEEL DRIVE ASSN	JOHN H	STEWART	CA	92040-5040
TOWN OF YUCCA VALLEY	MR. MIKE	STEWART	CA	92284
	ED	STIRLING	CA	90650-7835
	ROBERT	STRUB	CA	93592
TRANSPORTATION AND LAND MANAGEMENT	EDWIN D	STUDOR	CA	92501-3679
INTL SOC PROTECTION OF MUSTANGS BUR	MS KAREN A	SUSSMAN	SD	57636-0055
	PETER	SWOLAK	AZ	85650
DESERT SURVIVORS	MR STEVE	TABOR	CA	94620-0991
	STEV E	TABOR	CO	80525-6161
	ROBYN	TAFT	CA	95012

ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
	MR CHARLES W	TALMADGE	CA	92557-5940
	MR ROY H	THOMS	CA	92398-0727
CHEMEHUEVI TRIBE	DAVID J	TODD	CA	92363
DEATH VALLEY 49ERS	MR & MRS HUGH C	TOLFORD	CA	91401-5722
	BILL AND LA VELLA	TOMLINSON	CA	92311-2906
	DAVID W	TONKISS	CA	91221-5779
	ROERT AND DEBI	TRENT	CA	92028-8601
	MR LEWIS W	TROUT	CA	92311-5751
TROWBRIDGE RANCH REAL ESTATE	JOHN B	TROWBRIDGE	CA	92627-3625
LAKE MEAD NRA	KENT	TURNER	NV	89005-2426
MK GOLD COMPANY	LARRY L	TURNER	NV	89046
VALLEY PROSPECTORS	CHUCK	UCKER	CA	95240
	MR. ROBERT D.	VALESKI	CA	92647-4901
NATURAL RESOURCES DEFENSE COUNCIL	MS JOHANNA	WALD	CA	94105
	ANDREW	WALDE	CA	92342
CALIFORNIA OFF-ROAD VEHICLE ASSOC	MR EDWARD H	WALDHEIM	CA	91214
	MR WILLIE W	WALKER	CA	92868-2113
	EDMUND	WALLASCH	CA	91214-3728
	THOMAS J	WALSH	CA	92317-3413
	TRACY	WALTERS	CA	92308
	BARBARA	WARNER	KY	40033-9733
	BETSY	WEBB	MT	59715
LONE & HOLCOMB V MINING DIST	TONY	WEBB	CA	92333
BUREAU OF LD MGT LVFO	JAMES F	WEIGAND	CA	95825-1846
	TERRY	WEINER	CA	92103
CALIFORNIA WIDERNESSE COALITION	MARY	WELLS	CA	95616-3073
CA STATE LANDS COMMISSION	MARIANNE	WETZEL	CA	95825-8202
RANGE OF LIGHT TOIYABE CHAPT SIERRA CLUB	WILMA	WHEELER	CA	93546
SIERRA CLUB	CAROL A	WILEY	CA	92394
CONGRESSMEN HOWARD McKEON	SCOTT	WILK	CA	91355
PUBLIC LANDS ADVISORY BOARD	ATTN: SECRETARY	WILLEY	NV	89048-4924
CA4WDC	MR. CHUCK	WILLIAMS	CA	92371
PUBLIC EMPLOYEES FOR ENVIR RESPONSIBILITY	DR HOWARD G	WILSHIRE	CA	95472-9459
	MS JAYNE L	WOODRUFF	CA	91342

ORGANIZATION	FIRST NAME	LAST NAME	ST	ZIPCODE
	MR THOMAS E	YOUNG	CA	91977-4453
	MR PETER	ZADIS	NY	11411-1161
VICEROY GOLD CORP	MR ROBERT J	ZAEBST	NV	89046-0068
COLORADO RIVER BOARD OF CALIFORNIA	MR GERALD R	ZIMMERMAN	CA	91203-1035
EARTHJUSTICE	TED	ZUKOSKI	CO	80202-4303
RIVERA LIBRARY: GOVERNMENT PUBLICATIONS DEPT	UC RIVERSIDE		CA	92517-5900
DEATH VALLEY NATIONAL PARK			CA	92328
TECOPA COMMUNITY CENTER			CA	92389-0158
ASH MEADOWS NATIONAL WILDLIFE REFUGE			NV	89020
BOR-BLDG 67 D7925 LIBRARY			CO	80225
CA STATE CLEARINGHOUSE			CA	95814
CA STATE LANDS COMMISSION			CA	95825-8202
CITY OF LOS ANGELES - ENVIRONMENTAL MANAGEMENT			CA	90010-1914
FORT MOJAVE TRIBE-BIA			CA	92363-2229
FURNACE CREEK PUBLIC LIBRARY			CA	92328
MAMMOTH AREA MOUNTAIN BIKE ORGANIZ			CA	93546
PASADENA PUBLIC LIBRARY			CA	91101-1598
STAPP MINING			CA	92405-4711
TOWN OF PAHRUMP			NV	89060-4013
TRI BAL CHAIRPERSON			CA	93545-0747
UNIV OF CA LIBRARY GOVT DOCS			CA	94720-6000
US FISH & WILDLIFE SERVICE			CA	93003-7726
WASHOE TRIBE OF NEVADA & CALIFORNIA			NV	89410

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APPENDIX A ROUTE DESIGNATION

This appendix relates the decision making process for route designations and documents the rationale and designation of individual routes of travel in the planning area. Route designations only apply to BLM managed lands and are not applicable to private lands or county maintained roads.

A.1. Route Designation Decision-making Process

This planning effort developed a structured process for (1) identifying routes of travel with potential conflicts with resources, uses and special designation areas, (2) evaluating these conflicts by subject matter experts, and (3) designating routes of travel that have resource, uses or special designations conflicts through systematic decision tree. This process is consistent with the Federal Land Policy Management Act, Bureau regulations for route designation as identified in 43 CFR 8342.1, and additional guidance in the CDCA Plan.

A.1.1 Identifying Routes with Potential Conflicts

The first phase of the analysis was to identify the routes with potential conflicts with the various resource and uses. The following criteria were used to identify specific routes or areas for further focused analyses by subject matter experts. BLM used its' GIS database to identify routes near resources, uses and special designation areas and plot these routes and resources and special status areas on 7.5-minute quadrangle maps.

The GIS database was used to identify routes:

- within 600 feet of Special Areas such as Areas of Critical Environmental Concern, Wilderness areas, National Natural Landmarks, Outstanding Natural Areas, Research Natural Areas, and Wild and Scenic Rivers,
- with slopes greater than 20 percent that may lead to soil erosion,
- within 1,325 feet from riparian areas and springs and seeps,
- within 600 feet of water sources including rivers, streams, wells and guzzlers,
- within 1,325 feet of range improvements for grazing,
- within 700 feet of cultural sites,
- within 1,500 feet of active mines,
- within 500 feet of abandoned mines,
- within 600 feet of nesting, breeding, or lambing areas for threatened or endangered species and special status species, and
- within 100 feet of private property.

The output of this validation process was incorporation of this information in an "Attribute Table" on a route-by-route basis, for the route designation teams to evaluate during the Route Designation Process. Some conflicts are readily addressed through existing management strategies and others figured into the route designation decision-making under one or more alternatives. Phase 2 of the process is evaluation of specific routes, using the Phase 1 information and the 43 CFR 8342.1 criteria in conjunction with the Decision Tree.

A.1.2 Analyzing Conflicts

The above-mentioned routes with potential conflicts were organized by geographic area and by type of conflict. Maps were prepared that showed the location of potential conflicts and the routes of travel inventory. BLM resource specialists familiar with these routes from Barstow, Ridgecrest and Needles field offices meet to review these routes with potential conflicts with resources, uses and special area designations. They focused their analysis to determine if there were actual conflicts, determine their magnitude, and consider mitigation measures that would reduce the conflicts.

A.1.3 Designating Routes and Documenting Rationale

The first step in the route designation process was to analyze the route versus the four criteria are identified in 43 CFR 8342.1:

- a) Areas and trails shall be located in a manner to minimize impacts to physical resources (soils, watershed, vegetation, air, and other resources) and to prevent impairment of wilderness suitability;
- b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats;
- c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses;
- d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas, and shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which established

If a route was not compatible with these criteria, it was designated closed for all action alternatives.

The following route designation decision-making process forms the basis for the differences in open, closed and limited routes between the three action alternatives. Since the **No Action Alternative** is based on previous decisions, these questions were not used for the **No Action Alternative**. Few route designation decisions are determined solely on the basis of the guidance given in 43 CFR 8342.1. Most routes benefited from the additional Decision Tree analysis.

If a route appears to be consistent with 43CFR 8342.1 but needs further analysis to resolve conflicts, for the **Proposed Action**, use the Decision Tree to make a determination and provide the rationale.

Before closure of any route under the **Enhanced Recreation Opportunities and Access Alternative**, conduct a route network analysis to evaluate the contribution of the route to the network to meet recreational and access needs. If a route meets those needs (Decision Tree questions 3 and 5), designate it open unless it would result in unnecessary and undue harm and/or the Decision Tree identifies a substantial conflict that supports a 43 CFR 8342.1 closure that can not be mitigated through means other than closure.

Before opening of any route within sensitive areas (washes, within ¼ mile of sensitive species and known sensitive cultural sites) under the **Enhanced Resources Protection Alternative**, evaluate the route's importance within the overall route network and access to any specific recreational destination. Favor

eligible and listed cultural properties, threatened and endangered species, and riparian areas. This alternative proposes no net increase in wash routes, and expansion of NEMO (2002) DWMA protection measures for sensitive values to the rest of the route network.

Decision Tree-5 Main Questions

QUESTION 1: Does the route provide private land¹ access?

YES: Is route closure likely to lead to increased conservation of sensitive resource values?

YES: Is there an alternative route(s) that could serve the same purpose and substantially reduce impacts to sensitive resource values?

YES: Go to Question 3.

NO: Go to Question 2.

NO: Open - A²1

NO: Go to Question 2.

QUESTION 2: Does the route impact T&E³ species or occupied habitat of T&E species, impact an eligible or listed property on the NRHP⁴, or adversely affect the values⁵ in a specially designated area (e.g., an Area of Critical Environmental Concern)?

YES: Is there an alternative route(s) that could serve the same purpose and substantially reduce impacts to T&E, NRHP, or ACEC resource values?

YES: Does the route also provide private land access?

YES: Go to Question 3.

NO: Close – C⁶2

NO: Does this route contribute to recreational opportunities, dispersed use (thereby reducing impacts, e.g. soil erosion), connectivity, public safety, etc.?

YES: Go to Question 3.

NO: Close – C2

NO: Go to Question 3.

¹ This includes certain lessees, rights-of-way holders, and mining claimants, who have permits, easements, plans of operation, etc. that include long-term access agreements.

² “A” represents routes opened to enhance access.

³ Federally or California listed as threatened or endangered.

⁴ National Register of Historic Places.

⁵ The “values” would be those values for which the special area was designated for special management actions beyond the CDCA Plan.

⁶ “C” represents routes closed to conserve natural resources as identified in the route-specific designation table.

QUESTION 3: Is this a regional route for more than one area or that represents a principal means of connectivity within or between areas?

YES: Does the route impact T&E species or occupied habitat of T&E species, impact an eligible or listed property on the NRHP, or adversely affect the values in a specially designated area (e.g., an Area of Critical Environmental Concern)?

YES: Is there an alternative route(s) that could serve the same purpose (regional connector) and substantially reduce impacts to T&E, NRHP, or ACEC resource values?

YES: Close - C3; or Limited⁷ - L3 for commercial rights-of-way, private land access.

NO: Open A3

No: Go to Question 4

NO: Go to Question 4.

QUESTION 4: Is route closure likely to lead to increased conservation of sensitive resource values?

YES: Is there an alternative route(s) that could serve the same purpose and substantially reduce impacts to sensitive resource values?

YES: A. Can the sensitive resource impacts be effectively mitigated through other means than route closure?

YES: Open – A4

NO: Does the route provide private land or right-of-way access?

YES: Limited – C4

NO: Go to the next Question (B.)

NO: B. Can the sensitive resource impacts be effectively mitigated through other means than route closure?

YES: Open – A4

NO: Would closing the route substantially reduce impacts to T&E, NRHP, or ACEC resource values?

YES: Close – C4; or Limited – C4 if private land access is needed.

NO: Go to Question 5.

NO: Go to Question 5.

⁷ Limited routes are closed to public use, but are not identified for rehabilitation to continue to make them available for administrative use.

QUESTION 5: Does this route contribute to recreational opportunities, dispersed use (thereby reducing impacts, e.g. soil erosion), connectivity, or public safety?

YES: Is route closure likely to lead to increased conservation of sensitive resource values?

YES: Is this Recreational Access contribution already provided for by other routes proposed on this Motorized Access network?

YES: Close – C5; or Limited – L5 for commercial rights-of-way, private land access.
NO: Open – A5

NO: Open – A5

NO: Close – C5.

A.2 Route Designation and Rationale

Table A-1 designates each route as Open (O), Closed (C) or Limited (L) and documents the rationale for the Proposed Action based on the codes in the decision tree. Route designations are also shown for the other alternatives considered. Routes are listed in alphabetical/numerical order.

Table A-1. Route of Travel Designation for Each BLM Route in the NEMO Route Planning Area

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
699135	Boulder Corridor	B	17.9337	O	O	O	O	A3	Regional Network Access
699395		N	0.2456	O	O	O	O		
699560	Halloran Spring Rd	N	1.9898	O	O	O	O		
699605		N	0.4717	O	O	O	O		
AF071	T & T Railroad	B	0.0245	O	O	O	O	A5	Recreational Access
AF071	T&T Railroad	B	0.5052	O	O	O	O	A3	Regional Access adj to T&T
AF071	T&T Railroad	B	6.2065		O	O	O	A5	Recreational Access
AF071	T&T Railroad	B	11.6284		O	O	O	A3	Regional Access adj to T&T
AF505		B	1.7739	O	O	O	O	A5	Min. affects on ACEC & provides access
AR0193		B	7.1476	O	O	O	O	A5	Provides recreational access to network and Pahump valley wilderness
AR021		B	5.2483	O	L	O	L	L4	Wilderness cherry stem access to patented claims
AR024		B	0.2585	O	C	O	C	C5	Redundant with AR027

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR024		B	0.5717	O	C	O	C	C5	Redundant with AR027
AR024		B	1.0156	O	C	O	C	C5	Redundant access to DVNP
AR026		B	0.7449	C	C	C	C	C2	No access through DVNP
AR027		B	1.1601	C	C	C	C	C2	No access through DVNP
AR031	NHOST	B	3.6172	O	O	O	O	A5	Recreational Access easement may be required
AR032		B	3.9809	O	O	O	O	A5	Provides scenic access along south Nopah Range Wilderness
AR0332		B	0.1177	O	O	O	O	A4	Provides trailhead access within the ACEC
AR0344		B	0.0908	O	O	O	O	A4	Provides southerly access to ACEC
AR035		B	0.3926	C	C	C	C	C2	In Wilderness
AR0395	China Ranch Rd	B	1.7313	O	O	O	O	A1	Provides access to China Ranch
AR0396		B	0.2620	O	O	O	O	A4	Provides Trailhead access to ACEC
AR0410		B	0.3758	O	L	L	L	L5	Access to patented mining claims
AR0411	Old Spanish Trail	B	23.0234	O	O	O	O	A3	Regional Network Access
AR0412	Sperry Wash Rd	B	15.8689	O	O	O	O	A3	Regional Network Access
AR0413		B	1.5201	O	C	O	O	A4	Provides trailhead access to ACEC
AR0413		B	0.9069	O	C	O	C	C4	Uncontrolled access to the Amargosa ACEC & willow wash
AR0414		B	5.5790	O	O	O	O	A5	Provides scenic access to northern Kingston Wilderness
AR0415		B	0.5933	O	O	O	O	A5	Provides recreational access
AR0416		B	2.5512		C	O	O	A4	Provides trailhead access to ACEC
AR0417		B	0.3841	O	O	O	O	A5	Recreational Access
AR0420		B	0.9354	O	O	O	O	A4	Provides recreational & monitoring access north eastern ACEC
AR0421		B	0.2230	O	O	O	O	A5	Provides trailhead access to south Nopah range Wilderness
AR0425		B	2.6539		C	O	C	C5	Redundant optional Horse Trail

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR0426		B	0.0348	O	L	O	L	L2	Access to Mining claims
AR0426a		B	0.0800	C	C	C	C	C2	Within Wilderness
AR0427		B	0.3699	O	O	O	O	A5	Provides Recreational Access
AR0428		B	0.8824	O	C	O	C	C5	Redundant route
AR0428		B	0.8501	C	C	C	C	C2	Into Wilderness
AR0428		B	2.1649	O	O	O	O	A5	Provides Recreation access
AR044		B	1.0779	O	O	O	O	A5	Recreational Access
AR044		B	0.2920	C	C	C	C	C2	Close within wilderness
AR045		B	0.5483	O	O	O	O	A5	Recreational Access
AR046	Furnace Creek Rd	B	7.5275	O	O	O	O	A3	Regional Network Access
AR047		B	1.1506	O	O	O	O	A5	Recreational Access
AR048		B	0.8192	C	C	C	C	C1	Access from Private
AR051		B	10.1836	O	O	O	O	A5	Provides scenic access
AR0510		B	4.6172		O	O	O	A5	Provides access to the ACEC
AR0511		B	1.0131		C	O	L	L4	Mining access Riparian wash
AR0511		B	0.4700		C	O	C	C4	Riparian Wash Access
AR0511		B	2.2499	O	C	O	C	C4	Riparian Wash Access
AR0514		B	1.2052		C	O	O	A4	Per Kingston Range Plan and overlook
AR052		B	2.6348	O	O	O	O	A5	Provides Recreational Access
AR0520		B	2.3589	O	C	O	C	C4	Per Kingston ACEC plan
AR063		B	1.0673		O	O	O	A4	Provides access to the Kingston Range ACEC
AR063		B	1.3218	O	O	O	O	A4	Provides access to the Kingston Range ACEC
AR081		B	0.1671	O	C	C	C	C5	Provides no access to the network
AR0812		B	0.2130	O	O	O	O	A5	Provides access to network
AR088		B	0.7262	O	O	O	O	A1	Provides access to Nevada
AR089		B	0.1320	O	O	O	O	A5	Provides access to network, may require easement
AR1001		B	2.0360	O	C	O	C	C5	No connection to network adj. to Private land, Wilderness

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR125		B	0.9863		O	O	O	A5	Provides scenic Access to north side of Ibex wilderness
AR125		B	7.2082	O	O	O	O	A5	Provides scenic Access to north side of Ibex wilderness
AR126		B	1.3399	O	L	O	L	L1	Provides access to permitted use
AR1310		B	1.4836	O	O	O	O	A5	Provides Recreational access & overlook
AR1313		B	0.5022	O	L	O	L	L1	Access to commercial site
AR1314		B	0.1811	O	C	C	C	C1	No access to network from Private land
AR133		B	0.9546	O	C	O	C	C5	Redundant
AR134		B	1.5433	O	C	C	C	C5	Doesn't connect to the network, Private
AR135		B	0.2567	O	C	O	C	C5	Connect to close routes
AR136		B	0.2451	O	C	O	C	C5	Connect to close routes
AR1420		B	2.0966	O	O	O	O	A4	Provides access to the east side of ACEC
AR1476		B	0.0747	O	O	O	O	A4	Provides access to central portion of the ACEC
AR1477		B	0.1568	O	C	O	O	A4	Provides access to the central ACEC
AR1483		B	2.0484	O	O	O	O	A5	Recreational Access to the ACEC & Tecopa Hot springs
AR1484	Tecopa Hot springs Rd	B	2.9532	O	O	O	O	A3	Regional Network Access
AR1486		B	0.3343	O	O	O	O	A5	Recreational Access to the ACEC
AR153		B	0.8146	O	O	O	O	A5	Recreational Access
AR154		B	0.3568	O	O	O	O	A5	Recreational Access
AR161		B	1.8389	O	O	O	O	A5	Recreational Access
AR162		B	0.3879		C	O	O	A3	Access network connector to corridor
AR163		B	0.2298	O	O	O	O	A5	Access to Spanish trail
AR163		B	0.0126	O	C	O	C	C5	Doesn't enhance recreational access or connect to network
AR164		B	1.8436	O	C	O	C	C4	Riparian Wash Cat. 3 DT habitat
AR166		B	0.3332	C	C	C	C	C2	Within Wilderness
AR191		B	1.0127		C	C	C	C5	Redundant Route to Wilderness

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR192		B	5.0148	O	O	O	O	A5	Provides access to wilderness
AR193		B	4.1184	O	O	O	O	A5	Provides access to Pahrump valley allotment
AR229		B	0.1406	O	O	O	O	A1	Access to Private
AR2309		B	0.3688	O	C	O	C	C5	Doesn't enhance network
AR231		B	0.9474	O	O	O	O	A1	Access to recreation, patented mining claims
AR231		B	1.5212	O	C	L	L	L5	Gated portion of route to patented mining claims
AR2310		B	1.3006	O	O	O	O	A4	Provides access to recreational & cultural sites
AR2311		B	1.1010	O	O	O	O	A5	Recreational Access
AR2312		B	0.2612	O	O	O	O	A5	Scenic, recreational values, Overlook
AR2312		B	1.0929	O	C	O	O	A5	Scenic, recreational values, Overlook
AR2313		B	0.7823	O	C	O	C	C5	Redundant
AR2313		B	0.2955	O	C	L	L	L5	Gated portion of route to patented mining claims
AR2314		B	0.9819	O	C	O	O	A5	Scenic overlook in Dublin Hills
AR2315		B	0.2803	O	C	O	C	C5	Redundant route
AR2316		B	1.4352	O	C	L	L	L5	Gated portion of route to patented mining claims
AR2317		B	0.3733	O	O	O	O	A1	Provides access to SR127 from Private
AR2318		B	0.3004	O	C	O	C	C5	Shortcut
AR2319		B	0.1794	O	C	O	C	C5	Does not connect to the network
AR232		B	2.2745	O	O	O	O	A5	Recreational hunting and exploratory mining access
AR2320		B	0.3943	O	O	L	O	A1	Provides access to Private land
AR233		B	4.2835	O	O	O	O	A5	Access for AR341, No Sens. Resource Conflicts ID
AR234		B	5.9788	O	O	O	O	A5	Access for AR341, No Sens. Resource Conflicts ID
AR234		B	3.3326	O	C	O	C	C5	Redundant w/SR127
AR235		B	5.9244	O	C	O	C	C3	Run adj. to Amargosa ACEC and illegal dump
AR2350		B	5.6847	O	O	O	O	A3	Part of main Access network

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR236		B	1.6203	O	C	O	C	C5	Redundant SR178
AR237		B	0.9944	O	O	O	O	A5	Access to ACEC
AR237		B	0.1322	O	O	O	O	A1	Access to Private
AR238		B	0.8160	O	C	O	C	C5	Redundant
AR239		B	0.6446	O	C	O	C	C5	Redundant
AR240		B	0.1018	O	C	O	C	C5	Connects to closed route
AR241		B	1.5948	O	O	O	O	A5	Scenic views of wilderness
AR241		B	0.7258	O	O	O	O	A1	Access to Private
AR241		B	0.0601	O	C	O	O	A1	Access to Private
AR242		B	0.5835	O	O	O	O	A1	Access to Private
AR242		B	0.8996	O	O	O	O	A5	Scenic view and access to wilderness
AR243		B	7.4698	O	O	O	O	A5	Scenic views and access to wilderness
AR244		B	0.8546	O	O	O	O	A5	Recreational Access and access to Private land
AR245		B	0.1432	O	O	O	O	A1	Access from Private to SR 178
AR246		B	0.1447	O	O	O	O	A1	Access to Private
AR246		B	0.0730	O	C	O	C	C5	Connects to closed route
AR251		B	0.8720	O	O	O	O	A5	Provides access to wilderness from mesquite
AR252		B	1.0188	O	O	O	O	A1	Private land access to the network
AR261		B	0.2495	O	O	O	O	A5	Provides Recreational access to Pahrump valley
AR261		B	0.0231	O	O	O	O	A5	Provides Recreational access to Pahrump valley
AR261		B	0.1157	O	O	O	O	A5	Provides Recreational access to Pahrump valley
AR261		B	1.1021	O	O	O	O	A5	Provides Recreational access to Pahrump valley
AR341		B	7.5846	O	O	O	O	A3	4wd Scenic/Wilderness Corridor to mining claims
AR3413		B	0.3423	O	O	O	O	A1	Mining Access Rte excluded from wilderness
AR3431		B	0.7648	O	C	O	C	C2	Wilderness Access provided by SR178 & Stateline Rd
AR3432		B	0.1452	O	C	O	C	C5	Does not provide access to the network

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR3433		B	0.2337	O	L	O	O	A1	Access to gravel pit & wilderness
AR3433		B	0.1041	O	L	O	O	A1	Access to gravel pit & wilderness
AR3433		B	0.3716	O	L	O	O	A1	Access to gravel pit & wilderness
AR3435		B	0.6301		C	O	O	A1	Access to gravel pit
AR3436		B	0.2889	O	O	O	O	A5	Provides access to NV routes
AR351		B	0.1547	O	C	O	C	C2	Wilderness Access provided by SR178
AR361		B	2.2036	O	C	O	C	C2	Access to unnamed dry lake
AR362		B	0.3033	O	C	C	C	C5	Doesn't connect to network
AR380		B	1.1454	O	O	O	O	A5	
AR381		B	1.9957		O	O	O	A3	Regional Network Access
AR381		B	12.8466	O	O	O	O	A3	Regional Network Access
AR384		B	1.4557	O	O	O	O	A5	Recreational Access to Historic Mining area
AR385	Western Talc Rd	B	2.7884	O	O	O	O	A3	Regional Network Access
AR392		B	6.1600	O	C	O	C	C5	Access already provides by AR381
AR392		B	8.2469	O	O	O	O	A5	Recreation & mining access
AR394		B	4.4989	O	C	O	C	C4	Provides access to trespass seismic Site
AR395		B	2.7286	O	C	O	C	C5	Dead ends at DVNP Wilderness
AR402		B	5.9927	O	C	O	C	C2	Adj. access to T&E
AR403		B	0.3732	O	O	O	O	A5	Recreational Access
AR408		B	1.7240	O	O	O	O	A5	Recreation & Scenic Access to Eagle mountain
AR408		B	0.0297	O	O	O	O	C5	Shortcut Route Duplicates AF071
AR424		B	1.9583	O	C	O	C	C2	Access to Riparian, unstable soils, next to ACEC, unconnected route
AR441		B	5.4445	O	O	O	O	A1	Patented Mining claims
AR442		B	0.8186	O	O	O	O	A5	Recreation & mining access
AR443		B	0.5899	O	O	O	O	A5	Recreation & mining access
AR444		B	0.3553	O	O	O	O	A1	Patented Mining claims
AR4529		B	1.0619	O	O	O	O	A5	Recreational access
AR453		B	3.3645	O	O	O	O	A5	Recreation & mining access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR454		B	2.0982	O	O	O	O	A5	Recreation & mining access
AR455		B	1.0692	O	C	O	C	C5	Redundant
AR455		B	3.7241		C	O	C	C5	Redundant
AR456		B	4.3881	O	C	O	C	C4	Provides access to rehabbing seismic trespass
AR462		B	6.0449	O	C	O	C	C5	Redundant
AR4625		B	1.1812	O	C	O	C	C5	Redundant
AR4625		B	0.4137	O	O	O	O	A5	Recreational Access
AR4626		B	0.1488	O	O	O	O	A1	Access to Private need easement for access
AR4627		B	0.2624		O	L	L	L1	Patented Mining claim access
AR4628		B	0.8260	O	O	L	L	L1	Patented Mining claim access
AR463		B	5.5439	O	O	O	O	A5	Recreational Access
AR465		B	2.2665		C	O	C	C2	Carson Slough T&E
AR465a		B	0.7661		C	O	C	C2	Carson Slough T&E
AR471		B	2.1732	O	C	O	C	C2	Carson Slough ACEC, access & riparian, soils
AR471		B	0.0478	O	C	O	C	C2	Carson Slough ACEC w of AR402
AR472		B	0.3455	O	C	O	C	C2	Carson Slough ACEC
AR473		B	0.6801	O	C	O	C	C5	No access from closed route
AR476		B	1.1101		C	O	C	C2	Carson Slough ACEC
AR481		B	4.7383	O	O	O	O	A1	Patented Mining claims
AR483		B	0.9989	O	L	O	L	A5	Provides trial head access to Funeral Mountains.
AR483		B	0.2153	O	C	O	O	A5	Provides trial head access to Funeral Mountains.
AR484		B	0.6351	O	O	O	O	A5	Recreation & Mining access
AR491		B	1.1870	O	L	O	L	L5	Redundant
AR491		B	0.5720	O	C	O	C	C5	Redundant
AR492		B	1.3472	O	C	O	C	C5	Redundant, Patented claims
AR492		B	0.7109	O	L	O	L	L5	Redundant, Patented claims
AR5011		B	0.6961	O	C	O	C	C5	Funeral Mountains Wilderness East Access
AR5013	Clay Rd	B	0.0999	O	O	O	O	A5	Recreational & coord. with NV easement may be required

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
AR5013	Clay Rd	B	1.2596	O	O	O	O	A5	Recreational & coord. with NV
AR5014		B	0.8935	O	O	O	O	A1	Access to Private Land
AR5015		B	1.0322	O	O	O	O	A5	Consistent with NV network
AR502		B	3.8941	O	O	O	O	A3	Regional Network Access
AR5020		B	0.7131	O	C	O	C	C5	Funeral Mountains Wilderness East Access
AR503		B	2.4986	O	O	O	O	A5	Recreational & Mining access
AR504		B	6.0903	O	O	O	O	A5	Recreational Access to Network & Private Lands
AR504		B	2.3976	O	C	O	C	C4	Riparian w/ Amargosa ACEC
AR506		B	0.5404	O	O	O	O	A1	AR502 to Private
AR506		B	2.3300	O	O	O	O	A1	Patented Mining
AR506		B	2.3300	O	O	O	O	A1	Recreation access & patented Mining
AR507		B	0.4531	O	C	O	C	C5	Redundant
AR508		B	1.0435	O	O	O	O	A5	Adj. jurisdiction with NV
AR521		B	0.9574	O	O	O	O	A5	Recreation Access & access to NV
AR5210		B	0.0913	O	O	O	O	A5	Provides access to NV network
D0124		B	0.0556	O	O	O	O	A5	Recreational Access & Mine Access
D0124		N	0.0512	O	O	O	O	A1	Provides access to permitted use
D0124		N	0.2018	O	L	O	O	A5	Recreational Access & Mine Access
D0127		B	0.6228	O	O	O	O	A5	Recreational Access
D0127		N	3.4769	O	O	O	O	A5	Recreational Access
D0211		B	0.5840	O	O	O	O	A5	Provides access from Baker to the network
D031		B	1.7240	O	O	O	O	A5	Provides Recreational access from Baker to SR127 & network routes
D0318		B	0.5349	O	O	O	O	A5	Provides access to the Boulder Corridor
D0318		B	0.0571	O	O	O	O	A5	Provides access to the Boulder Corridor
D0318		B	0.2222	O	O	O	O	A5	Provides access to the Boulder Corridor

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D032		B	0.8185	O	O	O	O	A5	Provides access to Historic Mine from Baker and the network
D0320		B	0.1592	O	C	O	C	C4	No route network across dry lake bed in WSA
D033		B	3.7842	O	O	O	O	A5	Provides access to the Soda Mountain WSA
D034		B	1.8562	O	O	O	O	A5	Provides Recreational access to a dry lake bed
D038		B	0.8753	O	O	O	O	A5	Provides tech. 4 wheel access
D038		B	0.4287	O	O	O	O	A5	Provides access to Baker Airport
D040		B	0.4024	O	O	O	O	A5	Provides access from Baker to network and SR 127
D041		B	10.2976	O	O	O	O	A1	Commercial ROW
D043		B	0.6278	O	O	O	O	A5	Provides network access to Baker residents
D045		B	0.3999	O	O	O	O	A5	Provides network access to Baker Residents
D0610		B	2.8402	O	O	O	O	A5	Recreational Access
D065		B	4.0673	O	O	O	O	A5	Recreational Access
D066		B	2.8861	O	O	O	O	A5	Recreational Access
D067		B	2.1581	O	O	O	O	A5	Recreational Access
D069		B	5.4523	O	O	O	O	A5	Recreational Access WSA
D070		B	1.0686	O	O	O	O	A1	Provides access from patented mining claim
D071		B	0.4804	O	C	O	C	C5	Redundant Access provided by D0318
D0710		B	0.4255	O	O	O	O	A5	Recreational Access to WSA
D0713		B	2.0856	O	O	O	O	A5	Recreational Access avoiding Boulder corridor
D0714		B	0.4109	O	C	L	L	L1	Provides permitted access
D0715		B	0.6546	O	O	O	O	A5	Recreational Access
D0716		B	0.3243	O	C	O	C	C5	Redundant with D0715
D0717		B	0.1443	O	C	O	C	C5	Redundant route off the boulder corridor which doesn't connect to the network

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D0718		B	0.5378	O	C	O	C	C5	Redundant route off the boulder corridor which doesn't connect to the network
D0719		B	0.2340	O	C	O	C	C4	Redundant provides many routes in one location
D072		B	0.2948	O	L	O	L	L1	Provides access to Private land
D072		B	0.5596	O	O	O	O	A5	Recreational Access
D0723		B	0.2374	O	C	O	C	C5	Shortcut route
D0724		B	0.2713	O	O	O	O	A5	Provides trailhead Access to Soda Mountain. WSA
D0725		B	0.2615	O	C	O	C	C4	Redundant WSA route no connection to network
D0726		B	0.2736	O	C	O	C	A4	Redundant WSA route no connection to network
D0727		B	0.2760	O	C	O	C	C5	Redundant Access provided by D073 to WSA
D0728		B	0.3079	O	C	O	C	C5	Redundant Access provided by D073 to WSA
D0729		B	0.1892	O	C	O	C	C5	Redundant Access provided by D073 to WSA
D073		B	14.7089	O	O	O	O	A3	Regional Network Access
D073		B	2.1718		O	O	O	A3	Regional Network Access
D074		B	0.8276	O	O	O	O	A5	Recreational Access
D075		B	0.8307	O	C	O	O	A5	Recreational Access easement may be required
D076		B	0.3099	O	C	O	O	A5	Recreational Access easement may be required
D077		B	0.2513	O	C	O	O	A5	Recreational Access easement may be required
D078		B	0.4997	O	C	O	O	A5	Recreational Access easement may be required
D079		B	7.6845	O	O	O	O	A5	Recreational Access to the Avawatz WSA easement may be required
D080		B	2.0720	O	O	O	O	A5	Recreational Access
D081		B	4.4606	O	O	O	O	A5	Recreational Access adj. to the Hollow Hills Wilderness
D081		N	0.2911	O	O	O	O	A5	Recreational Access adj. to the Hollow Hills Wilderness

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D0810		B	0.1571	O	O	O	O	A5	Provides recreational access from the east to northern network
D082		B	0.2870	O	O	O	O	A5	Recreational Access
D085		B	0.3227	O	O	O	O	A5	Connector route between Boulder corridor and other network routes
D101		B	6.3842	O	O	O	O	A5	Access route into Avawatz mountain WSA
D111		B	8.6588	O	O	O	O	A3	Regional Access to Historic Mining District
D1111		B	0.2323	O	O	O	O	A5	Recreational Access Patented mining may require easement
D1112		B	0.9723	O	O	O	O	A5	Recreational Access
D1113		B	1.3582	O	O	O	O	A5	Recreational Access to Historic Mining Area easement may be required
D112		B	2.2765	O	O	O	O	A5	Recreational Access to Historic Mining Area easement may be required
D112		B	5.4163	O	C	O	O	A5	Recreational Access to Historic Mining Area easement may be required
D1120		B	1.0751	O	O	O	O	A5	Patented Mining Claim Access easement may be required
D1120		B	0.0201	O	L	O	L	L1	Access from Patented land no network connection
D114		B	0.2111	O	C	O	C	C5	Does not enhance network or provide Recreational Access
D115		B	1.2982	O	C	O	C	C4	Protection of lake bed
D117		B	0.0732	O	O	O	O	A5	Recreational Access to Historic Mines & Riggs Town Site
D117		B	0.3273	O	O	O	O	A5	Recreational Access
D118		B	0.3132	O	O	O	O	A5	Recreational Access
D121		B	1.7119	O	O	O	O	A5	Recreational Access
D1211		B	4.7749	O	O	O	O	A5	Recreational Access to Historic Mining District
D1214		B	6.4880	O	O	O	O	A5	Recreational Access to Historic Mining District

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D1214		B	1.9406		O	O	O	A5	Recreational Access to Historic Mining District
D1215		B	0.5509	O	C	O	O	A5	Provides access to Historic Mines
D1216		B	0.3897	O	C	O	O	A5	Provides access to Historic Mines
D1217		B	0.3733	O	C	O	O	A5	Provides access to Historic Mines
D1218		B	1.1866	O	O	O	O	A5	Recreational Access
D1221		B	0.0575	O	O	O	O	A5	Provides access to Historic Mine
D123		B	3.3015	O	O	O	O	A3	Regional Network Access
D125		B	0.8082	O	O	O	O	A5	Recreational Access to Historic Mining Area
D125a		B	0.0781	O	O	O	O	A5	Recreational Access to Historic Mining Area
D126		B	0.3199	O	L	O	L	L1	Patented Mining Claim Access
D128		B	0.9179	O	L	O	O	A5	Provides access to Historic Mine and Easement may be required
D129		B	1.2318	O	C	O	O	A5	Recreational Access to Historic Mine
D152		B	0.0029	O	O	O	O	A3	Regional Network Access
D152		B	14.1552	O	O	O	O	A3	Regional Network Access
D152		N	5.5858	O	L	O	L	L1	Access to eastern Star mine
D153		B	4.8942	O	O	O	O	A3	Access to open lake bed & south Kingston WSA and the T&T Railroad
D1609		B	0.0640	O	O	O	O	A5	Recreational Access to Historic Mines
D1610		B	0.2408	O	O	O	O	A5	Recreational Access to Historic Mines
D1612	T&T Railroad	B	14.3542	O	O	O	O	A5	Open for Recreational access
D1612	T&T Railroad	B	8.1769	O	C	O	O	A5	Open for Recreational access
D1612		B	3.2894	O	C	C	C	C5	Closed for safety
D163		B	0.1339	O	C	O	O	A4	Recreational Access to south Kingston WSA
D163		B	0.0659	O	O	O	O	A4	Recreational Access to south Kingston WSA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D164		B	0.1145	O	O	O	O	A5	Recreational Access to Historic Mines
D165		B	0.1047	O	O	O	O	A5	Recreational Access
D166		B	2.9536	O	O	O	O	A5	Recreational Access to Historic Mines & Riggs Town Site
D167		B	0.4380	O	O	O	O	A5	Recreational Access
D168		B	0.3904	O	O	O	O	A5	Recreational Access
D169		B	0.4440	O	O	O	O	A5	Recreational Access to Historic mines
D1719		B	0.1812	O	O	O	O	A5	Provides access to Historic Mine
D218		B	2.5665		C	O	C	C4	Close consistent within adj. DVNP & No connection to network
D221		B	2.0917	O	C	O	C	C4	Protect spring consistent with adjacent planning area
D221		B	1.2208	O	O	O	O	A5	Provides Recreational & patented mining access
D221		B	2.1488	O	C	O	O	A5	Provides Recreational & patented mining access
D221		B	1.5141	O	C	O	O	A4	Access to Denning Spring
D221		B	0.4319	O	C	O	L	L4	Led to set back to motor vehicles from spring
D2211		B	0.5826	O	O	O	O	A4	Rock hounding area within WSA
D2211		B	1.0047	O	C	O	O	A4	Rock hounding area within WSA
D2213		B	2.0161	O	O	O	O	A5	Rock hounding area within WSA
D223		B	2.5492	O	O	O	O	A5	Rock hounding area within WSA
D224	Saratoga Springs Rd	B	7.1757	O	O	O	O	A5	Recreational Access to DVNP Network
D225		B	1.4781	O	O	O	O	A5	Rock hounding area within WSA
D226		B	0.2406	O	O	O	O	A5	Rock hounding area within WSA
D227		B	0.8144	O	O	O	O	A5	Rock hounding area within WSA
D227		B	0.0004	O	O	O	O	A5	Rock hounding area within WSA
D227		B	1.9423	O	O	O	O	A5	Rock hounding area within WSA

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D227		B	0.5241	O	O	O	O	A5	Rock hounding area within WSA
D227		B	0.3622	O	O	O	O	A5	Rock hounding area within WSA
D228		B	2.0752	O	O	O	O	A5	Rock hounding area within WSA
D229		B	0.0842	O	O	O	O	A5	Rock hounding area within WSA
D2310		B	0.2704	O	O	O	O	A5	Access to baby Dumont Dunes
D233		B	4.1002	O	O	O	O	A5	Access to patented claims and WSA
D235		B	5.7358	O	O	O	O	A5	Within Dumont Dunes OHV open area
D238		B	2.3424	O	O	O	O	A5	Access to Avawatz Mountain. WSA
D241		B	0.8716	O	O	O	O	A5	Within Dumont Dunes OHV open Area
D242		B	1.4948	O	O	O	O	A5	Access to the Avawatz mountain. WSA
D244		B	0.2396	O	O	O	O	A5	Public Access to Salt Creek ACEC
D321		B	1.7128	O	O	O	O	A5	Provides Recreational Access adj. to the south side of the Kingston Range W
D3211		B	1.3300	O	O	O	O	A5	Within Dumont Dunes OHV open area
D3212		B	1.0544	O	O	O	O	A5	Within Dumont Dunes OHV area
D3213		B	0.4988	O	O	O	O	A5	Within Dumont Dunes OHV area
D323		B	0.8640	O	O	O	O	A5	Within Dumont Dunes OHV open area
D332		B	0.8283	O	L	O	L	L1	Access to patented mining claims
D333		B	1.0832	O	O	O	O	A5	Recreational Access
D361		B	2.8117	O	O	O	O	A3	Regional connector with adj. jurisdiction (DVNP)
D362		B	1.0572		C	O	C	C5	Redundant with D361
D381		B	6.3438	O	O	O	O	A5	Recreational Access to Historic Mining area along northern Kingston Range Wilderness

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
D383		B	0.8778	O	L	O	L	L1	Access active mine
D384		B	0.6946	O	L	L	L	L5	Provides access to mining claims
D385		B	0.2468	O	O	O	O	A5	Recreational Access
D385		B	0.6913	O	O	O	O	A5	Recreational Access
D386		B	0.1520	O	L	O	L	L1	Access active mine
F0011		R	1.1045	O	O	O	O	A3	Access to McAfee Creek Area and Inyo National Forest
F0012		R	1.0207	O	O	O	O	A5	Secondary access to McAfee Creek
F0013		R	1.9788	O	O	O	O	A3	Access to Toler Creek Area and Inyo National Forest
F0014		R	0.4960		O	O	O	A5	Dispersed Recreational Access
F0015		R	1.1049		O	O	O	A3	Connector Route between Toler and Iron Creek
F0024		R	2.2465	O	O	O	O	A3	Access to Iron Creek Area
F0025		R	1.5917	O	O	O	O	A3	Access to Wildhorse Creek Area
F0030		R	1.8346		O	O	O	A5	Recreation and Range Management Access
F0036		R	1.5460	O	O	O	O	A3	Provides Recreational Access to Region open to intersection with F0037
F0037		R	1.6578	O	O	O	O	A1	Provides Private property access
F0048		R	0.7964	O	O	O	O	A1	Provides Private property access
F0049		R	0.5335	O	O	O	O	A5	Dispersed Recreational Access
F0049		R	1.6311	O	O	O	O	A5	Dispersed Recreational Access
F0410		R	1.4050	O	O	O	O	A5	Recreational access and alternative access to Indian Garden Creek
F0411		R	1.5199	O	O	O	O	A5	Dispersed Recreational Access
F0411		R	0.1459	O	O	O	O	A3	Recreational access to Indian Garden Creek
F0411		R	2.2031	O	O	O	O	A5	Dispersed Recreational Access

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
F0412		R	1.0176	O	O	O	O	A5	Dispersed Recreational Access
F0513		R	0.3190	O	O	O	O	A1	Provides Private property access
F0515		R	0.7098	O	O	O	O	A5	Dispersed Recreational Access
F0516		R	0.5420	O	O	O	O		
F0540		R	0.2070		O	O	O	A5	Dispersed Recreational Access
F0541		R	0.6137	O	O	O	O	A5	Buck Mine Access
F0542		R	3.8491	O	O	O	O	A3	Regional Recreational Access
F0543		R	0.3234	O	O	O	O	A5	Dispersed Recreational Access
F0544		R	1.6924	O	O	O	O	A3	Regional Recreational Access connector
F0545		R	6.3892	O	O	O	O	A3	Regional Recreational Access - to Cottonwood Creek
F0546		R	0.3744	O	O	O	O	A5	Recreational Access
F0547		R	0.3858	O	O	O	O	A5	Recreational Access
F0548		R	0.8445	O	O	O	O	A1	Private property access
F0549		R	1.1625		O	O	O	A5	Alternative Regional access road in the Cottonwood Creek Area
F0549		R	0.7479	O	O	O	O	A5	Recreational Access and connector to Nevada
F0550		R	0.4026	O	O	O	O	A1	Private property access
F0554		R	1.3911	O	O	O	O	A3	Regional Recreational Access
F0554		R	3.0058	O	O	O	O	A3	Regional Recreational Access
F0603		R	0.8354	O	O	O	O	A5	Range Management Access
F0614		R	1.3147	O	O	O	O	A1	Private property access
F0661		R	2.3254	O	O	O	O	A3	Access to Piper Mountain. Wilderness
F0662		R	1.5475	O	O	O	O	A3	Regional Access to White Mountain. City ACEC
F0662		R	0.2295		O	O	O	A3	Regional Access to White Mountain. City ACEC
F0663		R	0.0637	O	O	O	O	A5	Dispersed Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
F0664		R	0.6218	O	O	O	O	A3	Access to Cooked Creek & Inyo National Forest
F0752		R	2.6214	O	O	O	O	A1&A3	Private Property Access & Inyo County Rd = Eureka Valley Rd
F0755		R	0.4097	O	O	O	O	A1	Private Property Access
F0755		R	0.4061	O	O	O	O	A1	Private Property Access
F0757		R	1.8435	O	O	O	O	A1	Private Property Access - Copper Queen Mine
F0759		R	1.7135		O	O	O	A3	Regional Connector - Piper Mountain. Wilderness Corridor
F0759		R	9.7823	O	O	O	O	A3	Regional Connector - Piper Mountain. Wilderness Corridor
F0759		R	1.0683		O	O	O	A3	Regional Connector - Piper Mountain. Wilderness Corridor
F0759		R	2.7112	O	O	O	O	A3	Regional Connector - Piper Mountain. Wilderness Corridor
F0863		R	1.9473	O	O	O	O	A5	Dispersed Recreational Access
F0864	Willow Creek Rd	R	7.2259	O	O	O	O	A3	Inyo County Rd = Willow Creek Rd
F0865		R	2.9545		L	L	L	L5	Range Improvement Maintenance Access
F0867		R	1.3205	O	O	O	O	A3	Recreational Access
F0868		R	7.0043	O	O	O	O	A3	Piper Mountain. Wilderness Corridor - Horse Thief Canyon
F0889		R	1.4529	C	C	C	C	C2	Wilderness Area - Piper Mountain wilderness
F0890		R	0.5001	C	C	C	C	C2	Wilderness Area - Piper Mountain wilderness
F0890		R	0.1598	C	C	C	C	C2	Wilderness Area - Piper Mountain wilderness
F0890		R	0.1598	C	C	C	C	C2	Wilderness Area - Piper Mountain wilderness
F0891		R	1.7897	C	C	C	C	C2	Wilderness Area - Piper Mountain. wilderness
F1019		R	0.3388	O	O	O	O	A5	Dispersed Recreational Access
F1020		R	0.4394	O	O	O	O	A5	Dispersed Recreational Access & Range Management Access
F1021		R	2.4594	O	O	O	O	A3	Access to bear Creek Area

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Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
F1022		R	1.9958	O	O	O	O	A1	Private Property Access
F1024		R	0.6795	O	O	O	O	A3	Access to Birch Creek
F1025		R	1.6427	O	O	O	O	A1	Private Property Access
F1026		R	1.9500	O	O	O	O	A3	Regional Recreational Access
F1027		R	0.0194	O	O	O	O	A1	Private Property Access
F1027		R	0.8943		O	O	O	A1	Private Property Access
F1028		R	1.1799	O	O	O	O	A1&A5	Private Property & Range Management Access
F1029		R	0.9700	O	O	O	O	A1&A5	Private Property & Range Management Access
F1029		R	2.2409		O	O	O	A1&A5	Private Property & Range Management Access
F1032		R	0.6974	O	O	O	O	A5	Alternate Access to Antelope Spring and near Private Property
F1033		R	0.4384	O	O	O	O	A3	Regional Access to Deep Springs Lake Area
F1033		R	2.4280	O	O	O	O	A3	Regional Access to Deep Springs Lake Area
F1034		R	2.3152	O	O	O	O	A1	Private Property Access
F1035		R	5.5400	O	O	O	O	A1&A3	Private Property Access & Piper Mountain. Wilderness Access
F1117		R	0.9989		C	O	C		
F1535		R	0.1308		O	O	O		
F1536		R	0.4023		O	O	O	A1	Private property Access
F1536		R	2.4670	O	O	O	O	A1	Private property Access
F1537		R	3.4651	O	O	O	O	A3	Regional Access & connector in to Inyo National Forest
F1538		R	1.3182	O	O	O	O	A5	Range Improvement Maintenance Access
F1539		R	3.1400	O	O	O	O	A1	Private Property Access
F1540		R	1.0480	O	O	O	O	A3	Regional Access into the Cooked rd Canyon Area - Inyo National Forest
F1675		R	6.9654	O	O	O	O	A1&A3	Private Property Access & Death Valley National Park Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
F1676		R	1.3356	O	O	O	O	A3	Regional Connector - Piper Mountain. Wilderness Corridor & Victor Cons Mine
F1676		R	0.5157	O	O	O	O	A3	Regional Connector - Piper Mountain. Wilderness Corridor & Victor Cons Mine
F1677		R	0.5248	O	O	O	O	A5	Recreational Access
F1678		R	0.0144	O	O	O	O		
F1679		R	0.5103	O	O	O	O	A1	Private Property Access to Victor Cons Mine
F1680		R	0.8268	O	O	O	O	A1	Private Property Access to Victor Cons Mine
F1686		R	0.1228	O	O	O	O	A1	Private Property Access to Nikolaus - Eureka Mine
F1686		R	1.9699	O	O	O	O	A1	Private Property Access to Nikolaus - Eureka Mine
F1691		R	0.8960	O	O	O	O	A5	Wilderness Area Access - Death Valley National Park
F1692		R	0.2155	O	O	O	O	A1	Private Property Access - Harlis-Broady Mine
F1692		R	1.1853	O	O	O	O	A1	Private Property Access - Harlis-Broady Mine
F1692		R	0.2120	O	O	O	O	A1	Private Property Access - Harlis-Broady Mine
F18100		R	0.3319	O	O	O	O	A5	Mining Access
F18101		R	0.4596	O	O	O	O	A5	Mining Access
F18102		R	0.4267	O	O	O	O	A5	Mining Access
F1896		R	0.6372	O	O	O	O	A5	Recreational Access
F1897		R	2.0029	O	O	O	O	A3	Regional Recreational Access
F1897		R	2.9118	O	O	O	O	A3	Mining Access & Recreational Access
F1899		R	0.9128	O	O	O	O	A5	Mining Access
Kingston R		N	0.0000	O	O	O	O		
NN0001		N	1.6300	O	O	O	O	A5	
NN0002		N	1.0651	O	O	O	O	A5	
NN0003		N	2.3182	O	O	O	O	A5	
NN0005		N	0.2738	O	O	O	O	A5	
NN0005		N	0.0579	O	O	O	O	A5	
NN0007		N	1.8185	O	O	O	O	A5	
NN0009		N	10.3597	O	O	O	O	A5	
NN0010		N	0.1263	O	O	O	O		

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0011	Utility ROW	N	6.5220	O	O	O	O	A5	
NN0013	Utility ROW	N	1.3346	O	O	O	O	A5	
NN0013	Utility ROW	N	16.3700	O	O	O	O	A5	
NN0015	Utility ROW	N	1.3523		O	O	O	A5	
NN0015	Utility ROW	N	17.5632		O	O	O	A5	
NN0017		N	15.7938	O	O	O	O	A5	
NN0019		N	4.4338	O	O	O	O	A5	
NN0099		N	0.0522	O	O	O	O		
NN0101		N	7.3349	O	O	O	O	A5	
NN0102		N	8.0423	O	O	O	O	A5	
NN0103		N	1.2689	O	O	O	O	A5	
NN0104		N	2.3143	O	O	O	O	A5	
NN0105		N	1.0506	O	O	O	O	A5	
NN0105		N	1.4027	O	O	O	O	A5	
NN0106		N	3.4337	O	O	O	O	A5	
NN0107		N	1.8522	O	O	O	O	A5	
NN0108		N	1.6570	O	O	O	O	A5	
NN0109		N	1.5734	O	O	O	O	A5	
NN0110		N	5.4603	O	O	O	O	A5	
NN0111		N	4.1631	O	O	O	O	A5	
NN0112		N	0.5379	O	O	O	O	A5	
NN0113		N	4.5936	O	O	O	O	A5	
NN0114		N	1.9894	O	O	O	O	A5	
NN0115		N	2.6771	O	O	O	O	A5	3
NN0116		N	0.3422	O	O	O	O	A5	
NN0118		N	4.8367	O	O	O	O	A5	
NN0119		N	0.4082	O	O	O	O	A5	
NN0120		N	5.7433	O	O	O	O	A5	
NN0121		N	0.1118	O	O	O	O	A5	
NN0122		N	0.9942	O	C	O	O	A5	
NN0123		N	0.5699	O	O	O	O	A5	
NN0124		N	0.7903	O	O	O	O	A5	
NN0125		N	0.4617	O	O	O	O	A5	
NN0126		N	1.3451	O	O	O	O	A5	
NN0127		N	0.6864	O	O	O	O	A5	
NN0128		N	1.0241	O	O	O	O	A5	
NN0129		N	0.5480	O	O	O	O	A5	
NN0130		N	0.5548	O	O	O	O	A5	1

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0131		N	1.0523	O	C	O	O	A5	
NN0132		N	0.6608	O	O	O	O	A5	
NN0133		N	0.2143	O	O	O	O	A5	
NN0134		N	0.3186	O	O	O	O	A5	
NN0136		N	0.3287	O	O	O	O	A5	
NN0137		N	0.1140	O	O	O	O	A5	
NN0138		N	0.2680	O	O	O	O	A5	
NN0139		N	0.2778	O	O	O	O	A5	
NN0140		N	0.1121	O	O	O	O	A5	
NN0141		N	0.4655	O	O	O	O	A5	
NN0142		N	3.3534	O	O	O	O	A5	
NN0143		N	0.9756	O	O	O	O	A5	
NN0144		N	2.7727	O	O	O	O	A5	
NN0146		N	0.3177	O	O	O	O	A5	
NN0146		N	0.0458	O	O	O	O	A5	
NN0146		N	0.2518	O	O	O	O	A5	
NN0146		N	0.2700	O	O	O	O	A5	
NN0146		N	0.1766	O	O	O	O	A5	
NN0146		N	0.1132	O	O	O	O	A5	
NN0146		N	0.8752	O	O	O	O	A5	
NN0146		N	0.1366	O	O	O	O	A5	
NN0148		N	1.4518	O	O	O	O	A5	
NN0152		N	0.1981	O	O	O	O	A5	
NN0154		N	3.4672	O	O	O	O	A5	
NN0156		N	0.3506	O	O	O	O	A5	
NN0159		N	0.0364	O	C	O	L	L1	Access to Viceroy Claim Block
NN0160		N	0.1047	O	C	O	L	L1	Access to Viceroy Claim Block
NN0161		N	0.1217	O	C	O	L	L1	Access to Viceroy Claim Block
NN0162		N	0.1107	O	C	O	L	L1	Access to Viceroy Claim Block
NN0163		N	0.1085	O	C	O	L	L1	Access to Viceroy Claim Block
NN0164		N	0.1129	O	C	O	C	C5	Duplicate Route
NN0165		N	0.3172	O	C	O	C	C5	Duplicate Route
NN0166		N	0.1373	O	C	O	C	C5	Duplicate Route
NN0167		N	0.4672	O	C	O	L	L1	Access to Viceroy Claim Block

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0168		N	0.1429	O	C	O	C	C5	Duplicate Route
NN0170		N	0.2354	O	O	O	O		
NN0180		N	0.7756	O	O	O	O	A5	
NN0201		N	0.8646	O	O	O	O	A5	
NN0202		N	2.8145	O	O	O	O	A5	
NN0203		N	1.4052	O	O	O	O	A5	
NN0204		N	0.2423	O	O	O	O		
NN0205		N	0.6417	O	O	O	O	A5	
NN0206		N	0.8313	O	O	O	O	A5	
NN0207		N	0.3144	O	O	O	O	A5	
NN0208		N	1.1739	O	O	O	O	A5	
NN0209		N	1.0062	O	O	O	O	A5	
NN0210		N	0.3934	O	O	O	O	A5	
NN0211		N	0.1131	O	O	O	O	A5	
NN0212		N	1.7262	O	O	O	O	A5	
NN0213		N	0.0820	O	O	O	O	A5	
NN0214		N	0.3401	O	O	O	O	A5	
NN0215		N	0.0968	O	O	O	O	A5	
NN0216		N	2.2654	O	O	O	O	A5	
NN0217		N	1.0238	O	O	O	O	A5	
NN0218		N	3.9677	O	O	O	O	A5	
NN0219		N	1.2344	O	O	O	O	A5	
NN0220		N	1.4350	O	O	O	O	A5	
NN0221		N	0.4084	O	O	O	O	A5	
NN0222		N	0.2951	O	O	O	O	A5	
NN0223		N	0.6042	O	O	O	O	A5	
NN0224		N	2.6506	O	O	O	O	A5	
NN0224		N	0.1253	O	L	O	O	A5	
NN0225		N	0.5222	O	O	O	O	A5	
NN0226		N	0.2861	O	O	O	O	A5	
NN0227		N	0.3101	O	L	O	L	C4	Reduce Impacts to Mineral Springs/Provides Access to Mining
NN0228		N	0.1878	O	O	O	O	A5	
NN0229		N	0.0674	O	L	O	L	L1	Provides Access to Mining Claims
NN0230		N	0.2924	O	O	O	O	A5	
NN0231		N	0.1482	O	L	O	L	L1	Provides Access to Mining Claims

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0233		N	1.4961	O	O	O	O	A5	
NN0234		N	1.5459	O	O	O	O	A5	2
NN0235		N	0.2316	O	C	O	O	A5	
NN0236		N	1.1704	O	O	O	O	A5	
NN0237		N	0.9645	O	L	O	L	C4	Reduce Impacts to Springs
NN0238		N	1.7027	O	O	O	O	A5	
NN0239		N	0.4150	O	O	O	O	A5	
NN0240		N	0.6985	O	O	O	O	A5	
NN0241		N	0.2283	O	O	O	O	A5	
NN0241		N	0.0884	O	O	O	O	A5	
NN0242		N	0.3392	O	O	O	O	A5	
NN0243		N	0.0981	O	O	O	O	A5	
NN0244		N	0.2132	O	O	O	O	A5	
NN0244		N	0.1963	O	O	O	O	A5	
NN0244		N	0.1543	O	O	O	O	A5	
NN0245		N	0.1309	O	O	O	O	A5	
NN0246		N	0.4649	O	O	O	O	A5	
NN0246		N	0.1155	O	O	O	O	A5	
NN0248		N	0.1037	O	O	O	O	A5	
NN0249		N	3.7868	O	O	O	O	A5	
NN0249		N	8.0463	O	O	O	O	A5	
NN0249		N	1.1344	O	O	O	O	A5	
NN0249		N	1.6450	O	O	O	O	A5	
NN0249		N	4.3530	O	O	O	O	A5	
NN0249		N	0.8265	O	O	O	O	A5	
NN0250		N	0.0794	O	O	O	O	A5	
NN0251		N	0.2026	O	O	O	O		
NN0251		N	3.3762	O	O	O	O		
NN0251		N	0.5383	O	O	O	O		
NN0251		N	0.4480	O	O	O	O		
NN0252		N	0.0675	O	O	O	O	A5	
NN0252		N	0.2343	O	O	O	O	A5	
NN0252		N	0.2037	O	O	O	O	A5	
NN0252		N	0.3152	O	O	O	O	A5	
NN0254		N	0.1299	O	O	O	O	A5	
NN0254		N	0.1026	O	O	O	O	A5	
NN0256		N	0.2057	O	O	O	O	A5	
NN0258		N	0.1435	O	O	O	O	A5	

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Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0258		N	0.0644	O	O	O	O	A5	
NN0258		N	0.1216	O	O	O	O	A5	
NN0258		N	0.0532	O	O	O	O	A5	
NN0258		N	0.0622	O	O	O	O	A5	
NN0259		N	0.0380	O	O	O	O		
NN0259		N	0.0300	O	O	O	O		
NN0260		N	0.1691	O	O	O	O	A5	
NN0260		N	0.4457	O	O	O	O	A5	
NN0260		N	0.1857	O	O	O	O	A5	
NN0260		N	0.1096	O	O	O	O	A5	
NN0261		N	0.0442	O	O	O	O		
NN0262		N	0.0090	O	O	O	O	A5	
NN0262		N	0.0785	O	O	O	O	A5	
NN0262		N	0.2007	O	O	O	O	A5	
NN0262		N	0.0439	O	O	O	O	A5	
NN0262		N	0.0998	O	O	O	O	A5	
NN0263		N	0.0214	O	O	O	O		
NN0264		N	0.1812	O	O	O	O	A5	
NN0264		N	0.4615	O	O	O	O	A5	
NN0264		N	0.2291	O	O	O	O	A5	
NN0265		N	0.0640	O	O	O	O		
NN0266		N	0.2346	O	O	O	O	A5	
NN0266		N	0.0649	O	O	O	O	A5	
NN0267		N	0.0648	O	O	O	O		
NN0268		N	0.1621	O	O	O	O	A5	
NN0268		N	0.0529	O	O	O	O	A5	
NN0268		N	0.4686	O	O	O	O	A5	
NN0271		N	2.2891		O	O	O	A5	
NN0272		N	0.1117	O	O	O	O	A5	
NN0273		N	0.1022	O	O	O	O	A5	
NN0273		N	0.1561	O	O	O	O	A5	
NN0273		N	0.2730	O	O	O	O	A5	
NN0273		N	0.1761	O	O	O	O	A5	
NN0273		N	0.2568	O	O	O	O	A5	
NN0274		N	0.4304	O	O	O	O	A5	
NN0275		N	0.1409	O	O	O	O	A5	
NN0275		N	0.0483	O	O	O	O	A5	
NN0275		N	0.2105	O	O	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0276		N	0.0822	O	O	O	O	A5	
NN0276		N	0.0474	O	O	O	O	A5	
NN0277		N	0.3140	O	O	O	O	A5	
NN0277		N	0.1711	O	O	O	O	A5	
NN0279		N	1.1173	O	O	O	O	A5	
NN0279		N	0.5744	O	O	O	O	A5	
NN0280		N	0.6333	O	O	O	O	A5	
NN0281		N	0.1250	O	O	O	O	A5	
NN0281		N	0.1309	O	O	O	O	A5	
NN0282		N	0.6143	O	O	O	O	A5	
NN0283		N	0.2779	O	O	O	O	A5	
NN0284		N	0.7448	O	O	O	O	A5	
NN0284		N	0.0659	O	O	O	O	A5	
NN0285		N	0.2051	O	O	O	O	A5	
NN0286		N	0.8652	O	O	O	O	A5	
NN0287		N	0.2112	O	O	O	O	A5	
NN0287		N	0.4947	O	O	O	O	A5	
NN0287		N	0.0972	O	O	O	O	A5	
NN0287		N	0.0795	O	O	O	O	A5	
NN0287		N	0.0527	O	O	O	O	A5	
NN0287		N	0.1938	O	O	O	O	A5	
NN0287		N	0.6508	O	O	O	O	A5	
NN0287		N	0.4933	O	O	O	O	A5	
NN0287		N	0.5004	O	O	O	O	A5	
NN0287		N	0.0773	O	O	O	O	A5	
NN0287		N	0.0692	O	O	O	O	A5	
NN0287		N	0.2655	O	O	O	O	A5	
NN0288		N	0.4424	O	O	O	O	A5	
NN0288		N	0.1181	O	O	O	O	A5	
NN0288		N	0.0550	O	O	O	O	A5	
NN0289		N	0.0704	O	O	O	O	A5	
NN0290		N	0.5912	O	O	O	O	A5	
NN0291		N	0.1053	O	O	O	O	A5	
NN0291		N	0.1274	O	O	O	O	A5	
NN0292		N	1.2693	O	O	O	O	A5	
NN0294		N	0.1391	O	O	O	O	A5	
NN0295		N	0.1655	O	O	O	O	A5	
NN0295		N	0.3357	O	O	O	O	A5	

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0296		N	0.1127	O	O	O	O	A5	
NN0296		N	0.4293	O	O	O	O	A5	
NN0298		N	0.2208	O	O	O	O	A5	
NN0298		N	0.3326	O	O	O	O	A5	
NN0298		N	0.1373	O	O	O	O	A5	
NN0299		N	0.1064	O	O	O	O	A5	
NN0300		N	0.1621	O	O	O	O	A5	
NN0301		N	0.0521	O	O	O	O	A5	
NN0302		N	0.0101	O	O	O	O	A5	
NN0303		N	0.0437	O	O	O	O	A5	
NN0303		N	0.0185	O	O	O	O	A5	
NN0304		N	0.0719	O	O	O	O	A5	
NN0305		N	0.1153	O	O	O	O	A5	
NN0310		N	0.1171	O	C	O	C	C5	Duplicate Route
NN0311		N	0.0625	O	C	O	C	C5	Duplicate Route
NN0312		N	0.0764	O	C	C	C		
NN0313		N	0.1728	O	O	O	O	A5	
NN0314		N	0.1086	O	C	O	C	C4	Duplicate Route
NN0315		N	0.2327	O	C	O	C	C4	Duplicate Route
NN0397		N	0.3455	O	C	O	C	C4	Duplicate Route
NN0398		N	0.2962	O	C	O	C	C4	Duplicate Route Impacts Wilderness
NN0398		N	0.8499	C	C	C	C	C4	Duplicate Route Impacts Wilderness
NN0398		N	0.2355	C	C	C	C	C4	Duplicate Route Impacts Wilderness
NN0399		N	1.8988	O	C	O	C	C4	Duplicate Route Impacts Wilderness
NN0400	State Line Pass Rd	N	0.5383	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	1.1424	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	0.8330	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	1.7314	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	1.6829	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	0.3237	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	0.2752	O	O	O	O	A3	Regional Route Network
NN0400	State Line Pass Rd	N	0.9346	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	0.4597	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	1.4623	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	1.3149	O	O	O	O	A3	Regional Route Network

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0401	Old Traction Rd	N	0.8028	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	3.0346	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	3.9520	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	0.8621	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	0.4546	O	O	O	O	A3	Regional Route Network
NN0401	Old Traction Rd	N	0.3150	O	O	O	O	A3	Regional Route Network
NN0402		N	1.9007	O	O	O	O	A5	
NN0402		N	0.8202	O	O	O	O	A5	
NN0402		N	0.2797	O	O	O	O	A5	
NN0402		N	0.7818	O	O	O	O	A5	
NN0402		N	1.0078	O	O	O	O	A5	
NN0403		N	1.4941	O	O	O	O	A5	
NN0404		N	1.3404	O	O	O	O	A5	
NN0405		N	1.0777	O	O	O	O	A5	
NN0406		N	1.1428	O	O	O	O	A5	
NN0406		N	1.5434	O	O	O	O	A5	
NN0407		N	0.5250	O	O	O	O	A5	
NN0408		N	5.1071	O	O	O	O	A5	
NN0409		N	0.3403	O	O	O	O	A5	
NN0409		N	0.2259	O	O	O	O	A5	
NN0409		N	0.7495	O	O	O	O	A5	
NN0410		N	0.7502	O	O	O	O	A5	
NN0410		N	0.1408	O	O	O	O	A5	
NN0410		N	1.8971	O	O	O	O	A5	
NN0411		N	0.2479	O	O	O	O	A5	
NN0411		N	0.3444	O	O	O	O	A5	
NN0412		N	0.3550	O	O	O	O	A5	
NN0413	Cherry Stem	N	0.3736	O	O	O	O	A5	
NN0413	Cherry Stem	N	3.3430	O	O	O	O	A5	
NN0414		N	0.1519	O	O	O	O	A5	
NN0414		N	0.0057	O	O	O	O	A5	
NN0414		N	0.3909	O	O	O	O	A5	
NN0414		N	0.0189	O	O	O	O	A5	
NN0414		N	0.0280	O	O	O	O	A5	
NN0415	Jeep Trail	N	0.0621	O	O	O	O	A5	
NN0415		N	1.3690	O	O	O	O	A5	
NN0415		N	0.4643	O	O	O	O	A5	
NN0416		N	0.8557	O	O	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0417		N	1.6156	O	O	O	O	A5	
NN0417		N	0.0848	O	O	O	O	A5	
NN0418	Jeep Trail	N	1.2036	O	O	O	O	A5	
NN0418	Jeep Trail	N	0.5754	O	O	O	O	A5	
NN0418	Jeep Trail	N	1.2743	O	O	O	O	A5	
NN0419		N	0.0011	O	O	O	O		
NN0419		N	0.0044	O	O	O	O		
NN0420		B	0.2514	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		B	1.6135	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		B	0.0647	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		N	0.0370	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		N	0.7416	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		N	0.3419	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		N	0.1283	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		N	0.6042	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0420		N	0.1835	O	O	O	O	A5	Recreational Access to wilderness and other network routes
NN0421	Cherry Stem	N	0.3084	O	L	O	O	A5	
NN0421	Cherry Stem	N	0.2543	O	O	O	O	A5	
NN0421	Cherry Stem	N	0.3808	O	L	O	O	A5	
NN0422		N	1.3421	O	O	O	O	A5	
NN0423	Cherry Stem	N	0.1200	O	L	O	O	A5	
NN0424	Cherry Stem	N	0.0630	O	L	O	O	A5	
NN0424	Cherry Stem	N	0.1212	O	L	O	O	A5	
NN0424	Cherry Stem	N	0.2897	O	L	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative				Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA				
NN0425	Cherry Stem	N	0.0924	O	L	O	O	O	A5	
NN0426		N	2.8589	O	O	O	O	O	A5	
NN0427		N	1.3055	O	O	O	O	O	A5	
NN0428	Kingston Wash	B	2.3560	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	B	1.5775	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	B	0.4925	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	B	0.2409	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	B	3.3840	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	B	0.7992	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	N	4.8527		O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0428	Kingston Wash	N	7.8258	O	O	O	O	O	A3	Regional network connector through Kingston Range wilderness
NN0429		N	1.5375	O	O	O	O	O	A5	
NN0430		N	1.2877	O	O	O	O	O	A5	
NN0431		N	0.2046	O	O	O	O	O	A5	
NN0432		N	3.0371	O	O	O	O	O	A5	
NN0433		N	0.1138	O	O	O	O	O	A5	
NN0433		N	0.0934	O	O	O	O	O	A5	
NN0433		N	0.1086	O	O	O	O	O	A5	
NN0433		N	0.0650	O	O	O	O	O	A5	
NN0433		N	5.8321	O	O	O	O	O	A5	
NN0433		N	0.0652	O	O	O	O	O	A5	
NN0433		N	1.1782	O	O	O	O	O	A5	
NN0433		N	0.1223	O	O	O	O	O	A5	
NN0434		N	0.6668	O	O	O	O	O	A5	
NN0434		N	0.9976	O	O	O	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0434		N	1.5058	O	O	O	O	A5	
NN0434		N	0.4627	O	O	O	O	A5	
NN0434		N	0.2489	O	O	O	O	A5	
NN0434		N	1.0825	O	O	O	O	A5	
NN0435		N	0.8683	O	O	O	O	A5	
NN0435		N	3.9768	O	O	O	O	A5	
NN0435		N	0.6696	O	O	O	O	A5	
NN0435		N	0.9845	O	O	O	O	A5	
NN0436		N	0.7191	O	O	O	O	A5	
NN0437		N	0.2164	O	O	O	O	A5	
NN0437		N	0.0757	O	O	O	O	A5	
NN0438		N	0.0375		O	O	O	A5	
NN0438		N	0.2214		O	O	O	A5	
NN0439		N	0.3014	O	O	O	O	A5	
NN0440		N	0.4492	O	O	O	O	A5	
NN0441		N	1.1569		O	O	O	A5	
NN0441		N	0.0791	O	O	O	O	A5	
NN0441		N	0.5911	O	O	O	O	A5	
NN0441		N	0.1247	O	O	O	O	A5	
NN0442		N	0.2494	O	O	O	O	A5	
NN0443		N	0.2407	O	O	O	O	A5	
NN0443		N	0.2567	O	O	O	O	A5	
NN0446		B	0.2105	O	O	O	O	A5	Recreational Access to Historic Mining Area
NN0446		N	0.8098	O	O	O	O	A5	Recreational Access to Historic Mining Area
NN0447		N	0.0073	O	O	O	O	A5	
NN0447		N	0.3369	O	O	O	O	A5	
NN0448		N	0.2167	O	O	O	O	A5	
NN0448		N	0.2695	O	O	O	O	A5	
NN0448		N	0.3591	O	O	O	O	A5	
NN0448		N	2.7596	O	O	O	O	A5	
NN0449		N	0.6261	O	O	O	O	A5	
NN0450		N	0.5029	O	L	O	L	L1	Patented mining access
NN0450		N	0.0999	O	O	O	O	A5	Recreational Access to North side of Kingston Range Wilderness

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NN0452		N	1.5411		O	O	O	A5	Recreational Access to North side of Kingston Range Wilderness
NN0453		N	0.0531	O	L	O	L	L1	Provides access to patented claims
NN0453		N	0.2508	O	L	O	L	L1	Provides access to patented claims
NN0453		N	0.0602	O	L	O	L	L1	Provides access to patented claims
NN0453		N	2.1161	O	O	O	O		
NN0455		N	0.1702		C	O	C	C5	Duplicate Route
NN0456		N	0.0730	O	O	O	O		
NN0456		N	0.0517	O	O	O	O		
NN0457		N	0.1993	O	O	O	O		
NN0458		N	0.2746	O	O	O	O		
NN097		N	0.4801	O	O	O	O		
NN098		N	0.0883	O	O	O	O		
NN099		N	0.0322	O	O	O	O		
NN099		N	0.3958	O	O	O	O		
NN099		N	0.8950	O	O	O	O		
NN099		N	1.0017	O	O	O	O		
NS0001		N	1.8042	O	O	O	O	A5	
NS0001		N	0.7465	O	O	O	O	A5	
NS0001		N	3.6770	O	O	O	O	A5	
NS0001		N	0.3141	O	O	O	O	A5	
NS0001		N	0.1024	O	O	O	O		
NS0001		N	1.5325	O	O	O	O	A5	
NS0001		N	1.0980	O	O	O	O	A5	
NS0001		N	0.2579	O	O	O	O	A5	
NS0001		N	2.2829	O	O	O	O	A5	
NS0001		N	0.7389	O	O	O	O	A5	
NS0001		N	0.3775	O	O	O	O	A5	
NS0001		N	1.7042	O	O	O	O	A5	
NS0001		N	1.7042	O	O	O	O	A5	
NS0002		N	0.9301	O	O	O	O	A5	
NS0002		N	1.7133	O	O	O	O	A5	
NS0002		N	0.3297	O	O	O	O	A5	
NS0002		N	2.3210	O	O	O	O	A5	
NS0002		N	2.9478	O	O	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NS0002		N	0.7814	O	O	O	O	A5	
NS0002		N	0.4341	O	O	O	O	A5	
NS0002		N	0.8322	O	O	O	O	A5	
NS0002		N	0.1766	O	O	O	O	A5	
NS0003	Utility Rd	N	0.1747	O	O	O	O	A5	
NS0003	Utility Road	N	3.0587	O	O	O	O	A5	
NS0003	Utility Road	N	3.2920	O	O	O	O	A5	
NS0003	Utility Road	N	0.7737	O	O	O	O	A5	
NS0003	Utility Road	N	3.7010	O	O	O	O	A5	
NS0003	Utility Road	N	3.0945	O	O	O	O	A5	
NS0003	Utility Road	N	1.4864	O	O	O	O	A5	
NS0003	Utility Road	N	0.7827	O	O	O	O	A5	
NS0003	Utility Road	N	1.2357	O	O	O	O	A5	
NS0003	Utility Road	N	1.1460	O	O	O	O	A5	
NS0003	Utility Road	N	0.3844	O	O	O	O	A5	
NS0003	Utility Road	N	2.3186	O	O	O	O	A5	
NS0004		N	0.6962	O	O	O	O	A5	
NS0004		N	0.3571	O	O	O	O	A5	
NS0004		N	0.0953	O	O	O	O	A5	
NS0004		N	0.8434	O	O	O	O	A5	
NS0004		N	1.0472	O	O	O	O	A5	
NS0005		N	2.7555	O	O	O	O	A5	
NS0005		N	0.8771	O	O	O	O	A5	
NS0005		N	0.5002	O	O	O	O	A5	
NS0005		N	0.1087	O	O	O	O	A5	
NS0005		N	0.2385	O	O	O	O	A5	
NS0006		N	1.0908	O	O	O	O	A5	
NS0006		N	0.0372	O	O	O	O	A5	
NS0007		N	1.5312	O	O	O	O	A5	
NS0007		N	2.0585	O	O	O	O	A5	
NS0007		N	0.8786	O	O	O	O	A5	
NS0007		N	0.1998	O	O	O	O	A5	
NS0007		N	0.1268	O	O	O	O	A5	
NS0007		N	0.4181	O	O	O	O	A5	
NS0007		N	0.5072	O	O	O	O	A5	
NS0007		N	1.0248	O	O	O	O	A5	
NS0007		N	1.0055	O	O	O	O	A5	
NS0007		N	3.0439	O	O	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NS0007		N	0.4036	O	O	O	O	A5	
NS0007		N	0.3392	O	O	O	O	A5	
NS0007		N	0.5610	O	O	O	O	A5	
NS0007		N	1.8047	O	O	O	O	A5	
NS0007		N	1.3561	O	O	O	O	A5	
NS0008		N	1.1085	O	O	O	O	A5	
NS0008		N	0.0885	O	O	O	O	A5	
NS0008		N	0.0937	O	O	O	O	A5	
NS0008		N	0.8132	O	O	O	O	A5	
NS0008		N	0.1684	O	O	O	O	A5	
NS0009		N	0.3262	O	O	O	O	A5	
NS0009		N	0.0979	O	O	O	O		
NS0010		N	2.0519	O	O	O	O	A5	
NS0011		N	1.3289	O	O	O	O	A5	
NS0011		N	1.5704	O	O	O	O	A5	
NS0012		N	2.0813	O	O	O	O	A5	
NS0012		N	1.3039	O	O	O	O	A5	
NS0013		N	0.3065	O	O	O	O	A5	
NS0013		N	0.1562	O	O	O	O	A5	
NS0014		N	1.2143		O	O	O	A5	
NS0015		N	0.2394	O	O	O	O	A5	
NS0016		N	4.3126	O	O	O	O	A5	
NS0016		N	1.1119	O	O	O	O	A5	
NS0016		N	0.6528	O	O	O	O	A5	
NS0016		N	1.0960	O	O	O	O	A5	
NS0017		N	1.6919	O	O	O	O	A5	
NS0017		N	0.4931	O	O	O	O	A5	
NS0017		N	0.4881	O	O	O	O	A5	
NS0017		N	0.8718	O	O	O	O	A5	
NS0018		N	5.8573	O	O	O	O	A5	
NS0018		N	2.2582	O	O	O	O	A5	
NS0018		N	0.3390	O	O	O	O	A5	
NS0019		N	0.2036	O	O	O	O	A5	
NS0020		N	0.4009	O	O	O	O	A5	
NS0021		N	0.1704	O	O	O	O	A5	
NS0021		N	0.4462	O	O	O	O	A5	
NS0021		N	0.1550	O	O	O	O	A5	
NS0021		N	0.8705	O	O	O	O	A5	

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
NS0022		N	0.3347	O	O	O	O	A5	
NS0022		N	0.8177	O	O	O	O	A5	
NS0022		N	0.0593	O	O	O	O	A5	
NS0022		N	0.1178	O	O	O	O	A5	
NS0022		N	0.4480	O	O	O	O	A5	
NS0022		N	2.2620	O	O	O	O	A5	
NS0022		N	0.2360	O	O	O	O	A5	
NS0022		N	1.0139	O	O	O	O	A5	
NS0023		N	0.4474	O	O	O	O	A5	
NS0024		N	1.1743	O	O	O	O	A5	
NS0024		N	0.5829	O	O	O	O	A5	
NS0024		N	3.0334	O	O	O	O	A5	
NS0024		N	0.5671	O	O	O	O	A5	
NS0025		N	0.0024	O	O	O	O		
NS0025		N	0.0533	O	O	O	O		
NS0025		N	0.0180	O	O	O	O		
NS0025		N	0.1873	O	O	O	O		
NS0025		N	0.3401	O	O	O	O		
NS0026		N	1.0982	O	C	O	O	A5	
NS0026		N	0.0093	O	O	O	O	A5	
NS0026		N	0.2292	O	O	O	O	A5	
NS0028		N	0.5604	O	C	O	O	A5	
NS0030		N	0.4518	O	C	C	C	C5	Duplicate Route
NS0031		N	0.2491	O	C	O	C	C5	Duplicate Route
NS0035		N	1.7042		C	O	O	A5	
NS0036		N	1.7042		C	O	O	A5	
P01146		R	0.1605		O	O	O		
P0130		R	3.0553		O	O	O	A3	Recreational Access - Slate Range Crossing Trail
P0167		R	0.0920		O	O	O		
P0167		R	0.1652		O	O	O		
P0168		R	0.3861		O	O	O	A3	Recreational Access - Fish Canyon Trail
P0168		R	0.8527		O	O	O	A3	Recreational Access - Fish Canyon Trail
P0168		R	3.9184		O	O	O	A3	Recreational Access - Fish Canyon Trail

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P0169		R	0.9925		O	O	O	A3	Recreational Access - Escape Trail = Technical 4wd
P0170		R	3.2837		O	O	O	A3	Recreational Access - Southern Panamint Lake Rd, western shoreline
P0170		R	0.6016		O	O	O	A3	Recreational Access - Southern Panamint Lake Rd, western shoreline
P0170		R	2.6693		O	O	O	A3	Recreational Access - Southern Panamint Lake Rd, western shoreline
P0170		R	8.5402		O	O	O	A3	Recreational Access - Southern Panamint Lake Rd, western shoreline
P0170		R	0.0103		O	O	O	A3	Recreational Access - Southern Panamint Lake Rd, western shoreline
P0171		R	0.4501		O	O	O	A5	Dispersed Recreational Access
P030		R	1.7163		O	O	O	A5	Dispersed Recreational Access
P037		R	0.4509	O	O	O	O	A5	Dispersed Recreational Access
P037		R	0.4711	O	O	O	O	A5	Dispersed Recreational Access
P037		R	0.6425	O	O	O	O	A5	Dispersed Recreational Access
P038		R	0.3708	O	O	O	O	A3	Boundary Rd between BLM-Death Valley; connects with Trona - Wildrose Rd
P038		R	0.5230	O	O	O	O	A3	Boundary Rd between BLM-Death Valley; connects with Trona - Wildrose Rd
P038		R	0.7433	O	O	O	O	A3	Boundary Rd between BLM-Death Valley; connects with Trona - Wildrose Rd
P0508		R	0.2002	O	O	O	O	A1	Private Property Access
P0508		R	0.4094	O	O	O	O	A1	Private Property Access
P0509		R	0.4039	O	O	O	O	A5	Mining Access - Modoc Mine Region
P0510		R	1.4091	O	O	O	O	A5	Recreational Connector from Osborne Canyon to Lookout City Area

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P0510		R	0.2521	O	O	O	O	A5	Recreational Connector from Osborne Canyon to Lookout City Area
P0511		R	0.4182		O	O	O	A1	Private Property Access
P0512		R	0.2146	O	O	O	O	A3	Defense Mine Access
P0513		R	0.0362	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	0.2972	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	0.9361	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	0.9547	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	2.0577	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	1.0597	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	1.2815	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	0.4208	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	0.5050	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0513		R	0.5271	O	O	O	O	A3	Regional Connector - Panamint Valley Rd to Lookout City Area
P0514		R	0.0398	O	O	O	O	A1	Private Property Access
P0514		R	0.8918	O	O	O	O	A1	Private Property Access
P0514		R	0.2460	O	O	O	O	A1	Private Property Access
P0514		R	0.1981	O	O	O	O	A1	Private Property Access
P0514		R	0.2367	O	O	O	O	A1	Private Property Access
P0515		R	0.2239	O	O	O	O	A5	Recreational Access - Stone Canyon Area

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P0516		R	0.2192		O	O	O	A5	Recreational Access - Stone Canyon Area
P0516		R	0.1177	O	O	O	O	A5	Recreational Access - Stone Canyon Area
P0517		R	0.2511	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0517		R	1.2547	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0517		R	0.1153	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0517		R	0.3196	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0517		R	0.0934	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0517		R	0.1612	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0517		R	0.7143	O	O	O	O	A5	Recreational Access to Thompson Canyon Area
P0519		R	0.2922	O	O	O	O	A3	Regional Access to Thompson Canyon Area
P0519		R	0.7592	O	O	O	O	A3	Regional Access to Thompson Canyon Area
P0520		R	0.2259	O	O	O	O	A5	Mining Access - Minnetta Mine
P0520		R	0.1174	O	O	O	O	A5	Mining Access - Minnetta Mine
P0520		R	0.2074	O	O	O	O	A5	Mining Access - Minnetta Mine
P0521		R	0.1526	O	O	O	O	A5	Mining Access
P0522		R	0.1005	O	O	O	O		
P0522		R	0.0208	O	O	O	O		
P0522		R	0.0945	O	O	O	O		
P0523		R	0.1238	O	O	O	O	A5	Mining Access
P0523		R	0.1706	O	O	O	O	A5	Mining Access
P0524		R	0.1871	O	O	O	O		
P0525		R	0.2668	O	O	O	O	A5	Dispersed Recreational Access
P0526		R	0.1230	O	O	O	O	A5	Dispersed Recreational Access
P0526		R	0.1165	O	O	O	O	A5	Dispersed Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P0527		R	0.2069	O	O	O	O	A5	Dispersed Recreational Access - Argus Range Wilderness
P0528		R	0.1441	O	O	O	O		
P059		R	0.3709	O	O	O	O	A3	Osborne Canyon Access - Argus Range Wilderness
P059		R	3.5671	O	O	O	O	A3	Osborne Canyon Access - Argus Range Wilderness
P0611		R	0.9605	O	O	O	O	A5	Alternate Route connector with P0037, 38, and P0513
P0628		R	2.6056	O	O	O	O	A3	Regional Connector - DVNP with Thompson Canyon
P0722		R	0.2274	O	O	O	O	A5	St. George Mine Access
P0722		R	0.1266	O	O	O	O	A5	St. George Mine Access
P0723		R	0.5341	O	O	O	O	A5	Mining Access
P0724		R	0.4199	O	O	O	O		
P0724		R	0.7756	O	O	O	O	A5	Mining Access
P0724		R	0.1988	O	O	O	O	A5	Mining Access
P0725		R	0.0823	O	O	O	O	A5	Golden Lady Mine Access
P0725		R	0.3480	O	O	O	O	A5	Golden Lady Mine Access
P0726		R	0.8883	O	O	O	O	A3	Snow Canyon Access
P0726		R	2.4656	O	O	O	O	A3	Snow Canyon Access
P0726		R	2.3326	O	O	O	O	A3	Snow Canyon Access
P0726		R	1.3004	O	O	O	O	A3	Snow Canyon Access
P0726		R	0.2064	O	O	O	O	A3	Snow Canyon Access
P0726		R	0.1200	O	O	O	O	A3	Snow Canyon Access
P0727		R	4.2295	O	O	O	O	A3	Regional Connector from Panamint Rd to Thompson Canyon Area
P0728		R	1.1494	O	O	O	O	A5	Recreational Connector from Thompson Canyon to Snow Canyon
P0732		R	0.2229	O	O	O	O	A5	Argus Range Wilderness Access
P0732		R	0.0150	O	O	O	O	A5	Argus Range Wilderness Access
P0733		R	1.3595	O	O	O	O	A1	Private Property Access
P0733		R	0.0180	O	O	O	O	A1	Private Property Access
P0733		R	0.1077	O	O	O	O	A1	Private Property Access
P0733		R	1.0247	O	O	O	O	A1	Private Property Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P0831	Slate Range Rd	R	4.9153	O	O	O	O	A3	Inyo County Rd = Slate Range Rd
P0831	Slate Range Rd	R	2.0733	O	O	O	O	A3	Inyo County Rd = Slate Range Rd
P0832		R	1.8659	O	C	O	C	C4	Route crosses Panamint Lakebed which is closed to vehicle use
P0832		R	0.0799	O	C	O	C	C4	Route crosses Panamint Lakebed which is closed to vehicle use
P0832		R	0.2009	O	C	O	C	C4	Route crosses Panamint Lakebed which is closed to vehicle use
P0833		R	1.1378		C	O	C	C4	Route Leads to Panamint Lakebed which is closed to vehicle use
P0834		R	0.3331		C	O	C	C4	Route Leads to Panamint Lakebed which is closed to vehicle use
P0834		R	0.2313		C	O	C	C4	Route Leads to Panamint Lakebed which is closed to vehicle use
P0835		R	0.1606	O	O	O	O	A5	Short Connector between Trona - Wildrose Rd & P0836
P0836		R	0.8536	O	O	O	O	A5	Recreational Alternative to Trona - Wildrose Rd
P0836		R	0.0331	O	O	O	O	A5	Recreational Alternative to Trona - Wildrose Rd
P0836		R	0.5118	O	O	O	O	A5	Recreational Alternative to Trona - Wildrose Rd
P0836		R	2.7227	O	O	O	O	A5	Recreational Alternative to Trona - Wildrose Rd
P0837		R	0.1768	O	O	O	O	A5	Short Connector between Trona - Wildrose Rd & P0836
P0929		R	0.8307	O	O	O	O	A3	Regional Connector along westside of Panamint Lakebed
P0929		R	3.4289	O	O	O	O	A3	Regional Connector along westside of Panamint Lakebed

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P0929		R	0.0004	O	O	O	O	A3	Regional Connector along westside of Panamint Lakebed
P0960		R	0.3256	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	0.9317	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	1.8634	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	0.4870	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	0.9175	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	0.6439	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	0.0547	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	1.3600	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	0.4221	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	1.8573	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0960		R	1.8892	O	O	O	O	A3	Recreational Access - Slate Range to Panamint Valley
P0961		R	0.6489		O	O	O	A5	Dispersed Recreational Access
P0961		R	1.1982	O	C	O	C		
P0963		R	0.7277		O	O	O		
P0964		R	0.8697		O	O	O		
P0966		R	1.9387	O	O	O	O	A3	Jail Canyon Access
P0967		R	0.0390	O	O	O	O	A1	Private Property Access _ Indian Ranch
P0967		R	0.0568	O	O	O	O	A1	Private Property Access _ Indian Ranch
P0967		R	0.1081	O	O	O	O	A1	Private Property Access _ Indian Ranch
P1135		R	0.3002		O	O	O	A5	Dispersed Recreational Access
P1136		R	2.5704		O	O	O	A5	Dispersed Recreational Access
P1137		R	1.2628		O	O	O	A5	Dispersed Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P1137		R	0.7449		O	O	O	A5	Dispersed Recreational Access
P1137		R	0.5139		O	O	O	A5	Dispersed Recreational Access
P1138		R	0.8905	O	O	O	O	A3	Knight Canyon Access
P1138		R	0.1403	O	O	O	O	A3	Knight Canyon Access
P1138		R	1.4762	O	O	O	O	A3	Knight Canyon Access
P1139		R	2.7920	O	O	O	O	A5	Recreational Connector Knight & Bendire Canyons
P1140		R	0.5201	O	O	O	O	A3	Bendire Canyon Access
P1140		R	0.8243	O	O	O	O	A3	Bendire Canyon Access
P1140		R	1.1082	O	O	O	O	A3	Bendire Canyon Access
P1140		R	0.8396	O	O	O	O	A3	Bendire Canyon Access
P1140		R	0.2275	O	O	O	O	A3	Bendire Canyon Access
P1141		R	0.2787	O	O	O	O	A5	Recreational Connector alternate route into Bendire Canyon
P1141		R	0.8476	O	O	O	O	A5	Recreational Connector alternate route into Bendire Canyon
P1143		R	0.8447		O	O	O	A5	Dispersed Recreational Access - Argus Range Wilderness
P1143		R	0.8964		O	O	O	A5	Dispersed Recreational Access - Argus Range Wilderness
P1144		R	0.6045	O	O	O	O	A5	Dispersed Recreational Access
P1144		R	0.6570	O	O	O	O	A5	Dispersed Recreational Access
P1144		R	1.4868	O	O	O	O	A5	Dispersed Recreational Access
P1145		R	0.6152	O	O	O	O	A5	Dispersed Recreational Access
P1156		R	0.8411	O	O	O	O	A5	Recreational connector Anthony Mill region to Shepard Canyon
P1156		R	1.3327	O	O	O	O	A5	Recreational connector Anthony Mill region to Shepard Canyon
P1156		R	0.4392	O	O	O	O	A5	Recreational connector Anthony Mill region to Shepard Canyon

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P1278		R	2.2462	O	O	O	O	A3	Happy Canyon Access
P1278		R	0.0272	O	O	O	O	A3	Happy Canyon Access
P1440		R	0.1149		O	O	O	A5	Dispersed Recreational Access
P1440		R	0.4675		O	O	O	A5	Dispersed Recreational Access
P1440		R	0.3880		O	O	O	A5	Dispersed Recreational Access
P1440		R	1.5697		O	O	O	A5	Dispersed Recreational Access
P1441		R	0.1156		O	O	O	A5	Dispersed Recreational Access
P1442		R	0.0224	O	O	O	O	A5	Dispersed Recreational Access
P1442		R	0.3425		O	O	O	A5	Dispersed Recreational Access
P1446		R	1.3186	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1446		R	0.9655	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1446		R	0.4265	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1446		R	2.5687	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1446		R	0.2256	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1446		R	0.9848	O	C	O	C	C4	Route Crosses Panamint Lakebed which is closed to vehicle use
P1446		R	1.8076	O	C	O	C	C4	Route Crosses Panamint Lakebed which is closed to vehicle use
P1446		R	0.7412	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1446		R	0.2774	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1448		R	0.3932	O	O	O	O	A3	Kopper King Mine Access
P1448		R	1.0321	O	O	O	O	A3	Kopper King Mine Access
P1448		R	0.9002	O	O	O	O	A3	Kopper King Mine Access
P1450		R	1.3454	O	O	O	O	A5	Dispersed Recreational Access
P1451		R	0.1767	O	O	O	O	A5	Dispersed Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P1451		R	0.2105	O	O	O	O	A5	Dispersed Recreational Access
P1451		R	0.1125	O	O	O	O	A5	Dispersed Recreational Access
P1451		R	0.2095	O	O	O	O	A5	Dispersed Recreational Access
P1451		R	0.4448	O	O	O	O	A5	Dispersed Recreational Access
P1452		R	0.2961		O	O	O	A5	Dispersed Recreational Access
P1452		R	0.1197		O	O	O	A5	Dispersed Recreational Access
P1453		R	0.3503	O	O	O	O	A5	Dispersed Recreational Access
P1454		R	0.9849	O	O	O	O	A5	Upper region of Shepard Canyon Access
P1455		R	0.1062		O	O	O		
P1456		R	0.1743		O	O	O	A5	Dispersed Recreational Access
P1552		R	0.9545		O	O	O	A5	Mining Access
P1552		R	0.6803	O	O	O	O	A5	Mining Access
P1552		R	0.3983	O	O	O	O	A5	Mining Access
P1552		R	0.6363		O	O	O	A5	Mining Access
P1552		R	0.2100	O	O	O	O	A5	Mining Access
P1553		R	3.4020		O	O	O		
P1555		R	1.8526	O	O	O	O	A3	Shepard Canyon Access
P1556		R	0.4782	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1556		R	0.2378	O	O	O	O	A5	Alternate Access to Shepard Canyon
P1557		R	0.2685	O	O	O	O	A5	Anthony Mill Ruins Access
P1557		R	1.5666	O	O	O	O	A5	Anthony Mill Ruins Access
P1558		R	0.4057	O	O	O	O	A3	Access to Anthony Mill Ruins
P1558		R	1.6305	O	O	O	O	A3	Access to Anthony Mill Ruins
P1560		R	0.1962		O	O	O	A3	Dispersed Recreational Access
P1560		R	0.1130		O	O	O	A3	Dispersed Recreational Access
P1560		R	0.4371		O	O	O	A3	Dispersed Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P1561		R	0.9891		O	O	O	A5	Dispersed Recreational Access
P1561		R	0.2219		O	O	O	A5	Dispersed Recreational Access
P1561		R	0.3858		O	O	O	A5	Dispersed Recreational Access
P1562		R	0.4677		O	O	O	A5	Dispersed Recreational Access
P1594		R	1.7527	O	O	O	O	A5	Dispersed Recreational Access
P1594		R	0.3629	O	O	O	O	A5	Dispersed Recreational Access
P1595		R	0.6550	O	O	O	O	A5	Dispersed Recreational Access
P1596		R	0.2864	O	O	O	O	A5	Dispersed Recreational Access
P16142		R	4.5657	O	O	O	O	A3	South Park Canyon Access
P16142		R	0.4944	O	O	O	O	A3	South Park Canyon Access
P16142		R	0.6811	O	O	O	O	A3	South Park Canyon Access
P16144		R	0.2896	O	O	O	O	A1	Private Property Access
P16144		R	0.0162	O	O	O	O	A1	Private Property Access
P16145		R	0.2643	O	O	O	O	A5	Mining Access
P16163		R	0.0003	O	O	O	O	A5	Alternate Route in Jackpot Canyon - makes loop opportunity
P16163		R	2.7865	O	O	O	O	A5	Alternate Route in Jackpot Canyon - makes loop opportunity
P16163		R	0.7469	O	O	O	O	A5	Alternate Route in Jackpot Canyon - makes loop opportunity
P16163		R	0.0267	O	O	O	O	A5	Alternate Route in Jackpot Canyon - makes loop opportunity
P16164		R	1.0423	O	O	O	O	A5	Dispersed Recreational Access
P16165		R	0.2895	O	O	O	O	A3	Middle Park Canyon Access
P16165		R	0.0206	O	O	O	O	A3	Middle Park Canyon Access
P16165		R	3.6616	O	O	O	O	A3	Middle Park Canyon Access
P16165		R	1.0680	O	O	O	O	A3	Middle Park Canyon Access
P1660		R	0.1936	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P1660		R	0.0462	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd
P1660		R	0.2855	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd
P1660		R	0.0337	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd
P1660		R	0.5623	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd
P1660		R	0.3031	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd
P1660		R	1.1685	O	O	O	O	A3	Connector Route _ Slate Range Area & Ballarat Rd
P1662		R	0.2942		O	O	O	A5	Connector - Short Spur Route
P1663		R	0.1150		O	O	O	A5	Connector - Short Spur Route
P1664		R	0.9245		O	O	O	A5	Alternate Connector Route
P1664		R	0.1237		O	O	O	A5	Alternate Connector Route
P1679		R	0.5397	O	O	O	O	A3	Jackpot Canyon Access
P1679		R	0.2890	O	O	O	O	A3	Jackpot Canyon Access
P1679		R	0.0003	O	O	O	O	A3	Jackpot Canyon Access
P1679		R	3.0035	O	O	O	O	A3	Jackpot Canyon Access
P1679		R	0.6749	O	O	O	O	A3	Jackpot Canyon Access
P1679		R	1.5858	O	O	O	O	A3	Jackpot Canyon Access
P1681		R	0.8534	O	O	O	O	A1	Private Property Access
P1681		R	0.0023	O	O	O	O	A1	Private Property Access
P1681		R	1.3667	O	O	O	O	A1	Private Property Access
P1681		R	0.0674	O	O	O	O	A1	Private Property Access
P1681		R	0.0442	O	O	O	O	A1	Private Property Access
P1681		R	1.2204	O	O	O	O	A1	Private Property Access
P1681		R	3.4006	O	O	O	O	A1	Private Property Access
P1681		R	0.2865	O	O	O	O	A1	Private Property Access
P1687		R	1.1429	O	O	O	O	A5	Mining Access
P1689		R	0.0004	O	O	O	O	A1	Private Property Access
P1689		R	1.1415	O	O	O	O	A1	Private Property Access
P1690		R	0.6008		O	O	O	A1	Private Property Access
P1690		R	0.0564		O	O	O	A1	Private Property Access
P1691		R	0.6169		O	O	O	A5	Recreational Access to Argus Range Wilderness
P1782		R	0.4046	O	O	O	O	A5	World Beater Mine Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
P1783		R	2.1437	O	O	O	O	A3	Porter Mine Access
P19100		R	0.6296	O	O	O	O	A5	Dispersed Recreational Access
P19146		R	0.6680	O	O	O	O	A3	Big Horn Canyon Access
P19147		R	0.0582	O	O	O	O	A3	Redlands Canyon Access - Briggs Mine
P19147		R	1.5933	O	O	O	O	A3	Redlands Canyon Access - Briggs Mine
P19147		R	0.0839	O	O	O	O	A3	Redlands Canyon Access - Briggs Mine
P19150		R	0.4408	O	O	O	O	A5	Briggs Mine Access
P19150		R	0.5679	O	O	O	O	A5	Briggs Mine Access
P19150		R	0.6085	O	O	O	O	A5	Briggs Mine Access
P1997		R	0.6409	O	O	O	O	A5	Dispersed Recreational Access
P1998		R	0.5925		O	O	O	A5	Dispersed Recreational Access
P21174		R	0.7446	O	O	O	O	A5	Dispersed Recreational Access
P24151		R	3.3386	O	O	O	O	A3	Coyote Canyon Access - Manly Peak Wilderness
P24157		R	0.8916	O	O	O	O	A5	Mining Access
P24157		R	2.0078	O	O	O	O	A5	Mining Access
P24158		R	2.3035		O	O	O	A5	Mining Access
P25153		R	1.6131	O	O	O	O	A5	Mining Access
P25154		R	1.1848	O	O	O	O	A5	Mining, Recreation, & Manly Peak Wilderness
P25155		R	0.9222	O	O	O	O	A5	Mining Access
S0526		R	0.0190	O	O	O	O		
S0712		R	1.5856	O	O	O	O	A3	Access into Lead Canyon & Inyo National Forest
S0712		R	0.7199	O	O	O	O	A3	Access into Lead Canyon & Inyo National Forest
S0712		R	0.0010	O	O	O	O	A3	Access into Lead Canyon & Inyo National Forest
S0712		R	1.0298	O	O	O	O	A3	Access into Lead Canyon & Inyo National Forest
S1118		R	1.4923	O	O	O	O	A3	Access into Willow Creek Area
S1119		R	0.3633	O	O	O	O	A5	Mining Access
S1119		R	0.7705	O	O	O	O	A5	Mining Access

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S1120		R	0.7944	O	O	O	O	A5	Mining Access - Grey Eagle Mine
S1121		R	0.2089	O	O	O	O	A5	Recreational Access
S1121		R	0.4954	O	O	O	O	A5	Recreational Access
S1122		R	0.9404	O	O	O	O		
S1124		R	1.1141	O	O	O	O	A5	Mining Access
S1125		R	0.3152		O	O	O	A3	Wilderness Access - Pat Keyes Canyon
S1125		R	0.4323		C	O	O	A3	Wilderness Access - Pat Keyes Canyon
S1126		R	0.5729		C	O	C	C4	Redundant Route - leads to Badwater Springs
S1126		R	0.3748		C	O	C	C4	Redundant Route - leads to Badwater Springs
S1127		R	0.9354		O	O	O	A3	Wilderness Access - McElvoy Canyon
S1128		R	0.8685		C	O	C	C5	Redundant Route into McElvoy Canyon
S1626		R	1.6570	O	O	O	O	A3	Snow Flake Mine Access
S1626		R	1.2266	O	O	O	O	A3	Snow Flake Mine Access
S1627		R	0.5808	O	O	O	O	A3	Wilderness Access - Keynot Canyon
S1628		R	0.4867	O	O	O	O	A3	Wilderness Access - Beveridge Canyon
S1628		R	0.7057	O	O	O	O	A3	Wilderness Access - Beveridge Canyon
S1629		R	0.2243	O	O	O	O	A1	State lands Access
S1629		R	0.3234	O	O	O	O	A1	State lands Access
S1629		R	0.1451	O	O	O	O	A1	State lands Access
S1629		R	0.0011	O	O	O	O	A1	State lands Access
S1629		R	0.7754	O	O	O	O	A1	State lands Access
S1631		R	1.4280		O	O	O	A3	Wilderness Access - Craig Canyon & Big Silver Mine
S1631		R	1.1087		O	O	O	A3	Wilderness Access - Hunter Canyon
S2036		R	0.3926	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S2036		R	0.5415	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S2036		R	2.4155	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S2036		R	0.1689	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S2036		R	0.0666	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S2036		R	0.3275	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S2036		R	0.0893	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S2036		R	0.7242	O	O	O	O	A3	Regional Recreation Access - Swansea-Cerro Gordo Rd
S21123		R	0.2016	O	O	O	O	A1	Private Property Access
S21124		R	0.0395	O	O	O	O	A1	Private Property Access
S21124		R	0.2357	O	O	O	O	A1	Private Property Access
S21124		R	0.0895	O	O	O	O	A1	Private Property Access
S21125		R	0.1120	O	O	O	O		
S21125		R	0.0506	O	O	O	O		
S2257		R	0.4342	O	O	O	O	A5	Dispersed Recreational Access - Route Connector
S2257		R	0.2441	O	O	O	O	A5	Dispersed Recreational Access - Route Connector
S2257		R	0.5289	O	O	O	O	A5	Dispersed Recreational Access - Route Connector
S2257		R	0.1094	O	O	O	O	A5	Dispersed Recreational Access - Route Connector
S2257		R	0.7623	O	O	O	O	A5	Dispersed Recreational Access - Route Connector
S2257		R	0.0027	O	O	O	O	A5	Dispersed Recreational Access - Route Connector
S2296		R	0.0697	O	O	O	O	A5	Connector route to Viking Mine Area
S2296		R	0.3346	O	O	O	O	A5	Connector route to Viking Mine Area
S2296		R	0.2251	O	O	O	O	A5	Connector route to Viking Mine Area

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S2296		R	0.2022	O	O	O	O	A5	Connector route to Viking Mine Area
S2297		R	0.3438	O	O	O	O	A5	Mining Access - Viking Mine Area
S2299		R	0.1157	O	O	O	O	A5	Mining Access - Viking Mine Area
S2299		R	0.2879	O	O	O	O	A5	Mining Access - Viking Mine Area
S2436		R	0.2002	O	O	O	O	A1	Private Property Access
S2436		R	0.0914	O	O	O	O	A1	Private Property Access
S2436		R	0.4203	O	O	O	O	A1	Private Property Access
S2437		R	0.6035	O	O	O	O	A5	Dispersed Recreational Access
S2438		R	0.1828	O	O	O	O	A5	Dispersed Recreational Access
S2439		R	0.0207	O	O	O	O	A1	Private Property Access
S2439		R	0.5600	O	O	O	O	A1	Private Property Access
S2441		R	0.1897	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.2351	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.2704	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.2351	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.1062	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.4232	O	O	O	O	A3	Regional Recreational Access
S2441		R	1.3404	O	O	O	O	A3	Regional Recreational Access
S2441		R	1.5300	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.2343	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.0990	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.0235	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.2062	O	O	O	O	A3	Regional Recreational Access
S2441		R	0.0717	O	O	O	O	A3	Regional Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S2441		R	0.0329	O	O	O	O	A3	Regional Recreational Access
S2442		R	0.0043	O	O	O	O		
S2442		R	0.0643	O	O	O	O	A1	Private Property Access
S2442		R	0.0343	O	O	O	O	A1	Private Property Access
S2442		R	0.1234	O	O	O	O	A1	Private Property Access
S2443		R	0.5032	O	O	O	O	A1	Private Property Access
S2443		R	0.0202	O	O	O	O	A1	Private Property Access
S2443		R	0.0796	O	O	O	O	A1	Private Property Access
S2443		R	0.0007	O	O	O	O		
S2444		R	0.2067		O	O	O	A1	Private Property Access
S2444		R	0.2064		O	O	O	A1	Private Property Access
S2445		R	0.2394	O	O	O	O	A1	Private Property Access - Belmont Mine Access
S2446		R	0.1273	O	O	O	O	A5	Dispersed Recreational Access
S2447		R	0.1905	O	O	O	O	A1	Private Property Access - Belmont Mine Access
S2448		R	0.4376		O	O	O	A5	Dispersed Recreational Access
S2449		R	0.0759	O	O	O	O	A5	Dispersed Recreational Access
S2449		R	0.0936	O	O	O	O	A5	Dispersed Recreational Access
S2449		R	0.1266	O	O	O	O	A5	Dispersed Recreational Access
S2450		R	0.6577		O	O	O	A5	Dispersed Recreational Access
S2451		R	0.3341		O	O	O	A5	Dispersed Recreational Access
S2452		R	0.1219	O	O	O	O	A5	Dispersed Recreational Access
S2452		R	1.0294	O	O	O	O	A5	Dispersed Recreational Access
S2452		R	0.1840	O	O	O	O	A5	Dispersed Recreational Access
S2453		R	0.1748		O	O	O	A5	Dispersed Recreational Access
S2453		R	0.1719	O	O	O	O	A5	Dispersed Recreational Access
S2454		R	0.0458	O	O	O	O	A5	Dispersed Recreational Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S2454		R	0.0633	O	O	O	O	A5	Dispersed Recreational Access
S2455		R	0.1096	O	O	O	O		
S2456		R	0.2406	O	O	O	O	A5	Route Connector with S2441 & S2545
S2543		R	0.1958	O	O	O	O	A5	Dispersed Recreational Access
S2544		R	0.4812	O	O	O	O	A5	Dispersed Recreational Access
S2544		R	0.2835	O	O	O	O	A5	Dispersed Recreational Access
S2546		R	0.0999	O	O	O	O		
S2564		R	1.3625	O	O	O	O		
S2565		R	2.4755	O	O	O	O		
S2565		R	4.6884	O	O	O	O		
S2866		R	0.2598	O	O	O	O		
S2866		R	0.1245	O	O	O	O		
S2866		R	0.2296	O	O	O	O		
S2867		R	0.2586	O	O	O	O		
S2867		R	1.6038	O	O	O	O		
S2975		R	0.3524	O	O	O	O	A5	Mining Access
S2976		R	0.5577	O	O	O	O	A5	Mining Access
S2977		R	0.4586	O	O	O	O	A3	Regional Connector
S2977		R	0.3882	O	O	O	O	A3	Regional Connector
S2977		R	0.8556	O	O	O	O	A3	Regional Connector
S2977		R	0.4714	O	O	O	O	A3	Regional Connector
S2978		R	0.7756	O	O	O	O	A5	Mining Access
S2978		R	0.3929	O	O	O	O	A5	Mining Access
S2979		R	1.1807	O	O	O	O	A5	Mining Access
S2979		R	0.5233	O	O	O	O	A5	Mining Access
S3083		R	0.6783	O	O	O	O	A3	Lee Mine Access
S3085		R	3.6654	O	O	O	O		
S3085		R	0.2462	O	O	O	O		
S3085		R	0.0895	O	O	O	O		
S3085		R	1.0498	O	O	O	O		
S3085		R	0.5861	O	O	O	O		
S3085		R	1.2647	O	O	O	O		
S3085		R	0.8617	O	O	O	O		
S3086		R	2.6787	O	O	O	O	A3	Regional Connector - Inyo County Rd = Santa Rosa Rd

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S3095		R	0.1185		O	O	O	A5	Dispersed Recreational Access
S3095		R	0.6963		O	O	O	A5	Dispersed Recreational Access
S3095		R	0.6379		O	O	O	A5	Dispersed Recreational Access
S3099		R	1.9285	O	O	O	O		
S3230		R	0.1130	O	O	O	O	A3	Regional Connector in Talc City Hills Area
S3230		R	0.3999	O	O	O	O	A3	Regional Connector in Talc City Hills Area
S3230		R	0.1148	O	O	O	O	A3	Regional Connector in Talc City Hills Area
S3230		R	0.3953	O	O	O	O	A3	Regional Connector in Talc City Hills Area
S3231		R	0.1091	O	O	O	O	A5	Short Connector - Aids in flow of traffic
S3232		R	0.7380	O	O	O	O	A5	Recreational Connector Route
S3233		R	0.0697		O	O	O	A5	Dispersed Recreational Access
S3233		R	0.1518		O	O	O	A5	Dispersed Recreational Access
S3234		R	0.0732		O	O	O		
S3293		R	0.0723	O	O	O	O	A5	Mining Access
S3293		R	0.2604	O	O	O	O	A5	Mining Access - White Swan Area
S3295		R	0.6508		O	O	O	A5	Recreational Access
S3296		R	0.6687	O	O	O	O	A3	Mining Access
S3296		R	0.1874	O	O	O	O	A3	Mining Access
S3298		R	0.6633	O	O	O	O	A3	Regional Connector - White Swan & Viking Mines
S3298		R	0.3296	O	O	O	O	A3	Regional Connector - White Swan & Viking Mines
S3298		R	0.0991	O	O	O	O	A3	Regional Connector - White Swan & Viking Mines
S3298		R	0.0889	O	O	O	O	A3	Regional Connector - White Swan & Viking Mines
S3298		R	0.0694	O	O	O	O	A3	Regional Connector - White Swan & Viking Mines
S3298		R	0.3113	O	O	O	O	A3	Regional Connector - White Swan & Viking Mines

NEMO-Proposed Route Designation-Plan Amendment and EA

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S3299		R	0.7574	O	O	O	O	A3	Access to White Swan Mine Area
S3299		R	0.1741	O	O	O	O	A3	Access to White Swan Mine Area
S3299		R	0.4848	O	O	O	O	A3	Access to White Swan Mine Area
S3299		R	0.3648	O	O	O	O	A3	Access to White Swan Mine Area
S3300		R	0.1590	O	O	O	O	A3	Regional Connector
S3300		R	0.3292	O	O	O	O	A3	Regional Connector
S3300		R	1.1640	O	O	O	O	A3	Regional Connector
S3301		R	0.0251	O	O	O	O	A5	Recreational Access
S3301		R	0.6080	O	O	O	O	A5	Recreational Access
S3302		R	0.2155		O	O	O	A5	Connector Route
S33101		R	0.0105	O	O	O	O	A5	Connector Route aids in flow of traffic
S33101		R	0.1431	O	O	O	O	A5	Connector Route aids in flow of traffic
S33102		R	0.1788	O	O	O	O	A3	Mining Access
S33103		R	0.0272	O	O	O	O	A3	Regional Connector & Mining Claims
S33103		R	0.4272	O	O	O	O	A3	Regional Connector & Mining Claims
S33103		R	0.2683	O	O	O	O	A3	Regional Connector & Mining Claims
S33103		R	1.4237	O	O	O	O	A3	Regional Connector & Mining Claims
S33103		R	0.1510	O	O	O	O	A3	Regional Connector & Mining Claims
S33104		R	0.1992	O	O	O	O		
S33105		R	0.2666	O	O	O	O	A5	Mining Access
S33105		R	0.1691	O	O	O	O	A5	Mining Access
S33106		R	0.4799	O	O	O	O	A5	Mining Access
S33108		R	0.0265	O	O	O	O	A5	Mining Access
S33108		R	1.9423	O	O	O	O	A5	Mining Access
S33110		R	0.1797	O	O	O	O	A5	Recreational & Mining Access
S33110		R	0.2569	O	O	O	O	A5	Recreational & Mining Access
S33110		R	0.0974	O	O	O	O	A5	Recreational & Mining Access
S33111		R	0.5714	O	O	O	O	A5	Mining Access

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
S33112		R	0.2117	O	O	O	O	A5	Mining Access - Silver Dollar Mine
S33112		R	0.1962	O	O	O	O	A5	Mining Access - Silver Dollar Mine
S33112		R	0.0780	O	O	O	O	A5	Mining Access - Silver Dollar Mine
S33113		R	0.0794	O	O	O	O		
S33114		R	0.0706	O	O	O	O	A5	Mining Access - Silver Dollar Mine
S33114		R	0.1351	O	O	O	O	A5	Mining Access - Silver Dollar Mine
S33116		R	0.0841	O	O	O	O	A5	Mining Access
S33117		R	0.1224	O	O	O	O		
S33118		R	0.1530	O	O	O	O	A3	Regional Connector
S33118		R	0.4641	O	O	O	O	A3	Regional Connector
S33118		R	0.0528	O	O	O	O	A3	Regional Connector
S33118		R	0.1917	O	O	O	O	A3	Regional Connector
S33118		R	0.0933	O	O	O	O	A3	Regional Connector
S33119		R	0.0818	O	O	O	O	A5	Short connector route aids in flow of traffic
S33120		R	0.0550	O	O	O	O	A5	Short connector route aids in flow of traffic
S33120		R	0.0509	O	O	O	O	A5	Short connector route aids in flow of traffic
S33402		R	0.4528	O	O	O	O	A5	Connector Route
S33402		R	0.0875	O	O	O	O	A5	Connector Route
S33402		R	0.0280	O	O	O	O	A5	Connector Route
S33402		R	0.1679	O	O	O	O	A5	Connector Route
S33402		R	0.5383	O	O	O	O	A5	Connector Route
S33402		R	0.0593	O	O	O	O	A5	Connector Route
SH023		N	0.1578	O	O	O	O		
SH023		N	0.2009	O	O	O	O		
SH023		N	0.1739	O	O	O	O		
SH023		N	0.3011	O	O	O	O		
SH023		N	0.0959	O	O	O	O		
SH023		N	0.2788	O	O	O	O		
SH023		N	1.0229	O	O	O	O		
SH023		N	0.1941	O	O	O	O		
SH025	Needles	N	0.5060	O	O	O	O		
SH025	Needles	N	0.5427	O	O	O	O		

Route Number	Route Name	BLM Field Office	Segment Length in Miles	Alternative			Proposed Action	Rationale	Comments
				4. No Action	3. ERP	2. EROA			
	Halloran Spring Rd	N	0.0280	O	O	O	O		
	Halloran Spring Rd	N	0.0566	O	O	O	O		
	Halloran Spring Rd	N	0.0275	O	O	O	O		
	Halloran Spring Rd	N	0.1747	O	O	O	O		
	Halloran Spring Rd	N	0.0091	O	O	O	O		
	Halloran Spring Rd	N	0.0754	O	O	O	O		
	Halloran Spring Rd	N	0.4224	O	O	O	O		
	Halloran Spring Rd	N	0.0716	O	O	O	O		
	Halloran Spring Rd	N	2.0255	O	O	O	O		
	Halloran Spring Rd	N	0.2012	O	O	O	O		
	Halloran Spring Rd	N	0.2152	O	O	O	O		
	Halloran Spring Rd	N	0.0814	O	O	O	O		
	Halloran Spring Rd	N	0.2046	O	O	O	O		
	Halloran Spring Rd	N	0.3510	O	O	O	O		
	Jeep Trail	N	0.0060	O	O	O	O		

Figure 2-1

Figure 2-2
Nemo
Enhanced Recreation
Opportunities & Access
Alternative

- Roads & Routes**
- Highways
 - DWMA
 - Open
 - Closed
 - Limited
 - County Road
 - Private
- Land Status**
- Nemo Study Area
 - Nemo Planning Boundary
 - ACEC Areas
 - Wilderness Areas
 - Wilderness Study Areas
 - Private
 - State
 - National Park Service
 - Bureau of Land Management

Bureau Of Land Management
 Barstow Field Office
 Map Projection: UTM NAD 1983
 S.Jackson 472904

Figure 2-3

Figure 2-4
Nemo
No Action
Alternative

- Roads & Routes**
- Highways
 - DWMA
 - Open
 - Closed
 - County Road
 - Private
- Land Status**
- Nemo Study Area
 - Nemo Planning Boundary
 - Private
 - State
 - National Park Service
 - Bureau of Land Management
- Other Features**
- ACEC Areas
 - Wilderness Areas
 - Wilderness Study Areas

UNITED STATES

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

California Desert District

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