1600
(CA670)

October 2002

Dear Reviewer:

Enclosed for your review is the draft California Desert Conservation Area Plan Amendment for the Western Colorado Desert Route of Travel Designation, the associated Environmental Assessment and a draft Finding of no Significant Impact. The draft plan amendment will update the 1980 California Desert Conservation Area Plan for designating off-road vehicle routes of travel in Imperial County, California. The Bureau of Land Management prepared these documents in partial fulfillment of its responsibilities under the Federal Land Policy Management Act of 1976, the National Environmental Policy Act of 1969, the Federal Endangered Species Act of 1973, and the Bureau of Land Management's Off-Road Vehicle Regulations (43 CFR 8340). (To gain the full management picture as the draft plan amendment applies to the California Desert Conservation Area, the reader is referred to the California Desert Conservation Area Plan.) This draft plan amendment may change some off-road vehicle route of travel and vehicle camping designations in the California Desert Conservation Area Plan. For example, various camping alternatives are discussed in the alternatives regarding camping within one mile of the common planning boundary with the Imperial Sand Dunes Recreation area and camping in the Yuha area. This draft plan amendment does not involve off-road-vehicle open & closed areas, wilderness, utilities, or minerals.

The planning area covers approximately 475,000 acres and approximately 2,320 miles of off-road vehicle routes of travel. The scope of the decisions applies only to federal lands managed by the Bureau of Land Management in Imperial County, California.

The public provided in-depth comments during the scoping phase. The Bureau of Land Management has assessed those comments and utilized them in developing the draft Plan Amendment, draft Finding of No Significant Impact, and the Environmental Assessment. The Bureau of Land Management appreciates those who took the time to provide comments. The draft Plan Amendment, draft Finding of No Significant Impact, and the Environmental Assessment are presented here for your review.

The formal comment period for the draft California Desert Conservation Area Plan Amendment, draft Finding of No Significant Impact, and the Environmental Assessment began when the Notice of Availability was published in the Federal Register on October 18, 2002. A new environmental assessment is not anticipated. The comments will be addressed in a revised Finding of No Significant Impact and the Decision Record. The public comment period closes on Monday, November 18, 2002. Comments should be directed to:

Bureau of Land Management
1661 South 4th Street
El Centro, CA 92243
Attn: Arnold F. Schoeck, or
E-mail: caecweco@ca.blm.gov

Comments may be made during public meetings for the draft Plan Amendment at:

San Diego Area, California	**El Centro, California**
Hilton San Diego Mission Valley	City Council Chambers
901 Camino Del Rio South	1275 W. Main Street
November 12, 2002	November 14, 2002
6:30 p.m. – 8:30 p.m.	6:30 p.m. – 8:30 p.m.

The Bureau of Land Management cannot accept faxed documents as they interfere with the routine use of the fax machine for day-to-day business.

If you would like a copy of the proposed Plan Amendment, the Finding of No Significant Impact, a copy of the final Decision Record and Finding of No Significant Impact and/or a copy of the Final Map, please complete and mail the form on the next page. The Bureau of Land Management will mail these documents when they become available.

Final plan approval will be documented in a Decision Record. The Decision Record will be made available to the public and mailed to all interested parties. Again, please complete the form on the next page and return it to the Bureau of Land Management if you would like to have a copy of the final decision.

In the last two years, the Bureau of Land Management has implemented a number of interim land use decisions as a result of a lawsuit filed against the Bureau of Land Management by a consortium of environmental advocacy groups. According to the court stipulations some of these interim decisions, to the extent that they apply within the planning area, will end when the Decision Record is signed.

Thank you for your participation in this project.

Sincerely,

Gregory Thomsen
Field Manager

CONTINUED INVOLVEMENT

If you would like to remain on the mailing list for future updates and information on the Western Colorado Desert Route of Travel Plan Amendment, Environmental Assessment, Finding of No Significant Impact Statement or Decision Record you **MUST** respond and let us know. Names will be dropped from the current mailing list if a response is not received. We appreciate your involvement in this project and would like your continued involvement. However, if you are no longer interested, we would like to remove your name from the mailing list.

Please remove this page, fill out the information below, fold it so the address on the reverse side is shown and mail it to us.

I would like to receive a copy of (please check):

_____The Proposed Plan Amendment, Finding of No Significant Impact (FONSI)

_____The Environmental Assessment, if revised

_____The Final Decision Record/FONSI

_____The Final Map showing the routes that are designated as open and limited

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Environmental Assessment And Draft Plan Amendment

for

WESTERN COLORADO DESERT ROUTES OF TRAVEL DESIGNATION

Environmental Assessment Number CA-670-EA2002-2

Bureau of Land Management
California State Office
California Desert District
El Centro Field Office
October 2002

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ENVIRONMENTAL ASSESSMENT **EA Number:** CA-670-EA2002-2

El Centro Field Office, California Desert District, Bureau of Land Management

Proposed Action Title/Type: Vehicle Route Designation, Western Colorado Desert
Location of Proposed Action: Imperial County, CA.

Applicant (if any): None

Purpose for Proposed Action:

Routes of travel are part of a transportation system that allows for access for the use of public lands and adjacent lands by the general public. This transportation system interconnects with state and county roads and private roads across private property. The purpose of this project is to designate routes of travel as open, limited or closed on land that is managed by the Bureau of Land Management. The project area is located west of the Imperial Sand Dunes Recreation Area in Imperial County, California and comprises approximately 475,000 acres. The goal of this project is to support the recreational and general access uses of BLM managed land while conserving cultural and natural resources. A reasonable network of routes currently exists that is able to provide general access and recreational opportunities to the public. The construction of new routes is outside of this project's scope, although the designation of physically existing routes that are currently not designated as open may be changed to open or limited. Some routes that are currently designated as open may be designated as limited or closed if the route duplicates the efforts of another open route or if the route use creates an unacceptable level of conflict with other land uses or resources. This project also includes designating vehicle parking and camping areas as well as potentially designating seasonal use areas, areas limited by the type of vehicle, and permit use areas
.
The goals in the CDCA Plan's Recreation Element (1985 Plan Amendment Six, approved January 15, 1987; and 1987 Plan Amendment Nine, approved August 23, 1988) are incorporated as the purpose for this action:

> Provide for a wide range of recreation opportunities and experiences, emphasizing dispersed undeveloped use.
>
> Provide a minimum of recreation facilities. Those facilities should emphasize resource protection and visitor safety.
>
> Manage recreation use to minimize user conflicts, provide a safe recreation environment, and protect desert resources.
>
> Emphasize the use of public education and education techniques to increase public awareness, enjoyment, and sensitivity to desert resources.
>
> Adjust management approach to accommodate changing visitor use patterns and

preferences.

Encourage the use and enjoyment of desert recreation opportunities by special populations, and provide facilities to meet the needs of those groups.

Establishing a route network that is in conformance with existing land use plans, or amending the land use plan by the route designation process, is a part of the purpose of this project. The purpose of this project also includes compliance with 43 CFR 8342.1 which establishes criteria to consider when making route designations. The designations should be based on the protection of the resources of the public lands, promotion of the safety of the users of the public land, and to minimize the conflicts among the various users of the public lands. They also must be in accordance with the following criteria:

Areas and trails shall be located to minimize the damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife or significant disruption of wildlife habitats. Special attention would be given to protect endangered or threatened species and their habitats.

Areas and trails shall be located to minimize conflict between OHV use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

Areas and trails would not be located in officially designated wilderness areas or primitive areas. Areas and trails would be located in natural areas only if the authorized officer determines that vehicle use in such locations would not adversely affect their natural, esthetic, scenic, or other values for which such areas are established.

The purpose of the California Desert Conservation Area Plan (CDCA Plan) amendment is to amend the CDCA Plan to conform to the alternative chosen in the decision record. Currently some routes are designated as open, closed or limited and some routes are not designated. Depending upon the alternative, the amendment may involve changing the designation of routes to open, closed or limited. Currently camping is allowed along most routes. Depending upon the alternative selected in the decision record, the amendment may involve the designation of different parking and camping areas. The scope of this project does not include amending the multiple use class of the project area: the multiple use class is currently limited.

Need for Proposed Action:

Regulations, executive orders, and the CDCA Plan require the BLM to designate routes of travel as either open, limited or closed to vehicular travel and to assure that resources properly managed in a multiple use context. During the mid-1980's and 1990's BLM staff in the El

Centro Resource Area identified and designated many routes of travel in the Western Colorado Desert (WECO) planning area. These designations resulted in approximately 1432 miles of approved open routes, 345 miles of closed routes, 27 miles of limited use routes (use by permit and/or seasonal route closures), and 513 miles of undesignated routes in limited areas. The present route network is the cumulative result of several route designation efforts over the last 20 years.

Updates of the designated route system are needed to:

Comply with changes required by recent laws (e.g., surface management on military lands).

Comply with current regulations.

Reflect changes on the ground (e.g., segments that have moved or routes that have disappeared or new routes that have been created).

Analyze changes in a route's potential impact to sensitive natural, cultural and environmental resources.

Correlate the actual use to the formal route designation.

Establish a standard method to define routes that can be used to clarify route designations and improve the ability to enforce unacceptable use (e.g., use centerline widths to define route and vehicle camping widths).

Correct errors and oversights that were made in previous route designations.

Improve consistency with plans and operations of other agencies (e.g., U. S. Border Patrol and Anza-Borrego Desert State Park).

The need of the CDCA Plan amendment is to allow the users to clearly understand the appropriate type of use for each area. Currently some routes are designated as open, closed or limited, and some routes are not designated. Camping is currently allowed near most routes, within varying distances from the route. The recreational users do not clearly understand which routes are open, closed or limited use. Some recreational users do not understand the limited multiple use class designation for the project area. Some recreational users do not understand the camping boundaries. The need for the plan amendment is to establish a clear and understandable route network and to amend the CDCA Plan to conform to the alternative chosen in the decision record. Depending upon the alternative, the amendment may involve establishing different designation of routes as open, closed or limited and establishing different areas where camping and parking is allowed.

Conformance with Applicable Land Use Plans

This proposed action is subject to the following land use plan:

California Desert Conservation Area Plan	Date Approved: 1980

The following plans are tiered from the above CDCA Plan and were also reviewed for conformance:

Jacumba Outstanding Natural Area Recreation Area Management Plan	Date Approved: 1980
East Mesa Geothermal Leasing	Date Approved: 1981
Apiary Management Plan, Imperial County	Date Approved: 1981
Southern East Mesa ACEC Management Plan	Date Approved: 1982
Yuha Basin ACEC Management Plan	Date Approved: 1982
Yuha Desert Habitat Management Plan	Date Approved: 1983
East Mesa Wildlife Habitat Management Plan	Date Approved: 1983
East Highline Canal Sand & Gravel Management Plan	Date Approved: 1983
Lake Cahuilla Shoreline ACEC	Date Approved: 1984
Yuha Desert Management Plan	Date Approved: 1985
San Sebastian Marsh & San Felipe Creek ACEC	Date Approved: 1986
Imperial Sand Dunes Recreation Area Management Plan	Date Approved: 1987 / Draft: 2002
Algodones Dunes Habitat Management Plan	Date Approved: 1987
Coyote Mountains Fossil Site ACEC and Habitat Management Plan	Date Approved: 1988
Flat-tailed Horned Lizard Management Plan	Date Approved: 1990
Flat-tailed Horned Lizard Rangewide Strategy.	Date Approved: 1997
Recovery Plan for Bighorn Sheep in the Peninsular Ranges, CA	Date Approved: 2000

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

Public lands within the Western Colorado Desert are intermingled with private lands and lands managed by other agencies. The proposed actions only apply to lands managed by BLM. BLM decisions do not apply to land that is not managed by BLM. The owners and managers of other lands may allow, close or restrict the use of segments of routes that cross their land at any time.

Some routes on public lands are also county roads. The route of travel designation does not affect the county's prerogatives or responsibilities for these roads. Nor does the designation affect laws and ordinances that apply to county roads. The designation as a route of travel does permit the BLM to spend funds signing the route, enforcing laws and regulations, maintaining the route, and to show the route on BLM maps.

Information common to all Alternatives:

To determine the route network for each alternative a road initially retained its designation based on the Imperial Valley South Motorized Vehicle Interim Access Guide Number 20 dated 1981 or the Cahuilla, Motorized Vehicle Interim Access Guide Number 19 dated 1981. Aerial photographs from 1965 through 1978 of the planning area supplemented the interim access guide information. Utilizing these aerial photographs in-conjunction with the motorized vehicle interim access guides improved the accuracy of the route system as it was on the ground in 1981. This initial route system was modified based on federal register notices that were published from 1981 through 1997 that designated specific routes of travel or provided camping notices.

Each alternative will modify this route network to provide a different recreational opportunity as described for each alternative below.

Description of Proposed Action: (See Map 1)

The proposed action will designate routes and establish camping areas within the project area using the following criteria:

Routes in critical habitat for Peninsular Range Bighorn Sheep in the Coyote Mountains Area will be designated as limited. They will be seasonally closed from January 1st through June 30th. This criterion is to allow use of the routes, while minimizing the potential impacts to the Peninsular Range Bighorn Sheep.

Routes in the Yuha Basin ACEC will be designated as limited: only street legal vehicles will be allowed on the routes in the Yuha Basin ACEC. The only exception for this limitation is the proposed Back Country Discovery Route, which will be designated as open. Camping will only be allowed in designated camping areas. Camping next to roads, in areas that are not designated as camping areas will not allowed. The Yuha Basin ACEC has received heavy impact, in the past, due to off route travel and Off-Highway Vehicle (OHV) play. The Yuha Basin ACEC is for on-route touring and limited camping; off route play is not allowed. BLM will increase law enforcement in this ACEC, using a zero tolerance policy for off route travel. BLM will also prioritize signing open routes, signing camping areas, developing an education program, and rehabilitating the current damage due to off route travel. These proposals are intended to reduce the current impacts within the Yuha Basin ACEC from off route travel to the flat-tailed horned lizard, its habitat and to cultural resources.

Routes that, based on BLM's judgment, pose a significant safety hazard to the public will designated as closed. For example routes near the Mexican border.

Routes that enter privately owned land would be designated as closed if requested by the private landowner.

Routes that are no longer physically present will be designated as closed.

Routes that were not designated as open by the above criteria, that, based on BLM's judgment, provide a unique recreational experience or serve as a principle means of connectivity will be designated as open, or in the Yuha Basin ACEC or in the Coyote Mountains portion of Peninsular Range Bighorn Sheep critical habitat, as limited, or in the Yuha Basin ACEC as open, if it is part of the Back Country Discovery Route. For example: one route that is the only route used for travel to a specific designation for rock hounding, a route that is proposed as a part of the Back Country Discovery Route, a route is proposed as a part of the De Anza National Historic Trail, a pole line or utility corridor route, a historic route (in existence prior to 1950).

Camping will be allowed within 300 feet of the centerline of any designated route, except for routes that are in the lizard management areas, in Yuha Basin ACEC, in the Elliot Mine Area, on Kane Spring Road, within one mile of the Imperial Sand Dunes Recreation Area, or in the camping closure area near the Superstition Mountains. Camping will be allowed within 50 feet of the centerline on routes within lizard management areas outside of the Yuha.

No camping would be allowed in the current camping closure area near the Superstition Mountains due to cultural resource concerns in this area. This area is located between the pole line road (old Route Y272) and the Superstition Open Area. Its boundaries are 1) from old Route Y272 approximately one mile north west from the intersection of Wheeler Road going north to the open area, 2) the open area boundary, 3) Route Y272, and 4) from old Route Y272 approximately 2 miles north west from the intersection of Wheeler Road going north to the open area.

No camping will be allowed within one mile of the Imperial Sand Dunes Recreation Area (ISDRA), except for at specific two locations. Camping would be allowed within 300 feet of the centerline of any open route at these two locations. The first location is on the west side of the ISDRA, within one and one-half miles north of Highway 78: this area is located between the two canals. The other location is on the west side of the ISDRA, south of I-8 to the Mexican border. The reason to limit camping near the ISDRA is to reduce the impacts of the ISDRA on the nearby desert habitat. However, BLM recognizes that camping has traditionally occurred in these two locations and has allowed this practice to continue in the preferred alternative. Since this camping is related to the recreational activities and experiences of the ISDRA, BLM will add these two areas into the ISDRA Fee Demonstration Project under this alternative.

Kane Spring Road will be designated "open". However, camping will not be allowed off of Kane Spring Road. This will increase protection for the threatened Pupfish and archeological and cultural resources. Camping will be allowed at the Elliot Mine area within 25' from centerline.

All routes not designated as open or limited by the above criteria will be designated as closed.

This alternative will amend the CDCA Plan. Routes will be designated open, closed or limited based on the above description. Camping and parking will be allowed based on the above description.

Description of the No Action Alternative: (See map 2.)

The no action alternative will designate routes and establish camping within the project area by the following criteria:

Camping will be allowed within 300 feet of all designated roads, except in the Yuha Basin ACEC which will be limited to 35' from centerline and the Elliot Mine area which will be limited to 25' from centerline. These designations were previously completed under federal register notices.

Routes that were previously undesignated will remain undesignated.

This alternative will not amend the CDCA Plan.

Description of Action Alternatives:

Alternative 1: (See Map 3)

Alternative 1 will designate routes and establish camping areas within the project area using the following criteria:

Routes in all critical habitats for Peninsular Range Bighorn Sheep will be designated as closed from January 1st through September 15th. This criterion is to allow the minimal potential impacts to the Peninsular Range Bighorn Sheep, its habitat, and its water sources.

Routes in the Yuha Basin ACEC would be designated as closed except for routes identified as county roads and two routes designated for touring which would allow the public to access points of interest within the Yuha Basin ACEC such as the De Anza historical marker, Yuha geoglyphs, Yuha well, and Yuha shell beds. These three routes will be designated as open. Camping would not be allowed within the Yuha Basin ACEC except for the area identified as the Dunaway Staging area located in the North East corner of the Yuha Basin ACEC. The Yuha Basin ACEC has received heavy impact, in the past, due to off route travel and Off-Highway Vehicle (OHV) play. BLM would increase law enforcement in this ACEC to enforce the designation. BLM would also prioritize signing the portal points of the Yuha Basin ACEC with signing indicating the area as closed and noting the exceptions, produce area maps portraying the area as closed and noting the exceptions, developing an education program, and rehabilitating the

current damage due to off route travel. These proposals are intended to minimize the current impacts within the Yuha Basin ACEC from off route travel to the flat-tailed horned lizard, its habitat and to cultural resources and to prevent future impacts.

Camping will be allowed only in designated sites within the planning area. However, there will not be any designated sites in the Yuha Basin ACEC or in the Elliott Mine area.

Routes that, based on BLM's judgment, pose a significant safety hazard to the public will be designated as closed. For example routes near the Mexican border.

Routes that enter privately owned land would be designated as closed if requested by the private landowner.

Routes that are no longer physically present will be designated as closed.

Routes that are part of the county road system will remain open.

Routes that were not designated as open by the above criteria, that, based on BLM's judgment, provide a unique recreational experience or serve as a principle means of connectivity will be designated as open. For example: one route that is the only route used for travel to a specific designation for rock hounding, a route that is proposed as a part of the Back Country Discovery Route, a route is proposed as a part of the De Anza National Historic Trail, a pole line or utility corridor route, a historic route (in existence prior to 1950).

All routes not designated as open or limited above will be designated as closed.

This alternative will amend the CDCA Plan. Routes will be designated open, closed or limited based on the above description. Camping and parking will be allowed based on the above description.

Alternative 2: (See Map 4)

Alternative 2 will designate routes and establish camping areas within the project area using the following criteria:

Routes in all critical habitat for Peninsular Range Bighorn Sheep will remain designated as open. This criterion is to allow the maximal recreational use of the routes.

Routes in the Yuha Basin ACEC will be designated as open. Camping will be allowed within 50 feet of the centerline of a designated route within the Yuha Basin ACEC. The Yuha Basin ACEC has received heavy impact, in the past, due to off route travel and Off-Highway Vehicle (OHV) play. BLM will increase law enforcement in this ACEC, using a zero tolerance policy for off route travel. BLM will also prioritize signing open routes, developing an education program, and rehabilitating the current damage due to off route

travel. These proposals are intended to maximize the recreational opportunities while controlling the current impacts within the Yuha Basin ACEC from off route travel to the flat-tailed horned lizard, its habitat and to cultural resources.

Designate the segment of route identified as the Juan Bautista de Anza National Historic Trail as open.

Authorize inclusion of the Back Country Discovery Route as open.

Routes that, based on BLM's judgment, pose a significant safety hazard to the public will designated as closed.

Routes that enter privately owned land would be designated as closed if requested by the private landowner.

Routes that are no longer physically present will be designated as closed.

Routes that were not designated as open by the above criteria, that, based on BLM's judgment, provide a unique recreational experience or serve as a principle means of connectivity will be designated as open. For example: one route that is the only route used for travel to a specific designation for rock hounding, a route that is proposed as a part of the Back Country Discovery Route, a route is proposed as a part of the De Anza National Historic Trail, a pole line or utility corridor route, a historic route (in existence prior to 1950).

All routes not designated as open or limited above will be designated as closed.

Camping will be allowed within 300 feet of the centerline of any designated road, except for the exceptions noted below:

1) The Yuha Basin ACEC (see above for the camping allowance and explanation).

2) No camping will be allowed within one mile of the Imperial Sand Dunes Recreation Area (ISDRA), except for at specific two locations. Camping would be allowed within 300 feet of the centerline of any open route at these two locations. The first location is on the west side of the ISDRA, within one and one-half miles north of Highway 78: this area is located between the two canals. The other location is on the west side of the ISDRA, south of I-8 to the Mexican border. The reason to limit camping near the ISDRA is to reduce the impacts of the ISDRA on the nearby desert habitat. However, BLM recognizes that camping has traditionally occurred in these two locations and has allowed this practice to continue in the preferred alternative. Since this camping is related to the recreational activities and experiences of the ISDRA, BLM will add these two areas into the ISDRA Fee Demonstration Project under this alternative.

3) Camping will be restricted to 50' from centerline in Flat Tailed Horned Lizard Management areas.

4) Camping will be restricted to 25' from centerline within the Elliot mine area.

5) Kane Spring Road will be designated "open". However, camping will not be allowed off of Kane Spring Road. This will increase protection for the threatened pupfish, archeological resources, and cultural resources.

This alternative will amend the CDCA Plan. Routes will be designated open, closed or limited based on the above description. Camping and parking will be allowed based on the above description.

Affected Environment

Location and Setting**:**

The project area lies within the Sonoran desert region of Southern California. This portion of the Sonoran desert is also known as the Colorado Desert after the Colorado River, which runs through the region. The Southern Pacific Railroad and the Chocolate Mountain Aerial Gunnery Range on the east, Riverside County on the north, San Diego County on the West border, and Mexico on the south define the borders of the project area.

Climate:

Imperial County is one of the hottest areas in California and often has the highest humidity of all desert land. Average daily maximum temperatures rise to 100 degrees Fahrenheit or more approximately 100 days out of the year. Average low temperatures for the same period are in the high 70s. Winter temperatures average in the high 60s and low night temperatures are in the high 30s. Temperatures in the mountainous areas average about 10 to 15 degrees lower. Annual precipitation averages below five inches. The summer is often characterized by violent thunderstorms and flash floods.

Land Status:

The public lands in the Yuha and West Mesa areas are divided from the East Mesa and ISDRA by a wide band of private, irrigated farmlands, urban areas, the Salton Sea National Wildlife Refuge, and the Salton Sea. In the Yuha and West Mesa areas, large, solid blocks of land are managed by BLM, the military and the State. On either side of Highway 78, a checkerboard pattern of ownerships exists. Catellus is the largest private landowner. The East Mesa is managed by BLM and the military: it also contains scattered pieces of privately owned lands. A checkerboard pattern of land ownership exists north of the ISDRA.

Vegetation:

The project area embraces several vegetation types. The Peninsular Ranges, covered by vegetation types such as chaparral and juniper woodlands, abruptly cascades down the east escarpment with its ecotones between chaparrals and Sonoran desert scrubs. Riparian habitats and springs infrequently emerge in canyons and valleys.

The East Mesa area is dominated creosote bush scrub with an under story of *Schismus barbatus*, saltbush and burrobush (white bursage). In the Yuha and West Mesa, burrobush tends to predominate. Spanish needle, wooly plantain and sand verbenia are common annual plants, especially abundant in springs following wet winters. Other plant associations found include salt-bush scrub and small areas of desert dry wash.

The Salton Sea is surrounded by the ancient Lake Cahuilla lakebed that consists of alkaline and saline soils. Vegetation on these soils is dominated by open chenopod scrubs and washes with slightly higher plant diversity. Dominant, perennial plant species are saltbush, iodine bush, and inkweed. The many washes are dominated by saltbush, tamarisk, and coldenia with catclaw acacia and thornbush also commonly found. The San Felipe Creek, a major watershed of the western side of the Imperial Valley, also drains into the Salton Sea. Periodic flash flooding resulting in very low plant cover scours much of the San Felipe Creek. Some areas establish vegetation between flooding events. These areas are either dominated by tamarisk scrub and trees, saltbush, inkweed, and iodine bush, or by freshwater marsh dominated by cattails, bulrush, and reeds.

In years of good rainfall, the alluvial fans on the eastern slopes of the Jacumba Mountains exhibit spectacular, diverse wildflower display. There is a relatively large number of endemic species that are related to more widespread species. One of the most conspicuous species of these alluvial fans is ocotillo. Other perennial plant species are creosote bush, burrobush, dalea, buckwheat, mormon tea, rabbitbush, and brittlebush.

T&E Vegetation:

Vegetation: The project area embraces several vegetation types. The Peninsular Ranges, covered by vegetation types such as chaparral and juniper woodlands, abruptly cascade down the east escarpment with ecotones between chaparral and sonoran desert scrubs. Riparian habitats and springs infrequently emerge in canyons and valleys. The planning area, for the purposes of botanical resources, has been broken up into 2 areas, east and west.

Psammophytic scrub-This habitat occurs on Superstition Mountain, in the Western portion of the planning area, most frequently between active dunes in bowls (depressions). This habitat also occurs just west of the Algodones Dunes, in the Eastern portion of the planning area. As dunes shift, the bowls shift as well. This habitat is classified under the California Desert Plan as a very sensitive unusual plant assemblage (UPA). The soils are made up of fine Rosita sands. The dominant species are longleaf jointfir (*Ephedra trifurca*) and Colorado Desert buckwheat (*Eriogonum deserticola*).

Desert Dry Wash Woodland – Desert Dry Wash Woodland occupies areas where rainfall drains distant mountain ranges. Plants commonly associated with this habitat are blue palo verde (*Parkinsonia florida*), desert ironwood (*Olneya tesota*), smoketree (*Psorothamnus spinosus*), and, to a lesser degree, western honey mesquite (*Prosopis glandulosa* var. *torreyana*). Shrubs associated with this habitat are creosote bush and goldenhills.

Creosote bush scrub- Creosote bush scrub generally occurs on alluvial fans, mesas, and sinks that occur throughout Imperial County. Creosote bush scrub is the dominant plant community in the planning area. This vegetation association contains creosote bush (*Larrea tridentata*), goldenhills (*Encelia farinosa*), and burrobush (*Ambrosia dumosa*), and numerous annuals that appear when rainfall is sufficient. Creosote bush scrub is associated with two special-status species of vertebrates, the flat-tailed horned lizard (*Phrynosoma mcallii*) and the Colorado Desert fringe-toed lizard (*Uma notata*).

The table below indicates sensitive plant species associated with blow-sand areas that may occur west of the Algodones Dunes, in the eastern portion of the planning area.
Table 1.1

Scientific Name	Common Name	Federal Status	State Status	CNPS Status[1]
Croton wigginsii	Wiggin's croton	sensitive	rare	List 1B
Pholisma sonorae	sandfood	sensitive	none	List 1B
Lyrocarpa coulteri	Coulter's lyrepod	sensitive	none	List 4
Pylosyles thurberii	Thurber's pylostyles	sensitive	rare	List 2

The table below shows rare and sensitive plants in the western portion of the planning area in the Yuha Desert, West Mesa, and Peninsular Mountain Range.

Table 1.2

Scientific Name	Common Name	Federal Status	State Status	CNPS Status[1]
Opuntia wigginsii	Wiggin's cholla	None	none	List 3
Lupinus excubitus var. *medius*	Mountain Spring's bush lupine	None	none	List1B
Mentzelia hirsutissima	hairy stickleaf	None	none	List 2
Ayenia compacta	ayenia	None	none	List 2
Pylosyles thurberii	Thurber's pylostyles	Sensitive	rare	List 2
Asrtragalus crotalariae	Salton Milk-vetch	Sensitive	rare	List 2
Castela emoryi	Crucifixion Thorn	Sensitive	rare	List 2
Ipomopsis effusa	Baja California gilia	none	rare	List 2

Wildlife:

Common wildlife of the area include the flat-tailed horned lizard, *Phrynosoma mcallii*, (federally proposed as threatened), desert iguana, whiptail lizard, Colorado Desert fringe-toed lizard (a BLM sensitive species), side-blotched lizard, zebra-tail lizard, leopard lizard, banded gecko, desert spiny lizard, sidewinder, patchnose snake, shovel- nosed snake, coachwhip, roundtail ground squirrel, kangaroo rat, blacktail jackrabbit, badger, kit fox, gray fox, coyote, bobcat, mule deer, mountain lion, loggerhead shrike, black-tailed gnatcatcher, sharp-shined hawk, Cooper's hawk, Swainson's hawk, ferruginous hawk, American Kestrel, white-winged dove, mourning dove, ground dove, burrowing owl, yellow warbler, desert cottontail and Gambel's quail.

Several federally or state-listed species occur in the project area: the desert pupfish, *Cyprinodon macularius*, (federal and state endangered) in San Felipe Creek, the Yuma clapper rail, *Rallus longirostrus yumanensis*, (federal endangered) and black rail, *Laterallus jamaicensis*, (state threatened) along the All-American Canal, the Peninsular Ranges population of bighorn sheep, *Ovis Canadensis cremnobates*, (state threatened, federally endangered), the least Bell's vireo, *Vireo belli pussillus*, (federally endangered) and southwestern willow flycatcher, *Empidonax extimus trailli*, (federally endangered). The last two species may occur in San Felipe Creek and along the All-American Canal, as well as in small isolated drainages in the Peninsular Ranges' eastern slope, such as Jacumba Jim Canyon in the In-ko-pah Mountains, where the vireo was seen in 1993 (Wright and Watkins, personal observation).

Arroyo Southwestern Toad (The following species account is taken largely from the *Federal Register* Announcement of June 8, 2000, proposing critical habitat.)

The arroyo southwestern toad (*Bufo microscaphus californicus*) is a small amphibian found in coastal and desert drainages from Monterey County, California, south into northwestern Baja California, Mexico. These systems are inherently quite dynamic, with marked seasonal and annual fluctuations in climatic regimes, particularly rainfall. Natural climatic variations as well as other random events, such as fires and floods, coupled with the species' specialized habitat requirements, lead to annual fluctuations in arroyo toad populations.

Human alterations of habitat can have unpredictable effects on arroyo toad populations. As a result of 1) agriculture, 2) urbanization, 3) roads, 4) construction and operation of reservoirs and flood control structures, and 5) recreational facilities, such as campgrounds and off-highway vehicle parks, many arroyo toad populations have been reduced in size or extirpated. Habitat loss from the 1920's into the 1990's coupled with habitat modifications due to the manipulation of water levels in many central and southern California streams and rivers, as well as predation from introduced aquatic species, and habitat degradation from introduced plant species, has caused arroyo toads to be extirpated from about 75 percent of the previously occupied habitat in California.

Although, the toad has never been detected in the Imperial Valley, it may occur in some of the larger washes such as Pinto, Carizzo or San Felipe Creek. Adequate surveys have not been done for the toad in these areas.

Desert Pupfish (The following account is taken largely from the Desert Pupfish Recovery Plan.)

General Distribution: At the beginning of the 20th Century, the desert pupfish, a very small detritus eating fish, was widespread throughout the lower Gila River and its tributaries; the San Pedro and Santa Cruz rivers; the lower Colorado River in Arizona, California, and Baja California; various springs, seeps, and streams in the Salton Sink; and sites in Sonora, Mexico. The species was widespread but probably not continuous within its historic range.

Naturally-occurring populations are now restricted in Arizona to Quitobaquito Springs, in California to two stream tributaries to the Salton Sea and a few shoreline pools and agricultural drains around the Salton Sea, and in Mexico at scattered localities along Rio Sonoyta, on the Colorado River Delta, and in the Laguna Salada Basin. The species has also been introduced to 20 artificial refugia.

Fishes now occupying former desert pupfish habitat include many non-native species. These fishes pose the greatest threat to extant desert pupfish populations. Pupfish do not fare well in the presence of non-native fishes and incursions by exotica have typically resulted in decline or extirpation of pupfish. Non-native fishes that occupy habitats also used by pupfish (e.g., adult western mosquitofish (*Gambusia affinis*), sailfin molly (*Poecilia lativinna*), largemouth bass (*Micropterus salmoides*), and juvenile cichlids (*Oreochromis* ssp. and *Tilapia* ssp.)) have proven most destructive to populations of native species. Primary mechanisms of replacement include predation and aggression (mosquitofish and largemouth bass) and behavioral activities that interfere with reproduction (mollies and cichlids)).

Interactions with introduced mosquitofish were noted early as contributory to the decline of pupfish in the Salton Sea (Evermann 1930, Jennings 1985). Pupfish populations declined further when sailfin molly and African cichlids became abundant (Schoenherr 1979, 1985, and 1988, Black 1980a and b,

Matsui 1981). In the Salton Sink, pupfish survive as remnant populations in tributary streams, a few shoreline pools, and irrigation drains where actual or potential invasion by non-native fishes (i.e., centrarchids, cichlids, ictalurids, and poecillids), threaten their survival.

Non-native bullfrog (*Rana catesbeiana*) may also prove problematic in the management of desert pupfish. This species was introduced to California early in the 1900s (Storrer 1922) and rapidly became established over a wide geographic range in the West, where it has extirpated or displaced several native amphibians (Clarkson and deVos 1986). The bullfrog is an opportunistic omnivore with a diet throughout its range that includes fish. Its potential for impact on desert pupfish was demonstrated in an artificial pond at Arizona State University, where a population of desert pupfish numbering in the thousands was nearly eliminated by fewer than 20 adult bullfrogs over a period of approximately a year. Natural and re-established populations of desert pupfish may thus be at risk where bullfrogs become established, and their removal may be required to assure viability of the native fish.

Drift from aerial application of pesticides, in proximity to pupfish populations, has contributed to the decline of Quitobaquito pupfish. Aerial pesticide application is a common practice near other natural populations (e.g., lower San Felipe Creek).

Introduced salt cedar (tamarisk) adjacent to pupfish habitat may reduce water levels at critical times. Evapotranspiration by luxuriant growths of this plant both at Salt Creek and San Felipe Creek may eliminate stream flow and reduce pond sizes resulting in reduction and degradation of habitat.

Bighorn Sheep (A more extensive species account is available in Recovery Plan for the Bighorn Sheep in the Peninsular Range available from the U.S. Fish and Wildlife Service (USFWS). The Palm Springs Office of the BLM supplied this account.)

Bighorn sheep are large herbivorous mammals that inhabitat the mountains and alluvial fans of the Peninsular Ranges from San Gorgonio Pass south into Baja California. The species generally occurs between sea level and 4,000 feet elevation below chaparral. Bighorn favor steep slopes to provide escape terrain but also access alluvial fans to forage. They depend on their keen eyesight to avoid predators. The ability to move swiftly up steep terrain aids in predator avoidance once danger is detected.

Mating occurs in the late summer and fall and lambing in the spring. 87% of lambing occurs between February and April. Typically, only one lamb is born. Ewes may bear young beginning at two years of age. Rams are capable of successful breeding as young as six months, although dominant older rams usually mate with females.

The Peninsular Ranges population of bighorn sheep (*Ovis canadensis cremnobates)* was listed as endangered by USFWS in March of 1998. The population is divided into eight ewe groups, one of which ventures into the Coyote, Jacumba and Fish Creek Mountains. The population has declined dramatically over the last 26 years from about 1100 animals to about 300 today. This decline has been attributed to a variety of causes by various researchers. These causes include disease, automobile collisions, mountain lion predation, exotic plant invasion, toxic plant ingestion, competition with cattle, habitat loss, degradation and fragmentation and recreational disturbance. The relative contribution of each of these causes to the population's status may shift through time. The population's decline is probably due to a combination of all of these causes.

Flat-tailed Horned Lizard (Account adapted from that provided by the Coachella Valley Association of Governments (CVAG).)

Distribution, Abundance and Trends: The flat-tailed horned lizard is often associated with sand flats and sand dunes, although it is rare on larger dunes. It also occurs far from blowsand on concreted silt and gravel substrates. In their comparisons of habitat types, Turner et al. (1980) determined the "best" habitat consisted of hard packed sand or desert pavement overlain with fine blowsand. The most common perennial plants associated with habitat for this lizard are creosote bush, *Larrea tridentata* and white bursage, *Ambrosia dumosa*.

The flat-tailed horned lizard occurs at lower elevations of the valley, generally below approximately 800 feet. The historic range of this species included suitable habitat in southeastern California, southwestern Arizona, northwestern Sonora, Mexico, and northeastern Baja California, Mexico. In California, they occurred in the Lower Colorado River Basin and the Salton Basin (Coachella and Imperial Valleys) from Palm Springs south-southeast to the Mexican border; an area of about 3,462 square miles. Currently, less than 50% of the historic habitat in California remains.

The flat-tailed horned lizard lives in low elevation desert, below about 800 feet in elevation. Extremely high temperatures and low rainfall and humidity characterize this low desert. The flat-tailed horned lizard has a higher preferred body temperature than its congener the desert horned lizard, *Phrynosoma platyrhinos*. This enables this lizard to exploit a hotter environment, but at the same time may restrict it to that environment.

Like related species, flat-tailed horned lizards are ant eaters: they are myrmecophageous. Ants, especially harvester ants, comprise about 98% of their diet. The proportion of ants in the diet is substantially higher in the flat-tailed horned lizard than in any other horned lizard.

The flat-tailed horned lizard is relatively active for a desert lizard. A majority (54%) of the day is spent in some kind of activity, including feeding and digging burrows. They eat ants they encounter while moving. They dig burrows to escape hot midday temperatures, and for winter hibernation. Most of the remaining activity involved running to locate food, suitable burrow sites, and mates. The mean home range size is nearly 300,000 sq. ft. (over 6½ acres), a large portion of which is covered daily. When approached by a potential predator, a flat-tailed horned lizard usually stops running and flattens its body against the ground. It relies on cryptic coloration to avoid predation and will usually remain immobile until after the threat has passed. This behavior makes the species difficult to locate in the field: in blowsand habitats they may be located by following tracks left in freshly deposited sand.

Adult flat-tailed horned lizards are obligatory hibernators. They hibernate from mid November to mid February in shallow burrows, although at least some juveniles are active on warm days during the winter. Reproductive activity begins in the spring and the first clutch of eggs hatches in late July. A second cohort may hatch in September. One or both of these cohorts may be lacking if environmental conditions are severe. Females lay about five eggs per clutch, on average. Young grow quickly and reach sexual maturity by one year of age.

About 50% of all individuals survive from one year to the next, with most mortalities in mid summer. Population density estimates range from 0.5 to 2.4 flat-tailed horned lizards per acre. The lower value may underestimate the true density, and the higher value may overestimate it. In addition, density may vary annually with changes in environmental conditions.

Threats and Limiting Factors: Threats to the species include increased mortality and loss of habitat. A Population Viability Analysis indicates that populations are particularly sensitive to changes in mortality rate and fecundity, and environmental variables such as drought and years with above-normal rainfall. A slight change in mortality or fecundity can lead to extinction. Threats to habitat within the Coachella Valley Mulitple Species Habitat Conservation Plan include agricultural development, urban development, expansion of the Salton Sea, expansion of utility corridors, and off-highway vehicle use. Here, 84% of the historic habitat has been lost to urban and agricultural development (K. Nicol pers. comm.). This estimate is conservative because much of the remaining habitat is now discontinuous and fragmented. Roads are known to dramatically increase mortality of desert reptiles, including flat-tailed horned lizards, and may deplete the population for as much as one mile from the road edge. Another serious edge effect is predation by household pets that are allowed to wander into habitat from surrounding urban development. Non-native species including Saharan mustard (Brassica tournefortii) and Russian thistle (Salsola tragus) may impact this species as well. By contrast much of the habitat in the Imperial Valley is still intact and not subject to development, though populations have been divided in half by the agricultural development in the middle of the Valley.

Least Bell's Vireo (Account courtesy of CVAG.)

Distribution, Abundance and Trends: The least Bell's vireo is a small insectivorous bird that inhabits riparian woodland habitats along the riverine systems of southern California, primarily in San Diego, Santa Barbara, and Riverside counties. They also breed in northern Baja California and are seen in migration in southern Baja California. This vireo species occurs at sites with two primary features: 1) a dense shrub cover within 1 to meters (3 to 6 feet) of the ground, where nests are typically placed, and 2) a dense, stratified canopy for foraging. Typical riparian habitats are those which may include cottonwoods (Populus fremontii), oak woodlands, and a dense understory of species such as willow (Salix spp.), mulefat (Baccharis salicifolia), and California wild rose (Rosa californica); in desert areas, arrow weed (Pluchea sericea) and wild grape (Vitis girdiana) may be dominant species in these riparian woodlands.

The least Bell's vireo was formerly known to inhabit dense willow thickets along streams throughout California's Sacramento and San Joaquin Valleys, from Red Bluff south, from coastal areas inland to the foothills of the Sierra Nevada, and in Owens and Death Valleys. Currently, U.S. populations are known only from Santa Barbara County and southern California. Major causes of the decline are cowbird parasitism and destruction of riparian habitats. In San Diego County, however, significant population increases in the period from 1986 to 1996 are primarily due to management of local cowbird populations (USFWS 1998).

The least Bell's vireos typically arrive in southern California to breed from mid-March to early April and remain until late September. Most birds spend the winter in southern Baja California and Mexico. During the breeding season, male vireos establish and defend territories; they maintain a stubborn attachment to these sites throughout the breeding season. Nests are constructed in dense thickets of willow or mulefat, one to two meters from the ground. These vireos may also make their nests in other riparian tree and shrub species.

Threats and Limiting Factors: The most significant threats to the least Bell's vireo are nest parasitism by brown-headed cowbird, destruction of habitat as a result of flood control activities, invasion of non-native plants in riparian habitats, and degradation of habitat as a result of edge effects related to human

activities. Brown-headed cowbird parasitism has been described as a primary cause for the decline of least Bell's vireos in central and northern California as well as southern California. The decline in breeding populations of lowland riparian passerine species, including the least Bell's vireo, along with other small, insectivorous, open-cup nesting birds -- among them the yellow warbler and southwestern willow flycatcher -- is well documented. It has been suggested that because the least Bell's vireo is most restricted to lowland riparian forests where cowbird parasitism is likely to be greatest, this species has suffered the largest aggregate reduction in numbers. Parasitized vireo pairs either desert the nest or raise the young cowbird at the expense of their own young. Human activities, including golf courses and agriculture, attract cowbirds thereby increasing the threat to least Bell's vireos.

Special Considerations: Reduction of cowbird populations in least Bell's vireo habitat has been shown to substantially benefit this species. The predominance of golf courses and agricultural areas, which both provide habitat for the cowbird may make control of this non-native bird difficult.

Black Rail (Account courtesy of CVAG.)

Distribution, Abundance and Trends: Historically, black rails occurred along the Pacific coast from Bahia San Quintin in Baja California to San Diego, Los Angeles and north to San Francisco. Inland, these rails occurred from the delta of the Colorado River north to the central valley of California and on to eastern Oregon marshlands. Today the coastal and inland wetlands are greatly reduced from their historic range. A desert strong hold for this species appears to be along the lower Colorado River where over a hundred birds have been observed repeatedly during censuses in recent years. Black rails are known to occur within the Salt Creek watershed of the Dos Palmas region, both in the wetlands in the Dos Palmas Springs area at and at the mouth of Salt Creek, as well as in the wetlands along the All-American Canal. No accurate numbers are available. There is also a record from the Whitewater delta area at the north end of the Salton Sea. Appropriate management of both Dos Palmas and the Whitewater delta could expand existing habitat for this species.

Black rails are birds of dense coastal and inland marsh habitat. Based on radio telemetry data gathered on the lower Colorado River, black rails selected habitat dominated by California bulrush, Scirpus californicus and three square bulrush S. americanus. They either avoided cattails Typha domingensis or utilized cattail habitat in proportion to its availability. However, nests were often constructed of cattail leaf blades, even though cattails were rarely the dominant vegetation type surrounding the nest. Preferred habitat sites had a shallow water depth of <2.5 cm, with 25% of the substrate covered in water. They preferred areas closer to the shoreline than would have been expected in random distribution. Home range size in appropriate habitat along the lower Colorado River varied from 0.43 to 0.55 ha. depending on sex and time of year. The birds are resident year-round. The home range sizes described above are three to four times smaller than those described for the eastern black rail, and may result from more stable water levels than found in tidal habitats. The rails were found to be entirely diurnal in their activity.

Black rails are omnivorous, eating both invertebrates and bulrush seeds. Predators include house cats, short-eared owls, northern harriers, great blue herons and great egrets.

Threats and Limiting Factors: Threats to the black rails' continued occurrence within the Plan area include water diversions that reduce marsh habitat, including the lining of the earthen Coachella canal above Dos Palmas; habitat modification for flood control at the Whitewater River delta; tamarisk infestations which degrade and dry up marsh habitat; and predation from exotic bullfrogs. Even with

appropriate habitat management practices, the black rail population within the Plan area is small and will probably require immigration from habitats outside the area being addressed in this conservation plan to maintain long-term viability.

Special Considerations: California black rails are often found in association with Yuma clapper rail habitat. Conservation measures for one species will benefit the other, however, additional information is needed on how these two species partition the habitat.

Yuma Clapper Rail (Account courtesy of CVAG.)

Background, Distribution, Abundance and Trends: Yuma clapper rails are and have been restricted to the region of the lower Colorado River, the Colorado River delta, and appropriate habitats surrounding the Salton Sea and in the Whitewater River north of the Sea. There are rare records for this species in marshland habitat along the eastern shore of the Sea of Cortez. Within this historic range, appropriate habitat along the lower Colorado River and delta areas has been severely reduced through water diversions and salt cedar infestations. The Plan area is at the northern edge of the Yuma clapper rail distribution. There are records from the Whitewater River delta and upstream, in scattered locations, for approximately 10 miles along the Whitewater River channel, and from two agricultural drains on the west side of the Salton Sea. The Salton Sea and Whitewater River habitats are potentially impacted due to chemical contaminants, salt cedar infestations, and flood control channel maintenance. The Yuma clapper rail occurs at the Salton Sea State Recreation Area at the mouth of Salt Creek. The Yuma clapper rails occur within the Dos Palmas marshland complex in unknown numbers. The Dos Palmas area may have particular importance in that it may be one of the few occupied sites throughout this bird's entire range that is relatively free of chemical contaminants. Both Dos Palmas and the Whitewater River delta/Salton Sea could, if managed appropriately, provide additional habitat to what already exists there. The population size of Yuma clapper rails within this area is not known, nor are the trends in its population numbers known, but it is likely that this population will require immigration from occupied habitat to the south to maintain long term viability. Rails also occur along the All-American Canal in Imperial County, west of the Algodones Dunes.

Yuma clapper rails are found in marsh habitats of cattails Typha domingensis and bullwhip/California bulrush Scirpus californicus. In habitats found along and adjacent to the lower Colorado River, these rails selected some combination of cattails and bulrush for breeding. There was a post-breeding shift at some sites concurrent with a rise in water level, to higher elevation willows, arrowweed and salt cedar dominated habitats. Common reed Phragmites communis was also used as habitat, but usually occurred in areas too dry for breeding and foraging. Water depth appears to be an important habitat character, with average preferred depths varying from 6.5 cm to 20 cm depending on the study site. In deeper water a residual mat of decaying vegetation was important to allow the rails to have access and use throughout their home range. The rails also preferred habitat edges and generally less dense habitat to facilitate the birds' mobility and access. Home ranges for male birds were found to average 7.7 +/- 5.9 ha, and for females 9.9 +/- 9.6 ha.

Threats and Limiting Factors: Water diversions, salt cedar infestations, habitat manipulation for flood control and chemical contamination (the last two pertain primarily to the Whitewater delta) are the primary threats to Yuma clapper rails. Another potential threat is the lining of the Coachella Canal and the All-American Canal; leakage from the Coachella Canal currently provides a portion of the water supply to rail habitat at the Dos Palmas Preserve/ACEC and the All-American Canal provides water via leakage to habitat near the Mexican Border.

Special Considerations: California black rails are often found in association with Yuma clapper rail habitat. Conservation measures for one species will benefit the other.

Southwestern Willow Flycatcher (Account courtesy of CVAG.)

Distribution, Abundance and Trends: The southwestern willow flycatcher is a small insectivorous bird restricted to dense riparian woodlands and forests along the river and stream systems of southern California, primarily in Kern, San Diego, San Bernardino, and Riverside counties. Their breeding range also includes southern Nevada, Arizona, New Mexico, Utah, western Texas, and possibly southwestern Colorado. They are reported as breeding birds in Mexico, in extreme northern Baja California and Sonora. They winter in Mexico, Central America, and northern South America. This flycatcher can be found at sites where a dense growth of willows (Salix sp.), Baccharis, arrowweed (Pluchea sp.), or other plants occurs in thickets. These thickets are often associated with a scattered overstory of cottonwood (Populus fremontii) and other riparian trees. This species has also been found nesting in southern California in relatively narrow bands of riparian habitat and can utilize extremely small remnant riparian areas (one medium size willow tree) during migration.

The historic range of the southwestern willow flycatcher in California included riparian areas throughout the southern third of the state; it was reported as common in the Los Angeles basin, the San Bernardino/Riverside area, and in San Diego County. It was also a common breeder along the lower Colorado River, near Yuma. Currently, stable nesting groups are reported from only two locations, along the South Fork of the Kern River and along the Santa Margarita River on Camp Pendleton. Elsewhere, they exist only in small scattered, remnant and isolated populations. Major causes of the decline are cowbird parasitism and destruction or disturbance in riparian habitats.

The breeding status of the southwestern willow flycatcher is not well known in the Imperial Valley area - San Felipe Creek and the All-American Canal wetlands are possibilities. Some locations are known from the Coachella Valley. Of the known locations at which this species has been observed, only one was confirmed as supporting breeding birds, sited by Bob McKernan in Mission Creek. Suitable breeding habitat is present in a number of locations where riparian habitat exists, in Chino Canyon, Andreas, Murray, and Palm Canyons, Millard Canyon, Whitewater Canyon, possibly Stubbe and Cottonwood Canyons. Suitable breeding habitat may also occur at Oasis de Los Osos, along the Whitewater River near the Salton Sea, at the Coachella Valley Preserve, and at Dos Palmas Preserve/ACEC.

Southwestern willow flycatchers may travel through the Imperial Valley en route to other breeding areas. In migration, they may use desert fan palm oasis woodland, mesquite hummocks, mesquite bosque, arrow weed scrub, desert dry wash woodland, southern sycamore-alder riparian woodland, Sonoran cottonwood-willow riparian forest, and southern arroyo willow riparian forest. The birds begin to arrive in southern California to breed late in the spring, generally from May 15 on through the summer months, until August. Males establish and defend territories beginning shortly after arrival in mid-May. Most birds begin nesting within one week after pair formation, which occurs 10 to 14 days after their arrival. The young fledge in early July and begin to disperse approximately two weeks after leaving the nest.

They construct their nests in dense thickets of willows, mulefat, and other trees and shrubs approximately 4 to 7 meters in height. They virtually always nest near surface water or saturated soil.

They have not been found nesting in habitats where the riparian zone is very narrow, or where distances between willow patches and individual shrubs is great. The southwestern willow flycatcher is an insectivore, foraging within and above dense riparian vegetation, sometimes adjacent to nest sites.

Threats and Limiting Factors: The most significant threats to the southwestern willow flycatcher are extensive loss and modification of riparian habitats upon which they depend and nest parasitism by the brown-headed cowbird. Other factors that have contributed to their decline include disturbance of riparian habitat by cattle, fragmentation of breeding areas, flood control activities, invasion of non-native plants in riparian habitats, degradation of habitat as a result of edge effects related to urbanization and other human activities, and sand/gravel mining. Other localized threats may include changes in fire frequency and concentrated human access within some of the riparian areas. For example, the Whitewater River area near Bonnie Bell appears to be heavily used by people. Brown-headed cowbird parasitism rates of southwestern willow flycatcher nests has been reported as ranging from 50 to 80 percent in California, to 100% in the Grand Canyon. The decline in breeding populations of the southwestern willow flycatcher, along with other small, insectivorous, open-cup nesting birds -- among them the yellow warbler and least Bell's vireo -- is well documented. It has been reported (Unitt 1987) from historical and contemporary records that the southwestern willow flycatcher has declined precipitously throughout its range in the last 50 years. Parent birds in parasitized nests either desert the nest or raise the young cowbird at the expense of their own young. Human activities, including golf courses and agriculture, attract cowbirds, thereby increasing the threat to southwestern willow flycatchers.

Special Considerations: Reduction of cowbird populations in southwestern willow flycatcher habitat has been shown to substantially benefit this species, along with other riparian bird species. The predominance of golf courses and agricultural areas, which both provide habitat for the cowbird may make control of this non-native bird difficult.

Mountain Plover (Account Courtesy of USFWS)

The mountain plover (Charadrius montanus) is a member of the group of birds called shorebirds that are usually found along the edges of water areas. It is an unusual shorebird since it spends its entire life avoiding water. The mountain plover is a Great Plains native that breeds on the arid shortgrass prairie from northern Montana to southern New Mexico and winters in California, Texas and Mexico. Since 1837, it has been reported from 23 states, Canada and Mexico. The number of mountain plovers has declined drastically in the last century. About 1900, it was abundant and was heavily market hunted in California and probably throughout its range. As early as 1914, plover numbers were reported to be declining. The Migratory Bird Treaty Act of 1916 protected the plover from hunting, but its range and numbers continued to decrease. Recent studies have estimated a 50 percent to 89 percent reduction in mountain plovers.

Current distribution maps are misleading, showing plovers occurring over a large range. In reality, habitat within this range is limited. Breeding strongholds are confined to small areas of native prairie in Montana and Colorado. Most of the birds winter in California, principally in the San Joaquin Valley, an area experiencing high rates of human population growth. The plover winters on some agricultural lands in the Imperial Valley and may use the open desert lands near agricultural areas, especially ephemeral lakebeds such as occur near Superstition Mountain.

Today the mountain plover is considered endangered in Canada, a species of special interest or concern in Montana and Oklahoma, extirpated in North Dakota and South Dakota, on the watch list in Kansas and threatened in Nebraska. The U.S. Fish and Wildlife Service is considering listing the mountain plover as threatened throughout its range.

Wetland/Riparian:

Riparian and wetland areas are rare in the area, the most notable being San Felipe Creek and San Sebastian Marsh. San Sebastian Marsh and San Felipe Creek are located in Western Imperial County. They are bounded on the north by State Highway 78, on the east by State Highway 86, on the southeast by the Superstition Hills, and on the south and west by the Lower Borrego Valley. Approximately 11 miles of San Felipe Creek, Carrizo Wash, and Fish Creek Wash have been designated as critical habitat for the endangered desert pupfish by the United States Fish &Wildlife Service (USFWS). This critical habitat also includes a 100-foot riparian buffer zone.

Other riparian areas include the wetlands along the All-American Canal and small isolated drainages in canyons of the Peninsular Ranges.

ACECs:

Eight ACECs are within the area of this action. The Federal Land Policy and Management Act (FLPMA), in Section 103(a), defines an Area of Critical Environmental Concern as an area "…within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or possesses, or to protect life and safety from natural hazards." With the exception of the West Mesa ACEC, various activity plans exist for the ACECs.

Each of the Areas of Critical Environmental Concern (ACEC) within the project and the primary reason for being an ACEC are listed in the following table. Nearby ACECs that are outside the area of this action area (e.g., Coyote Mountains Fossil Site) are not included in the table. Most ACECs contain other important resources in addition to the primary reasons.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN			
ACEC Number	ACEC	Primary Reason(s) for Establishment	Acreage
61	San Sebastian Marsh/San Felipe Creek	Cultural Resources, Riparian habitat, and Wildlife habitat (Desert Pupfish)	6,565
64	Yuha Basin	Cultural Resources and Wildlife habitat (Flat-tailed Horned Lizard)	40,069
65	Lake Cahuilla # 2	Cultural Resources	1,214
66	Lake Cahuilla # 3	Cultural Resources	2,528
69	Lake Cahuilla # 5	Cultural Resources	5,592
70	East Mesa Flat-tailed Horned Lizard Habitat	Wildlife habitat (Flat-tailed Horned Lizard) and Cultural Resources	42,768
71	Lake Cahuilla # 6	Cultural Resources	4,724
82	West Mesa	Cultural Resources and Botanical & Wildlife Resources (Flat-tailed Horned Lizard habitat)	20,295
Source: Table 15, p. 104, *California Desert Conservation Areas Plan 1980 As Amended* (08/17/1999)			

Air Quality:

The project area is located in Imperial County, which is in the Salton Sea Air Basin (SSAB). The climate of Imperial County exhibits climatological characteristics typical of a desert: low annual precipitation, very hot summers, mild winters, high evaporation rates, and strong inversions. One of the main determinants of climatology is a semi-permanent high-pressure area (the Pacific High) in the eastern Pacific Ocean. In the summer, this pressure center is located well to the north, causing storm tracks to be directed north of California. This high- pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, weakened low-pressure storms and the orographic barrier brings little rainfall. The combination of subsiding air, protective mountains, and distance from the ocean severely limits precipitation. In Imperial County, the precipitation level is very low, averaging 2.40 inches annually (NOAA, 2001). A summary of the monthly temperatures and precipitation are shown in the table below. The mean temperature is 73.1°F, and the mean maximum and mean minimum temperatures are 87.7° F and 58.5° F, respectively (NOAA, 2001).

Monthly Temperatures and Precipitation for Imperial, CA, 1971-2000

	Imperial County Airport		
	Mean Daily Temperatures		Mean Monthly
Month	Maximum (°F)	Minimum (°F)	Precipitation (inches)
January	69	42	0.42
February	74	46	0.24
March	78	50	0.22
April	85	55	0.11
May	93	62	0.01
June	102	69	0.00
July	107	78	0.10
August	105	77	0.31
September	101	72	0.26
October	91	61	0.21
November	78	49	0.23
December	70	42	0.29
Absolute extreme temperatures	119	23	2.40 (total)

Reference: Imperial County, 2001b.

The flat terrain of Imperial Valley and the strong temperature differentials created by intense solar heating produce moderate winds and deep thermal convention. The Imperial Valley region occasionally experiences periods of high winds. Predominant wind directions are westerly and west-southwesterly during all four seasons, and average annual daily wind speed is 4.1 miles per hour (CARB, 1999).

A common atmospheric condition known as a temperature inversion affects air quality in the project area. During an inversion, air temperatures become warmer with increasing height rather than cooler. The presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms it to a temperature higher than the air below. This highly stable atmospheric condition is called a subsidence inversion. The boundary between the layers of air acts as a

temperature inversion that traps pollutants below it. The inversion layer can persist for 1 or more days, causing air stagnation and buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion. Subsidence inversions are common from November through June, but appear to be relatively absent July through October.

Health Effects of Criteria Air Pollutants

Air pollutants are recognized to have a variety of health effects on humans. Research by the CARB shows that exposure to high concentrations of air pollutants can trigger respiratory diseases such as asthma, bronchitis, and other respiratory ailments and cardiovascular diseases. A healthy person exposed to high concentrations of air pollutants may be become nauseated or dizzy, may develop a headache or cough, or may experience eye irritation or a burning sensation or both in the chest. Ozone is a powerful irritant that attacks the respiratory system, leading to the damage of lung tissue. Inhaled particulate matter, nitrogen dioxide, and sulfur dioxide can directly irritate the respiratory tract, constrict airways, and interfere with the mucous lining of the airways. When it is absorbed into the bloodstream, carbon monoxide can endanger hemoglobin, the oxygen-carrying protein in blood, by reducing the amount of oxygen that reaches the heart, brain, and other body tissues. When air pollutant levels are high (a common occurrence in Southern California), children, elderly people, and people with respiratory problems are advised to remain indoors. Outdoor exercise also is discouraged because strenuous activity may cause shortness of breath and chest pains. A brief discussion of the criteria pollutants and their effects on human health and the environment is provided in the table below.

Criteria Air Pollutants and Their Effects on Human Health and the Environment

Physical Characteristics	Health Effects	Environmental Effects
CO is a colorless and odorless and at high levels is a poisonous gas. It is a component of motor vehicle exhaust. Peak CO concentrations typically occur during the colder months of the year and nighttime inversion conditions.	Exposure to CO reduces oxygen delivery to the body's organs and tissues. Elevated levels are dangerous to those who suffer from cardiovascular disease. CO can be poisonous, can cause visual impairment, reduce work capacity and manual dexterity, and inhibit learning ability.	None.
Ground-level ozone (the primary constituent of smog) is not emitted directly into the air but is formed by the reaction of volatile organic hydrocarbons (VOCs) and nitrogen oxides (NOx) in the presence of heat and sunlight.	Exposure to ambient ozone has been linked to increased hospital admissions and emergency room visits for respiratory causes, including respiratory infection, asthma, significant decreases in lung function, chest pain, and cough.	Ozone also affects vegetation and ecosystems, leading to reductions in agricultural and commercial forest yields, reduced growth and survivability of tree seedlings, and increased plant susceptibility to disease, pests, and other environmental stresses (e.g., harsh weather).
NO_2 is a reddish brown, highly reactive gas. The major sources of man-made NOx emissions are high-temperature combustion processes. Home heaters and gas	Exposures to NO_2 may reduce airway and lung function, increase respiratory illnesses in children, and increase susceptibility to respiratory infection. Atmospheric	NO_2 is a precursor of acid rain and is linked to a wide range of environmental effects, including changes in the composition and competition

stoves also produce substantial amounts of NO_2 in indoor settings.	transformation of NOx can lead to the formation of ozone and PM, both of which are associated with adverse health effects.	of some species of vegetation, visibility impairment, acidification of freshwater bodies, eutrophication of estuarine and coastal waters, and increases in levels of toxins harmful to fish and other aquatic life.
SO_2 is formed when fuel containing sulfur (mainly, coal and oil) is burned, and during metal smelting and other industrial processes. The highest concentrations of SO_2 occur in the vicinity of large industrial facilities.	Exposure to SO_2 can result in temporary breathing impairment, reduced lung function, wheezing, chest tightness, or shortness of breath, respiratory illness, alterations in the lungs' defenses, and aggravation of existing cardiovascular disease.	SO_2 is a major precursor of acid rain, which is associated with the acidification of soils, lakes, and streams, accelerated corrosion of buildings and monuments, and reduced visibility.
PM consists of a mixture of airborne solid particles and liquid droplets that originate from both man-made and natural sources. Fine particles ($PM_{2.5}$) are generally emitted from fuel combustion sources. Coarse particles (PM_{10}) are generally emitted from sources that cause wind-blown or entrained dust. SO_x, NO_x, and VOC also interact with compounds in the air to form PM.	Inhalable PM can accumulate in the respiratory system and is associated with numerous health effects, including the aggravation of respiratory conditions (asthma), increased hospital admissions and emergency room visits for heart and lung disease, increased respiratory symptoms, decreased lung function, and even premature death.	PM is the major cause of reduced visibility in many parts of the United States. Airborne particles also can cause damage to paints and building materials.
Pb emissions to the atmosphere were formerly dominated by automotive sources. As a result of the elimination of leaded gasoline, metals processing facilities are currently the primary source of Pb emissions. The highest air concentrations of Pb are found in the vicinity of smelters and battery manufacturers.	Exposure to Pb occurs mainly through inhalation and ingestion pathways. It accumulates in the blood, bones, and soft tissues. Pb can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to Pb may cause neurological impairments, such as seizures, mental retardation, behavioral disorders, damage to the nervous systems of fetuses and young children, and may be a factor in high blood pressure and subsequent heart disease.	Lead can also be deposited on the leaves of plants, presenting a hazard to grazing animals.

Toxic Air Contaminants

The federal and state laws and regulations also define a group of pollutants called "hazardous air pollutants," "toxic air contaminants," or "air toxics." These pollutants are regulated by the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) section of the federal Clean Air Act; various state laws and regulations; state air toxics acts (e.g., the AB 1807, AB 2588, and SB 1731 programs); and Imperial County Air Pollution Control District (APCD) Regulations XI and XII. In urban areas, toxic air contaminants are a concern because of the concentration of people living close to large sources of emissions. The combination of toxic emissions from vehicles, industry, and multiple area sources creates an unhealthy mix that varies based on geography, industry, population, and other factors. Exposure to toxic air pollutants may cause or contribute to cancer, birth defects, genetic damage, and other adverse health effects.

In Imperial County, the Imperial County APCD is the agency responsible for protecting public health and welfare through the administration of federal and state air quality laws, regulations, and policies. Included in the tasks for Imperial County are the monitoring of air pollution, the preparation of the State Implementation Plan (SIP) for the San Diego Air Basin (SDAB), and the promulgation of Rules and Regulations. The SIP included strategies and tactics to be used to attain the federal O_3 standard in Imperial County. The elements are taken from the Air Quality Attainment Plan, the APCD plan for attaining the state O_3 standard, which is more stringent than the federal standard (Imperial County APCD, 1991). The Rules and Regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts.

Federal Clean Air Act Conformity

The CAA Amendments of 1977 (42 United States Code [USC] 7401, et seq.) state that the federal government is prohibited from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP. Federal actions related to transportation plans, programs, and projects developed, funded, or approved under 23 USC or the Federal Transit Act (49 USC 1601, et seq.) are covered under separate regulations for Transportation Conformity.

In the 1990 CAA Amendments, EPA included provisions requiring federal agencies to ensure that actions undertaken in nonattainment or attainment-maintenance areas are consistent with applicable SIPs. Imperial County APCD has adopted Rule 925, General Conformity. The process of determining whether or not a federal action is consistent with applicable SIPs is called "conformity." The general conformity rules establish a process to demonstrate that federal actions would be consistent with applicable SIPs and would not cause or contribute to new violations of the NAAQS, increase the frequency or severity of existing violations of the NAAQS, or delay the timely attainment of the NAAQS. The emission thresholds that trigger requirements of the conformity rule are called *de minimis* levels.

A determination of conformity with the applicable SIP is required for each pollutant where the total direct and indirect emissions in a nonattainment or attainment-maintenance area caused by the action would exceed *de minimis* levels. The General Conformity *de minimis* thresholds are defined in 40 CFR 93.153(b) and in Rule 1501. In addition, the project proponent must demonstrate that the total direct and indirect emission increases associated with the action will not be regionally significant; that is, they will not represent 10 percent or more of an emission inventory or emissions budget of an area.

The General Conformity rules do not apply to federal actions in areas designated as nonattainment of the CAAQS only.

Compliance with Air Quality Standards

Under the 1977 Amendments to the CAA, those states with air quality that did not achieve the NAAQS were required to develop and maintain SIPs. These plans constitute a federally enforceable definition of the approach of the state (or "plan") and schedule for the attainment of the NAAQS. Air quality management areas are designated as "attainment," "nonattainment," or "unclassified," depending on whether or not they achieve the NAAQS and CAAQS. In addition, California can also designate areas as "transitional." It is important to note that, because the NAAQS and CAAQS are different in many cases, it is possible for an area to be designated as attainment by EPA (meets the NAAQS) and "nonattainment" by the CARB (does not meet the CAAQS) for the same pollutant. Also, an area can be designated as attainment for one pollutant (e.g., NO_2) and nonattainment for others (O_3 and PM_{10}).

Areas that were designated as attainment in the past, but have since achieved the NAAQS, are further classified as "attainment-maintenance." The maintenance classification remains in effect for 20 years from the date that the area is determined by EPA to meet the NAAQS. There are numerous classifications of the nonattainment designation, depending on the severity of nonattainment. For example, the O_3-nonattainment designation has seven subclasses: transitional, marginal, moderate, serious, severe-15, severe-17, and extreme. Areas that lack monitoring data are designated as unclassified areas and treated as attainment areas for regulatory purposes.

The SSAB, which coincides geographically with the desert region of Imperial and Riverside Counties, currently meets the federal and state standards for all pollutants except O_3 and PM_{10}. The SSAB is currently classified as a federal and state "moderate" O_3-nonattainment area and nonattainment area for PM_{10}. The project area is located within an attainment area for the federal and state CO, NO_2, SO_2, and Pb standards. The City of Calexico, located at the California/ Mexico International border, is in a nonattainment area for CO.

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of "ground-level" concentrations. Factors affecting ground-level pollutant concentrations include the rate at which pollutants are emitted to the atmosphere, the height from which they are released, the physical combination of emissions from various sources, the formation of secondary pollutants, the interaction of pollutants with topographic features, and meteorological conditions. Meteorological parameters that affected pollutant dispersion the most are wind speed and direction, atmospheric stability, mixing height, and temperature.

Ambient criteria air pollutant concentration in the SSAB are measured at six air quality monitoring stations operated by Imperial County APCD and CARB. The nearest air quality monitoring station operating in the vicinity of the Plan Area is a monitoring station located at Calexico East, approximately 20 miles to the southwest of the Plan Area. The station monitors O_3, CO, NO_2, SO_2, PM_{10}, and Pb. Data for the years 1996 to 2000 are summarized in the table below. Over the last 5 years, the federal and state standards for NO_2, SO_2, and Pb have not been exceeded at the Calexico East Station. For the last 3 years, the federal and state 24-hour and annual standards for PM_{10} were exceeded every year. Ozone levels at the Calexico East Station exceeded federal and state standards in every year from 1996 to 2000.

Please note that the monitoring data from the Calexico-East Monitoring station was invalidated by both CARB and U.S. EPA as of September 2001 due to its location near a road.

Ambient Air Quality Summary, Calexico – East Monitoring Station
—Note data has been officially invalidated as this location may receive impacts due to its proximity to the road.

		California Air Quality Standards		Maximum Concentrations [a]					Number of Days Exceeding Federal Standard [b]					Number of Days Exceeding State Standard [b]				
Oxidants (Ozone)	1 hr	0.09 ppm	0.12 ppm	0.162	0.121	0.236	0.156	0.108	3	0	1	3	0	22	6	27	13	7
	8 hrs (c)	N/A	0.08 ppm	0.117	0.092	0.101	0.110	0.079	12	2	13	5	0	N/A	N/A	N/A	N/A	N/A
Carbon Monoxide	1 hr	20 ppm	35 ppm	22.0	21.0	18.4	14.0	17.6	0	0	0	0	0	1	1	0	0	0
	8 hrs	9 ppm	9 ppm	8.74	16.29	13.00	9.37	11.30	0	2	3	0	1	0	4	3	1	1
Nitrogen Dioxide	1 hr	0.25 ppm	N/A	0.072	0.091	0.105	0.110	0.124	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0
	Annual	N/A	0.053 ppm	0.007	0.011	0.011	0.013	0.012	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A
Sulfur Dioxide	1 hr	0.25 ppm	N/A	0.036	0.035	0.026	NM	NM	N/A	N/A	N/A	N/A	N/A	0	0	0	N/A	N/A
	24 hrs	0.05 ppm	0.14 ppm	0.010	0.015	0.009	NM	NM	0	0	0	N/A	N/A	0	0	0	N/A	N/A
	Annual	N/A	0.03 ppm	0.001	0.002	0.003	NM	NM	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PM_{10}	24 hrs	50 µg/m^3	150 µg/m^3	NM	NM	568	1,342	1,613	N/A	N/A	10	20	32	N/A	N/A	44	51	57
	Annual	30 µg/m^3	50 µg/m^3	NM	NM	107.8	168.7	238.8	N/A	N/A	1	1	1	N/A	N/A	1	1	1
Lead	Quarterly Average	N/A	1.5 µg/m^3	0.05	0.03	0.03	0.02	0.02	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A

Source: AIRData, U.S. EPA Office of Air Quality Planning and Standards: Imperial County, CA 1996 - 2000. EPA website: http//www.epa.gov/air/data

Notes:

(a) Concentration units for ozone, carbon monoxide, nitrogen dioxide, and sulfur dioxide are in parts per million (ppm). Concentration units for PM_{10} and lead are in micrograms per cubic meter (µg/m^3).

For annual standards, a value of 1 indicates that the standard has been exceeded.

(c) The number of days above the 8-hour ozone standard is not the number of violations of the federal standard for the year. The number of days is presented for display purposes until the EPA completes the 8-hour ozone monitoring evaluation program.

NM = Not Monitored.

N/A = Not applicable.

Sources of Regional and Local Pollution

The most significant sources of O_3, NO_2, CO, and PM_{10} in SSAB are automobiles and OHVs. The greatest source (87 percent) of PM_{10} is road dust. Ozone is formed by the reaction of ROG and NO_x, which are largely combustion products from gas and diesel engines. Ozone is a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production. In Imperial County, 68 percent of the 310 tons per day of ROG emitted come from mobile sources (i.e., automobiles, trucks, marine vessels, aircraft, and heavy equipment). For NO_x, 88 percent of the 240 tons emitted daily are from mobile sources. Some ozone levels in excess of the federal and state standards can be traced to emissions of ozone precursors transported by wind from the South Coast Air Basin and from Mexico. Computer modeling of smog formation has shown that a reduction of approximately 25 percent each of NO_x and ROG would allow the SSAB to meet the federal O_3 standard on days when there is no substantial transport of pollution from the South Coast Air Basin or other airshed (District, 1999).

High concentrations of PM_{10} in many areas in Imperial County result from wind action. The wind picks up particles from disturbed and undisturbed surfaces, recreational travel on paved and unpaved roadways, construction and demolition activities, and farming operations such as crop burning. These particles can remain suspended in the air for long periods and can travel a great distance. The principal health effect of airborne particulate matter is on the respiratory system.

Emissions sources associated with the existing use of the project area consist of combustion emissions from OHVs; small internal-combustion generator engines; recreational vehicles and on-road motor vehicles (commuting to, delivery at, traveling inside, and departing from the site); and fugitive dust emissions entrained from vehicles traveling over paved and unpaved surface. The principal sources of criteria pollutant emissions are automobiles and recreational vehicles.

The South Coast Air Quality Management District (SCAQMD) recently released a draft report, referred to as the *Multiple Air Toxics Exposure Study* (SCAQMD, 1999), discussing the exposure risk to toxic air contaminants in Southern California. The report stated that about 70 percent of all estimated human health risk to toxic air contaminants is attributed to diesel exhaust (particulate emissions); about 20 percent to other toxic compounds associated with mobile sources such as benzene and 1,3-butadiene; and about 10 percent to stationary sources. Existing emitters of toxic air pollutants include automobiles, trucks, recreational vehicles, portable fuel storage tanks, and OHV rental stations.

Noise:

In deserts where the natural sound pressure levels are very low, vehicular use on a route associated with recreational activities, affect hearing in some vertebrates. Natural deserts do not exceed 66 decibels, and no desert animal creates sounds above 56 decibels. Mechanized sounds increase the decibels in the desert. A motorcycle ranges from 40 to 100 decibels. Within 100 meters, the peak decibels created by a motorcycle exceed those of naturally occurring sounds. It has been shown that prolonged noise can adversely affect some lizards (e.g., desert iguana, Mohave fringe-toes lizard). Laboratory studies show that dune buggy sounds, collected from the Imperial Valley, of moderate intensity and short duration cause hearing loss in Colorado Desert fringed-toed lizards. However, it is not known whether or not vehicle noise at levels and durations anticipated in the desert negatively impact flat-tailed horned lizards. Exposure to vehicle sounds reduced hearing detection abilities in desert kangaroo rats for three weeks. Hearing reductions lead to the animals' inability to detect its predator, the sidewinder, for those three weeks. Effects are more likely where prolonged, loud noise occurs.

Social Economics: Demographics:

In 2000, the nine counties that are believed to be the most frequent users for the project area (Yuma, Maricopa, and Pima in Arizona and Riverside, Orange, San Diego, Imperial, Los Angeles, San Bernardino in California), had an estimated population of 22.6 million, up from 19.3 million in 1990. This represents an increase of over 3.3 million people (17 percent) in a decade. The table below provides a summary of the current population in the nine counties as well as 20-year population projections for each county. All counties except Los Angeles showed double-digit increases in population between 1990 and 2000. Imperial County's 30.2 percent increase was second only to Riverside County's 32.0 percent increase among the six California counties. Two of the Arizona counties, Maricopa and Yuma, experienced growth rates of 44.8% and 49.7%, respectively.

The 20-year projections suggest continued growth for the nine counties. Triple digit growth is projected for Riverside, Maricopa and Imperial counties. In addition to the projected growth within Imperial County, increased population in the other counties of the study area will move population centers closer to Imperial County.

Population Estimates for the Nine Counties in the Affected Environment, 1990 – 2020.

	1990	2000	2010	2020	% Increase 1990-2000	% Increase 2000 –2020
Imperial	109,303	142,361	217,500	294,200	30%	169%
Los Angeles	8,863,164	9,519,338	10,605,200	11,584,800	7.4%	31%
Orange	2,410,556	2,846,289	3,266,700	3,541,700	18%	47%
Riverside	1,170,413	1,545,387	2,159,700	2,817,600	32%	141%
San Bernardino	1,418,380	1,709,434	2,231,600	2,800,900	20%	97%
San Diego	2,498,016	2,813,833	3,288,400	3,863,500	13%	55%
Maricopa	2,122,101	3,072,149	3,709,566	4,516,090	45%	113%
Pima	666,880	843,746	1,031,623	1,206,244	26%	81%
Yuma	106,895	160,026	171,689	209,861	50%	80%
Study Area Total	19,365,708	22,652,563	26,781,978	34,834,895	17%	80%

Imperial County occupies an area of 4,587 square miles in the southeastern corner of California. It is bounded on the north by Riverside County, on the west by San Diego County, on the south by Mexico, and on the east by the Colorado River and Yuma County, Arizona. The Western Colorado Desert Route of Travel area is located throughout the sparsely populated, unincorporated areas of Imperial County. The 2000 census indicated that Imperial County had a total population of 142,361 (California DOF-1, 2001). There are seven incorporated cities in the county, the three largest being El Centro, Calexico, and Brawley with populations of 37,835; 27,109; and 22,052, respectively. Seventy-seven percent of the County's inhabitants live in the incorporated areas. The following table shows the county and city populations for Imperial County in 1990 and 2000.

Imperial County/City Population Estimates

County/City	1990	1990 Percentage of Total	2000	2000 Percentage of Total
Brawley	18,923	17	22,052	15
Calexico	16,633	17	27,109	19
Calipatria	2,690	3	7,289	5
El Centro	31,405	29	37,835	27
Holtville	4,820	4	5,612	4
Imperial	4,113	4	7,560	5
Westmorland	1,380	1	2,131	1
Unincorporated	27,339	25	32,773	23
Incorporated	81,964	75	109,588	77
County Total	109,303	100	142,361	100

Source: California DOF-1, 2001

Based on the 2000 census data, approximately 72 percent of the population of Imperial County was classified as Hispanic. Whites were the next largest ethnic group at 20 percent of the population. The remaining 8 percent of the county population was classified as African American, Asian and Pacific Islander, American Indian, or Other (including those identifying two or more racial backgrounds). These percentages are comparable to the 1990 data as shown in the table below.

Imperial County Racial Profile

Race	1990	1990 Percentage of Total	2000	1997 Percentage of Total
White	31,901	29	28,768	20.2
Hispanic	71,935	66	102,817	72.2
African American	2,272	2.1	5,148	3.6
Asian and Pacific Islander	1,632	1.5	2,521	1.8
American Indian	1,563	1.4	1,736	1.2
Other[a]			1,371	1.0
Total	109,303	100	142,361	100

Source: California DOF-2, 2001; 2000 U.S. Census

[a]The 2000 estimate for Others includes those identifying two or more racial backgrounds. Two or more racial background identification was not part of the 1990 Census.

Yuma County occupies an area of 5,522 square miles in the extreme southwest corner of Arizona. It is bordered by the Colorado River and Imperial County, California, on the west and Mexico on the south. The 2000 census indicated that Yuma County had a total population of 160,026 (Census, 2000). There are seven incorporated cities in the county, the three largest being Yuma, Fortuna Foothills CDP, and San Luis with populations of 77,515; 20,478; and 15,322, respectively. Sixty-four percent of the inhabitants of the county live in the incorporated areas. In Yuma County, the City of Yuma is the population center nearest to the ISDRA. The table below shows the county and city population for Yuma County.

Yuma County/City Population Estimates

County/City	1990	1990 Percentage of Total	2000	2000 Percentage of Total
Fortuna Foothills CDP	7,737	7.2	20,478	12.8
Gadsden CDP	NA	NA	953	0.6
San Luis City	4,212	3.9	15,322	9.6
Somerton City	5,282	4.9	7,266	4.5
Tacna CDP	NA	NA	555	0.3
Wellton town	1,066	1.0	1,829	1.1
Yuma City	54,923	51.4	77,515	48.4
Unincorporated	41,412	38.7	58,094	36.3
Incorporated	65,483	61.3	101,932	63.7
County Total	106,895	100	160,026	100

Source: Arizona DES-1 and DES-2, 2001
NA = Not available

Hispanics comprise the largest racial group accounting for 50.5 percent of the 2000 population of the county. Whites are the second largest racial classification comprising 44.3 percent of the population, while the remaining racial classification of African American, Asian and Pacific Islander, and American Indian comprise approximately 2.0, 0.9, and 1.1 percent of the population, respectively. The table below summarizes the racial profile of Yuma County with a comparison to 1990 data. As the data indicate, the number of Hispanics has increased from about 40 percent of the population of the county in 1990 to about 51 percent in 2000. This increase in the percentage of Hispanics has been accompanied by a decrease in the White population from 54.4 percent in 1990 to 44.3 percent in 2000.

Yuma County Racial Profile

Race	1990	1990 Percentage of Total	2000	1997 Percentage of Total
White	58,151	54.4	70,956	44.3
Hispanic	43,388	40.6	80,772	50.5
African American	2,776	2.6	3,136	2.0
Asian & Pacific Islander	1,188	1.1	1,494	0.9
American Indian	1,178	1.1	1,819	1.1
Other	214	0.2	1,849	0.2
Total	106,895	100	160,026	100

Source: Arizona DES-3, 2001 and Arizona DES-4, 2001

Social Economics: Social Trends:

The management of public lands is a part of a controversial discussion on recreational use, land use, environmental issues and resource management that is occurring both in the United States and globally. Social values for lands and natural resources vary greatly by individual and groups. Based on comments received during the public scoping period, these values for the ISDRA include public use, spiritual use, ecological use, resource protection, resource conservation, wilderness, health, and recreation.

According to *Outdoor Recreation In America 1999: The Family and the Environment*, Americans are concerned about the environment, but they do not think that answer to environmental protection is forbidding the use of public lands. 78% of Americans say outdoor recreation, overall, has a "good

effect" or "no effect" on the environment. 62% believe its effects are "good". 11% say outdoor recreation has a "bad effect".

Outdoor Recreation In America 1999: The Family and the Environment also states that many Americans believe that the key to environmentally safe recreation is responsible behavior. 47% of Americans "strongly agree" with the statement: "if people would just follow the rules in parks and other outdoor recreation areas, their use of the land would have no significant effects on the environment", and 42% "mostly agree". Similarly, 90% "strongly" or "mostly agree" that "most recreation is compatible with environmental protection when done responsibly". However, 76% say they are "very concerned that people who engage in outdoor recreation hurt the environment by leaving trash and damaging the landscape".

The survey data in *Outdoor Recreation In America 1999: The Family and the Environment* indicates that most Americans believe that outdoor recreation can promote environmental responsibility. 89% "strongly" or "mostly agree" with the statement: "Outdoor recreation benefits the environment because it gives people more of a reason to care about environmental protection". 86% agree with the statement "spending time outdoors gives people the incentive to take care of the environment properly."

Social Economics: Affected Users:

The groupings used in the section are made to facilitate the discussion of social values and impacts. Any member of any of these groups may have actual attitudes and values that are significantly different than those expressed below. Some members of the public identify themselves with one or more of these groups.

OHV and Other Vehicle Recreational Users:

In California there are 3.5 million OHV recreation enthusiasts: this is 14.2% of all households according to *CA State Parks, Taking the High Road.* Arizona Game and Fish Department's Off-Highway Vehicle Safety and Habitat Protection Program states that OHV recreation use on public lands has increased significantly: "Since 1977 the increased use of OHVs has out-paced Arizona's population growth. OHV use has more than doubled, while the population has increased by slightly more than 65 percent. A study completed in 1990 estimated the number of OHV's (4X4's, Buggies/Sandrails, ATV's, Motorcycles, and Snowmobiles) in Arizona, to be over 550,000."

"Many families use outdoor recreation as a way to form bonds and transfer important family values to children. A number of Americans feel recreation strengthens the family as a unit and the children as individuals" (*Outdoor Recreation In America 1999: The Family and the Environment).* Participation in outdoor activities can greatly increase family interaction and foster cohesion. Numerous recreational users identified building family values and family interaction as important reasons that they enjoy the outdoors during the public scoping period.

Americans believe that today's young people should participate in recreation. A survey by *Outdoor Recreation In America 1999: The Family and the Environment* showed that 72% of the participants believed that outdoor recreation promotes good health, 70% that outdoor recreation creates shared experiences family and friends can bond over, 69% that outdoor recreation teaches appreciation of nature, 68% that it helps children develop important physical skills, 65% that outdoor recreation builds self esteem and personal growth and 62% that it helps children develop important interpersonal skills.

Many recreational users have concerns about the future of OHV recreational use of the public land in the California desert. The number of acres of public lands in the California desert that are open to OHV use has decreased since the First Wilderness Act 1964 designated approximately 1 million acres of CA as wilderness. In addition, in 1968-1978, there were 14 additional areas that were designated as wilderness. Furthermore, Wilderness Acts or monument designations in 1984, 1992, 1994, and 1999 increased closed or restricted areas by more than 8,581,259 acres.

As summarized in *CA State Parks, Taking the High Road: "* The California Desert Protection Act of 1994 affected OHV recreation through its wilderness designations and through the transfer of BLM land to the National Park Service. The California Desert District Office of the BLM managed 13.5 million acres, the majority of which was available for OHV recreation prior to passage of the California Desert Protection Act. Of the original 13.5 million acres, 6.4 million acres (48 percent) were closed"…to OHV use…" as a result of wilderness area designations and land transfers to the National Park Service."

The number of participants in OHV activities, as a whole, and at ISDRA and elsewhere has increased in the past few decades, while the amount of public land on which to participate has decreased. According to *CA State Parks, Taking the High Road,* "Since 1980, the acreage available to Green Sticker vehicles for recreation has shrunk 48 percent in our deserts alone, while off-highway vehicle registrations have increased 108 percent." This situation has increased the recreational user's concern that OHV use of public lands may not be available for future generations. There has been a 30% increase in the number of dirt bike registrations between 1983 and 2000, a 96% increase in the number of All-Terrain Vehicle registrations between 1983 and 2000, a 96% increase in the number of dune buggy and sand rail registrations between 1983 and 2000 and a 74% increase in the number of street licensed 4 wheel drive vehicle registrations between 1994 and 2000.

Based on comments received during the public scoping period, many OHV recreational users believe that they do not harm environmental resources by their recreational activities. Many recreational users stated that they have a respect for the land and the species that live there. Many recreational users stated a belief that concern about species conservation was a method being used by environmental groups to close the desert to recreational use. Recreational users have become more informed about the environmental concerns in the project area during the past decade. Recreational users are funding and supporting environmental surveys within the Western Colorado Desert so that they can learn more about the concerns and form their own opinions on the issues.

Environmental Advocacy Groups:

Based on the comments received during the public scoping period, the environmental advocacy groups recreationally use the project area as a hiking area. They desire a quiet, peaceful time of reflection and observation of nature during their visit to the desert. Some members of this group have indicated that the noise from OHV and other vehicle use is distracting. They believe that the solitude and peace they seek is harder and harder to find and that they need to establish areas to have this experience.

According to *Outdoor Recreation In America 1999: The Family and the Environment"* 51% of the environmental leaders and activists say to experience nature is a very important reason to participate in outdoor recreation. This percent was the same for environmental spenders (those who are willing to pay to improve the environment, but with little time to get involved themselves).

Generally, environmental advocacy groups support a more restrictive plan for the OHV and other vehicle use of the desert. Commenters during the public scoping process stated that they were concerned that the management of the project area would not provide enough acreage for the protection of threatened and/or endangered species, and other species. They also expressed concerns about air quality, pollution, habitat destruction, and disturbance to native plant species and wildlife. Many environmental advocacy group comments indicated that they were not confident that OHV and other vehicle recreational use could occur without harming the environmental resources.

The conditions and resources on public lands are important to the environmental advocacy groups. Many members of these groups appreciate just knowing that these areas exist, even if they never visit the areas. Members of these groups feel strongly that the public lands must be managed to protect the resources for future generations. Overall, the environmental advocacy groups that participated in the public comment process are concerned that OHV use is not compatible with their desired recreational experiences, resource conservation and resource protection.

Local Communities:

During the public comment period for a closely related project, the ISDRA, numerous officials from the local communities stated that they support the use of the ISDRA for OHV recreation. They stated that the recreational use of the ISDRA provides jobs for their communities at grocery stores, restaurants, gas stations, medical facilities, and vehicle sales, repair and supply shops. It is believed values for the ISDRA would be similar to those for the project area. Some officials indicated that the money that is spent in their communities then is redistributed in the community through the local residents spending their salaries. The affect of the money spend by the recreational users is expected to be significant due to the cumulative affect of the jobs that are supported by these expenditures.

Local community businesses also participated in the public comment period for the ISDRA. These businesses supported the recreational use of the dunes and indicated that jobs would be lost if the ISDRA significantly restricted OHV use. It is believed that the OHV and other recreational vehicle use of the project area would have a similar value to the business owners.

In the past, the local communities expressed a concern related to the use of local land, including privately owned land, by OHV recreational users. There is a concern that if the use of public lands is restricted, more recreational users who are turned away from the public lands may trespass into the privately owned desert land in the local communities to camp and ride without permission. This conflict is becoming more apparent as users from urban areas travel to more rural areas to recreate. As stated in *CA State Parks, Taking the High Road:* " At one time, local OHV opportunities were accessible to Southern Californians, even within such heavily urbanized counties as Orange, Los Angeles, and San Diego. As regional populations increased within these areas and the usable OHV land was decreased, outlying rural areas began to receive heavier use and "backyard" riding resulted in increased user conflicts and complaints in the urban/rural interface. Today, the situation is exacerbated by an increased and legitimate interest in protecting natural resources within rural riding areas and increasing user conflicts in once rural OHV areas that are now rapidly being absorbed into the urban edge."

Social Economic: Economics:

To evaluate the economic conditions that may be affected by the management of the project area, this section will present trends in regional employment, income, and finance. Economic data are generally

reported at the County level, so this section will describe the economic conditions at the county level for both Imperial and Yuma. In addition, selected, available OHV specific economic information will be presented.

Imperial County, California:

The civilian labor force in Imperial County in 2000 was about 58,500. The average unemployment rate in the civilian labor force was 26.3 percent, compared to 4.9 percent for the State (California EDD, 2001). Historically, Imperial County has had one of the highest unemployment rates within the state, approaching 30 percent during the 1990s. The primary employment sectors in the county are the government, agriculture, trade, and service. The table below shows the major employment sectors for 2000. The agriculture and government sectors are the dominant sectors in the county providing approximately one in two jobs. The bulk of the other jobs are in the trade (both wholesale and retail) and services sectors. Retail trade employs 8,300 people and accounts for 16.7 percent of the industry employment. Services employ 5,700 and account for 11.4 percent of the industry employment. According to comments received during the public comment period for a similar project, the retail trade and service employment of Imperial County is directly linked to sales to recreational users of the ISDRA. Loss of jobs could occur if visitation to the ISDRA is severely limited. It is expected that this project would have a similar, although lesser effect. (The reduced effect would be the reduction in users.)

The per capita income for Imperial County in 1999 was $17,550, one of the lowest in California and well below the state average of $29,856 (California DOF-4, 2001). Median family income for 1990 was estimated at $25,147. The percent of person below the poverty level in 1990 was 23.8 percent compared to 12.5 percent for the state (California DOF-5, 2001).

Summary of Imperial County Employment Data, 2000

	Employment Numbers	Percentage of Total
Agriculture	11,300	22.7
Construction and Mining	2,100	4.2
Manufacturing	1,900	3.8
Transportation and Public Utilities	1,900	3.8
Wholesale Trade	2,100	4.2
Retail Trade	8,300	16.7
Finance, Insurance and Real Estate	1,100	2.2
Services	5,700	11.4
Government:	15,500	31.1
Federal Government	1,800	3.6
State and Local Government	13,700	27.5
Total Industry Employment	49,800[a]	100.0

Source: California EDD, 2001.
[a]Difference in totals is due to the differences in labor force and employment-by-industry data.

Taxable retail sales in Imperial County was $871.2 million in 1999 (California DOF-6, 2001). This represents about 0.3 percent of total state retail sales. The sales tax rate in the county is 7.5 percent.

Yuma County, Arizona:

The average civilian labor force in Yuma County in 2000 was about 65,700. The average unemployment rate in the civilian labor force was 27.5 percent compared to 3.9 percent for the state (Arizona DES-5, 2001). The primary employment sectors in the county are the government, trade, and services. The table below shows the major employment sectors for 2000.

Summary of Yuma County Employment Data, 2000

	Employment Numbers	Percentage of Total
Agriculture	7,475	15.7
Construction and Mining	2,750	5.8
Manufacturing	2,200	4.6
Transportation and Public Utilities	1,550	3.3
Trade	11,250	23.6
Finance, Insurance and Real Estate	1,325	2.8
Services	9,625	20.2
Government:	11,425	24.0
Federal Government	2,075	4.4
State and Local Government	9,350	19.6
Total Industry Employment	47,600[a]	100.0

Source: Arizona DES-5, 2001.
[a]Difference in totals is due to the differences in labor force and employment-by-industry data.

The government, trade, and services sectors are the dominant sectors in the county providing one out of every three jobs. The government sectors (federal, state, and local) employ 11,425 people (about 24 percent), whereas the trade sectors employ 11,250 people (about 24 percent). The services sector employs 20.2 percent (or 9,625) of the labor force. According to comments received during the public comment period for a related project, the retail trade and service employment of Yuma County is directly linked to sales to recreational users of the ISDRA, a similar project. Loss of jobs could occur if visitation to the ISDRA is severely limited. It is expected that this project would have a similar, although lesser effect. (The lesser effect is due to the lower number of recreational users.)

The per capita income for Yuma County in 1999 was $18,452 ranking 10th out of the 15 counties in Arizona. The average per capita income for the state was approximately $25,173. Median family income for 1990 was estimated at $23,635 (Arizona DES-6, 2001). In 1990, the poverty rate stood at 19.9 percent, a figure that is more than the state average of 15.7 percent (Arizona DES-7, 2001).

Taxable retail sales in Yuma County was $780 million in 1999. (Smith, 2002). This represents about 2 percent of total state retail sales. The sales tax rate in the county in 1999 was 7.10 percent (Heugly, 2002).

OHV Economics :

A Survey by Sacramento State University, Institute for Social Research, 1993 assessed the economic impact OHV recreation has on the California. This survey determined that 43,000 jobs within California are affected by OHV recreation. According to the survey, OHV recreation generates about $1.6 billion in personal income. Comments received during the public comment period for a related project, the ISDRA Recreation Area Management Plan support these findings: numerous business owners, both in

California and Arizona, testified that their business is directly related to and affected by OHV use. They indicated that their business could be directly affected financially by severe restrictions on visitor use of the ISDRA. It is believed that this project would have a similar, though lesser effect. (The reduced effect is because the number of recreational users s lower for this project than for the ISDRA project.)

The table below provides a summary of the affects of OHV recreation on the state of California's economy. Over two billion dollars are directly related to OHV purchases, fuel, parts, repairs, accessories, equipment and insurance.

OHV Recreation Economics for California

Item or Service	Expenditures
OHV purchases	$1,166,000,000
Fuel, parts, repair, and insurance	$646,000,000
Accessory and equipment	$491,000,000
Groceries, restaurants, lodging	$469,000,000
Misc costs and other equipment	$244,000,000
Total	$3,049,000,000

Data from *CA State Parks, Taking the High Road*

"More than four million people visit lands designated for off-highway recreational use each year, and this ever more popular form of recreation contributes more than $3 billion to the state economy each year" according to *CA State Parks, Taking the High Road.*

Cultural Resources:

Introduction

Approximately 8,500 archaeological and cultural sites have been recorded within Imperial County. The Western Colorado Desert Route of Travel Area covers western Imperial Valley alone, which is less than half of the county. A review of approximately 2, 859 archaeological site records and about 100 technical documents revealed that the largest majority of the prehistoric archaeological and cultural sites within the Imperial Valley or Salton Trough are associated with Lake Cahuilla (See figure-1), a name given to successive freshwater lakes formed when the Colorado River flowed north into the Salton Trough.

Within the Western Colorado Desert, prehistoric cultural resources tend to be located along shorelines of Lake Cahuilla and within the Yuha Desert. A sample pedestrian survey of the east and west shoreline areas (Gallegos 1980) found that the majority of the prehistoric archaeological sites, particularly those that are eligible for inclusion to the National Register of Historic Places, are located within 0.4 to 0.5 miles of one of the last shorelines of Lake Cahuilla. The exception is the Yuha Basin Area of Critical Environmental Concern where significant cultural resources are located throughout the basin. Archaeological investigations conducted since 1980 continue to support this hypothesized pattern of prehistoric occupation.

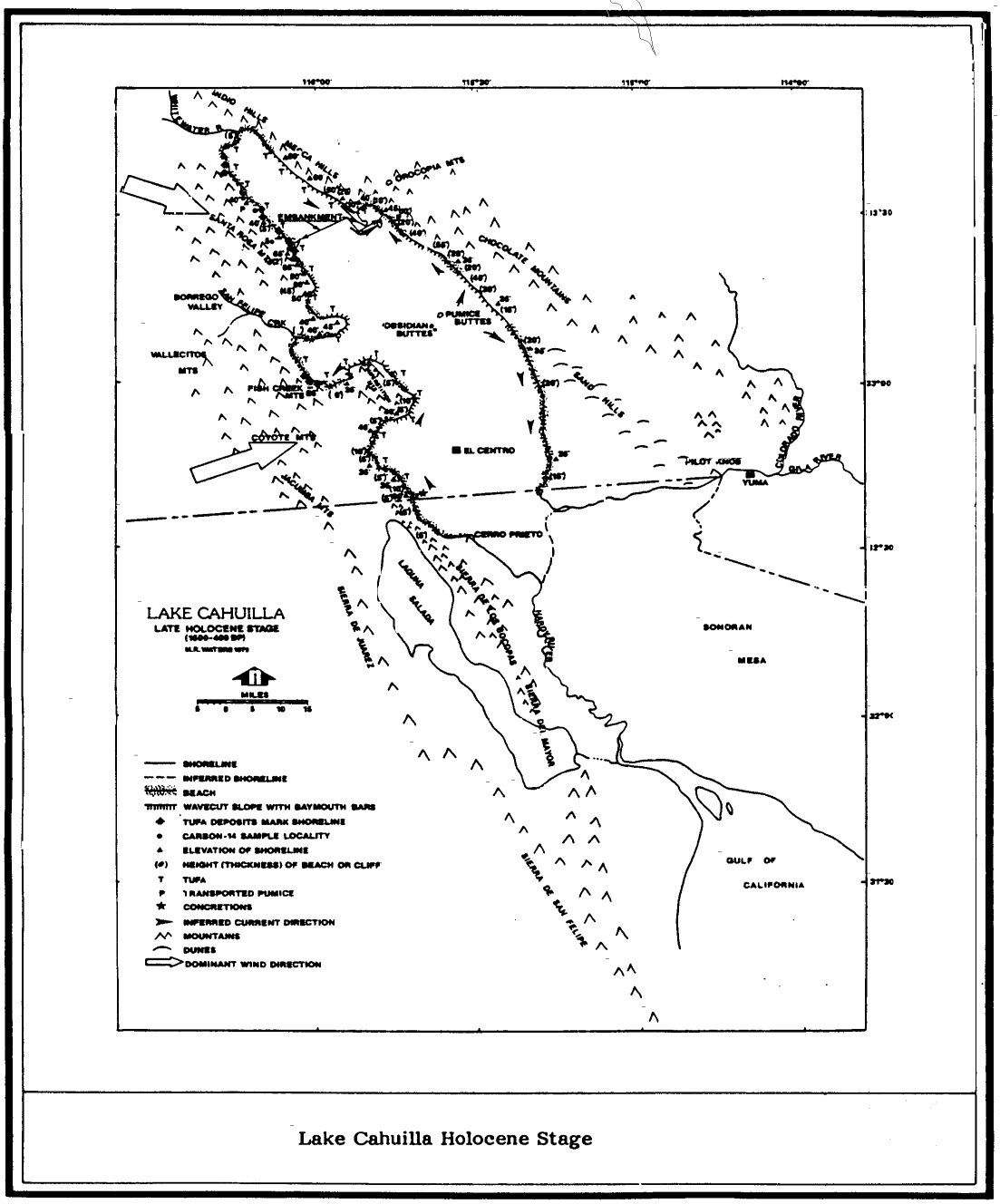
The historic sites reflect early exploration, travel, and development of water conveyance systems and agriculture, and minerals extraction. Because of the presence of the US/Mexico International Border, some of the historic sites also reflect political changes regarding immigration and military strategy.

Lake Cahuilla

Also known as Lake LeConte, or Blake=s Sea, Lake Cahuilla was named by geographer William Blake (1907) after the lake=s northern inhabitants, the Cahuilla Indians. The lake was also within the traditional areas of the Quechan, Cocopah, and Kumeyaay tribes.

Beginning in the late Pleistocene era (over 10,000 years ago), the freshwater Lake Cahuilla formed intermittently within the Salton Trough whenever the Colorado River was diverted to the northwest (Waters 1980:vii). Lake levels were dependent on the amount and duration of the river=s flow into the trough, the rate of evaporation, and the overflow altitude of the delta threshold (Waters 1980:vii).

The archaeological and cultural sites associated with the lake shoreline are predominately a series of seasonal camps consisting of hearths, or fire pits, evidence of small brush structures and pit houses, scatters of pottery shards, stone tool production material, milling tools, freshwater and saltwater shell fragments, and fish and bird bones. Some of the sites can also contain rock alignments, geoglyphs (also known as intaglios), pecked rock figures, or petroglyphs, pedestrian trail segments, and cremations. The individual camp sizes range from about 5 meters (15 feet) square to as large as 295 meters (967 feet) square and, in some cases, the camps represent the reoccupation of a portion of the shoreline over a series of seasons or years. The Southwest Lake Cahuilla Recessional Shoreline Archaeological District occupies approximately 2,700 acres, and represents a series of sites dating to around A.D. 1540 that follow the shoreline as the lake recedes and eventually becomes brackish before drying up completely.



Lake Cahuilla Holocene Stage

Gallegos et al 1980:25 **Figure-1**

Another prevalent archaeological feature along the shoreline are fish traps. Lake Cahuilla had tides just like the ocean. These fish traps are rock alignments that are generally AU@ or AV@ shaped and tended to be built perpendicular to the shoreline. The Native Americans relied on the infilling of the water during the high tide period to bring in fish that would then be trapped by the rock alignment as the water ebbed during the low tide period.

There are only a few recorded villages. Similar in content to the temporary camps, these sites are very large and are believed to have been occupied year round, rather than seasonally. They are generally located close to fresh water springs that are often near the lake shoreline.

The Yuha Desert

The predominate material for making stone tools is a meta-volcanic known as Andesite Porphryry or Alverson Andesite and it is found within sites located all around the Imperial Valley (Morton 1977:17). One of the largest sources for this material is within the Yuha Desert where it occurs in the form of large rocks or small boulders on the surface of the ground. As a result, the majority of the archaeological sites within the Yuha Desert are Alithic scatters@ or areas where stone was tested, reduced, and tools were made.

Prehistoric camp sites are located along shorelines of Lake Cahuilla at the eastern edge of the Yuha Desert and along the edge of Pinto Wash (Gallegos 1980). Similar to shoreline sites north of the Yuha Desert, these sites contain hearths, scatters of pottery shards, stone and milling tool, rock alignments, cremations and small geoglyphs (or intaglios). Also found within these temporary camps, or sometimes alone, are small areas known as cleared or sleeping circles. These are round areas created when the surface rock and gravel was brushed away to make an activity area that might have been shaded by a brush shelter of some type.

Large geoglyphs and features called Dance Circles are also found within the Yuha, generally along the edge of the Yuha Basin. These archaeological features were created by the removal of the darker soil on the surface to expose the lighter soil below and were probably tamped down to compact the soil. They tend to be made in a sort of geometric shape or pattern and are recognized by the Kumeeyaay and the Quechan tribes as having important religious significance.

Trails

The traditional peoples of the Salton Trough area traveled great distances and frequently. Thus they developed and maintained a large trail network leading to and from important sacred places like Pilot Knob, the Colorado River, the ocean, and Sea of Cortez.

History

The first Europeans to enter the valley were early Spanish Explorers such as Juan De Anza. In 1774, De Anza crossed the Yuha Desert Basin near Mt Signal and traveled north to the San Sebastian Marsh before turning west and leaving the valley through the Anza Borrego area. In 1845, the treaty of Hidalgo was signed between the US and Mexico creating the International Border. A route similar to De Anza=s was used by early emigrants heading to the gold fields of the Sierra Nevada=s beginning as early as the 1850s.

In 1875, the Southern Pacific Railroad completed a segment of the rail line from Las Angeles to Yuma, AZ. Small communities such as Flowing Well, Niland, and Amos formed around the railroad watering stations.

Companies like Butter Field developed stage routes through the area to transport travelers and mail west into San Diego or south into Baja California, Mexico. The Bradshaw Trail was created through the Chocolate Mountain range to access the gold fields along the Colorado River.

During the late 1880s-1890s cattlemen drove their cattle through the hills west of the Salton Trough to the valley floor in the cooler winter months. The cattle would fatten up on the grasses that grew along the shores of the small lakes that formed long the New and Alamo Rivers after a rain or overflows from the Colorado River (Frisby 1992:19).

The first water conveyance development began in Mexico just south of Yuma, AZ. with the building of a canal off of the Colorado River in the year 1900. The canal and water reached the Imperial Valley in 1901. In 1905, seasonal flooding broke one of the canal gates and water rushed into the Imperial Valley along the New and the Alamo Rivers for three years forming the Salton Sea.

The Plank Road was completed in 1913 and it was the first road to successfully cross the Sand Dunes. The San Diego & Arizona railroad line (SD&A) was completed in 1919, and soon a major route, Highway 8, was developed for east-west travelers. The entire highway was paved between 1922 and 1925. The first plaster mines were opened in the Fish Creek Mountains in the early 1920s and a processing plant, Plaster City, was developed along Highway 8 and the SD&A, about 20 miles south of the mine. In 1922 a narrow gauge rail line was constructed to haul the plaster from the mine to the plant. This line is still in use today.

During the 1920's oil and gas exploration took place in the valley. Small companies drilled wells in the Yuha Desert, near Niland, and along the western edge of the Imperial Sand Dunes.

The US Border Patrol was officially formed in 1924. This signaled a change in immigrant policy forcing the crossing of immigrants through portals in major cities and towns, rather than at the customs houses that were located at intervals along the border. There are remnants of a customs house in the Yuha Desert Basin.

The All-American Canal was completed in the late-1930s. The Imperial Irrigation District developed communities of workers that lived in company housing near the Adrops@ along the All-American Canal. The Coachella Canal was constructed in the mid- 1940s.

The earliest military operation in the Imperial Valley began with the Spanish who built a small fort along the Alamo River. Later operations included troops of Buffalo Soldiers amassed near the International Border during the Mexican Revolution in 1911 to insure the safety of the SD&A from bandits crossing the border. Other military operations included tank operations in the Yuha Desert Basin, weapons testing north and south of the Superstitions, and west of the Imperial Sand Dunes, the Chocolate Mountains, and at the Salton Sea Test Base, located south of Salton City.

Previous Investigation

The WECO area includes three archaeological districts listed in the National Register of Historic Places (NRHP):

- The Lake Cahuilla Recessional Shoreline

- The Yuha Basin Discontiguous District
- The In-Ko-Pah Discontiguous District

The Yuha Geoglyph is also listed on the NRHP, and the All-American Canal, Coachella Canal, East Highline Canal, and Southern Pacific Railroad line have been determined to be eligible for listing in the NRHP. Approximately 139 prehistoric and 9 historic sites have been evaluated through the Section 106 process and determined eligible or potentially eligible for listing on to the NRHP.

The WECO area contains five Areas of Critical Environmental Concern (ACEC) that were created to protect natural and cultural values:

- Lake Cahuilla
- East Mesa
- West Mesa
- Yuha Basin
- San Sebastian March

The following (table-1) lists previously recorded site types within the WECO area. Since there are about 4,250 sites listed within the WECO area, a sample of approximately 2,859 site records is summarized below.

TABLE -1

Number of Sites	Site Types
4	Villages
12	Rock Shelters
814	Prehistoric Temporary Camps
552	Lithic Scatters
215	Ceramic/Pottery Scatters, Pot Drops
105	Fish Traps
45	Geoglyphs, Rock Alignments, Rock Ring, Dance Circles Petroglyphs, Pictoglyphs
13	Cleared Circles
38	Cairns
81	Trails
803	Isolated Prehistoric Finds
3	Rail Roads
5	Canals
32	Highways, County Roads, Stage Routes, Historic Routes
133	Historic Trash Dumps
4	Historic and Prehistoric Combined
2859	Total

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Morton, Paul K.
1977 Geology and Mineral Resources of Imperial County, California. County Report 7, California Division of Mines and Geology.

Waters, Michael Richard
1980 Lake Cahuilla: Late Quaternary Lacustrine History of the Salton Trough California. A thesis on file at the Bureau of Land Management El Centro Field Office, California.

Wilderness:

Imperial County contains 108,859 acres of wilderness in the Coyote Mountains Wilderness, Fish Creek Mountains Wilderness, Jacumba Wilderness, and the North Algodones Dunes Wilderness. These areas are managed for their wilderness resources and the use of non-mechanical transportation. Motor vehicles and mountain bikes are prohibited in these areas. The wilderness area within the project area includes approximately 350 miles of closed routes.

Soils:

The beds of routes have reduced habitat value by compacting soils and removing vegetation with its associated cover. This may result in increased erosion and changes in hydrological processes along the route. All of the principle, natural, soil protective elements in the desert are highly vulnerable to disturbances such as vehicle use. A single vehicle pass on undisturbed soil can destroy many types of annuals, perennials, desert pavement, microfloral and mechanical crusts. Rates of disturbance from erosion, sedimentation, and modification of surface-runoff patterns are highly variable.

Recreation:

The California desert is a regional recreation resource, attracting not only local residents, but visitors from an area encompassing all of southern California, and to a lesser degree, other regions of the United States and Canada. The five activities in the project area and on BLM managed land in Eastern San Diego receiving the most visits in fiscal year 1996 were:

Driving for pleasure (104,500 visits)
OHV use (98,800 visits)
Rock hounding (36,200 visits)
Hiking and walking (33,800 visits)
Camping (23,000 visits)

The five activities that visitors spent the most visitor hours participating in were:

Camping (980,800 visitor hours)
OHV use (939,200 visitors hours)
Backpacking (810,000 visitor hours)
Driving for pleasure (398,900 visitor hours)
Hiking and walking for pleasure (203,200 visitor hours)

While driving for pleasure or using an OHV accounts for most of the visits, campers spend the most time. Other common activities were nature studies, photography, viewing wildlife and scenery, visiting interpretive displays, backpacking, target practice, mountain bike riding, hunting, horseback riding, and fishing.

Some uses are localized. For example, driving for pleasure is generally done in a two wheel drive vehicle and is restricted to paved or graded roads. The small number of paved and graded roads in the Yuha and West Mesa ares account for a relatively low amount of driving for pleasure in the area, but OHV use is popular. There is a limited amount of equestrian type recreation activities in the east and west mesa areas. Desert Cavalcade, an equestrian event that is periodically done by various organizations, is held to reenact/honor the De Anza Expedition. With the incorporation of the De Anza Historic Trail it is anticipated that these uses may become more popular. The use of mountain bicycles is also increasing in popularity in portions of this planning area. Fishing is popular along the canal banks in the East Mesa area. Except for driving for pleasure, most activities generally use routes of travel to obtain reasonable access to areas of interest. Even wilderness use generally involved visitors utilizing a route of travel to reach the wilderness boundary.

Visitor use occurs primarily from October to May. Visitation is very low during the summer months due to the high temperatures.

Environmental Impacts:

The proposed action and each of the alternatives have been analyzed to assess direct, indirect, and cumulative impacts to critical elements of the human environment listed below. Those critical elements that may be notably affected by the action are marked ‘yes’ in the table below. However, if the action may be mitigated so that the critical element is not notably affected the table is marked ‘no’. Those

critical elements that are not notably affected by the action are marked ‘no’. In addition, those elements that are not present are marked ‘no’ on the table below. Each of the critical elements is discussed in further detail following the table.

Critical Element	Proposed action		No Action Alternative		Alternative 1		Alternative 2		Subject Area Expert
Notable Effect?	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	
Air Quality		X		X		X		X	
ACECs		X	X			X	X		
Cultural Resources		X	X			X	X		
Farmlands, Prime / Unique		X		X		X		X	
Floodplains		X		X		X		X	
Native American Relation Concerns		X	X			X	X		
Social Economic		X		X		X		X	
T&E Wildlife		X	X			X	X		
T&E Vegetation		X		X		X		X	
Water Quality		X		X		X		X	
Wastes, Hazardous/Solid		X		X		X		X	
Wetlands/Riparian Zones		X	X			X	X		
Wild and Scenic Rivers		X		X		X		X	
Wilderness		X		X		X		X	
Visual		X	X			X	X		
Recreation		X		X	X			X	
Environmental Justice		X		X		X		X	
Energy Policy		X		X		X		X	

Description of Impacts:

Air Quality**:**

Vehicle Types
Motorized vehicles are the primary source of emissions associated with this project. Recreational route of travel uses directly emit air pollutants from the vehicle as well as from the particulate matter produced by driving on the dirt road surface. Vehicular trips to and from the project area also emit pollutants. An increase in the number of new daily vehicle trips will typically mean an increase in recreational motorized off highway vehicular activities at the project area. It is assumed that an increase in the number of open routes will result in an increased use of the project area. It is also assumed that an increase in the number of miles of open routes will result in an increase in the use of the project area. Lastly, it is assumed that more restrictions on the type of vehicles allowed in the project area will result in a decrease in use.

In route emissions result from automobile, trucks, and recreational vehicles that travel to and from the project area, and are proportional to the distance of vehicle travel to the project location. On-site emissions result from the operation of mobilized off-hjghway vehicles and street legal vehicles at the project location. On-site emissions are proportional to the length of activity. All off highway vehicle activities can be expected to vary hour-by-hour in their activity. Operational profiles are not available for these activities over the course of an entire day or hour-by-hour. In addition, the number of recreational users in the project area has not been surveyed.

Motorized Vehicle Generated Dust
The principal pollutant of concern emitted by motorized OHV is PM_{10} because of the relatively large quantity of PM_{10} dust emissions disturbed by OHVs operating over unpaved surface, and the relatively low ambient air quality standard for PM_{10}. Soil disturbance activities, such as motorized vehicle travel on the dirt roads, can represent substantial sources of fugitive dust depending on the level of activity, the specific vehicle activities being conducted, the type of soil underlying the road, and prevailing meteorological conditions. It should be noted that most of the PM_{10} emissions are from wind erosions, which are a major source of PM_{10} emissions throughout the project area. In addition, the newly adopted $PM_{2.5}$ standard is not yet applicable.

PM_{10} dust emissions can adversely affect sensitive receptors (i.e., people who are more susceptible to the adverse impact of air pollutants). These include the elderly, young children, and those individuals suffering from respiratory disorders. Although most dust emissions are readily filtered by human breathing passages, tiny particles can easily bypass this natural filtering system and lodge deep in the lungs. Many scientific studies have linked breathing PM to a series of significant health problems, including: aggravated asthma, increased respiratory symptoms like coughing and difficult or painful breathing, chronic bronchitis, decreased lung function, premature death. Large-diameter dust, which settles out on nearby foliage and other surfaces, is more a soiling nuisance than a potential health impact. Areas near the OHV sites would be the most susceptible to this nuisance from OHV activities.

Fugitive dust emissions would also be generated from on-highway vehicle travel over paved road that lead to the project area.

Evaluation Criteria

Although the Imperial County Air Pollution Control District (ICAPCD) has not developed specific guidelines for evaluating air quality impacts for proposed actions undergoing environmental review, the ICAPCD has established peak daily air pollutant emission limits that, when exceeded, indicate that a source could have an impact on ambient air quality. These emission threshold levels are shown in the table below.

EPA sets *de minimis* conformity thresholds, and they refer to the maximum allowable increase in direct and indirect emissions between each projected year and the baseline year for each criteria pollutant in nonattainment and maintenance areas (40 CFR, Section 51.853 [b]). Emissions below these levels are presumed to conform to the SIP within the meaning of the General Conformity Rule. If the total direct and indirect emissions from a federal action would not exceed the thresholds for criteria pollutants in any year, the federal action is deemed *de minimis* and exempted from conformity requirements. If the total emissions are equal or greater than the *de minimis* levels for the pollutant in any year, a formal conformity determination is required for that pollutant. EPA *de minimis* levels are provided in the table below.

Pollutant Emission Criteria

Criteria Pollutant	ICAPCD Criteria (pounds per day)	Clean Air Act *De Minimis* Levels (tons/year)
CO	550	100
NO_x	137	100
ROG	137	50
SO_x	137	100
PM_{10}	137	100

Source: ICAPCD, 1993; EPA, 1993.

Note: California defines ROG as VOC (volatile organic compounds)

Relative to air quality, a notable major emission concern is the PM_{10} fugitive dust emissions, both natural and mechanical. Wind-blown dust emission generates approximately 173.35 tons per day (or 346,000 pounds per day) in Imperial County during the year 2000. (This does not include windblown dust from disturbed vacant land so the actual amount of wind blown dust is greater.) Entrained dust emission from vehicles on paved and unpaved surfaces generates approximately 3.67 and 38.92 tons per day, respectively, in Imperial County during the year 2000. Any additional construction and off-road recreational activities occurring in the present and near future would increase the PM_{10} emission beyond these already significant levels.

Proposed Action

Compared to existing conditions, the air quality should improve under this alternative. Total emissions would be reduced from all sources. There will be fewer roads designated as open than the current situation. There would be less miles of routes than the existing conditions. (Currently recreational users drive on roads that are not designated as open since many roads do not have any designation.) The vehicle use limitation to street legal vehicles in the Yuha should result in a decrease in the use of this area. In addition the designation of roads and the enforcement of the designation and land use should result in less off route travel. The off route travel creates new roads which increases the particulate

matter emissions due to vehicular use and wind. This alternative also includes the mitigation requirement to restore closed roads to a natural desert landscape. This will result in fewer emissions due to the inability to easily use closed roads and the reduction in emissions due to wind.

No Action Alternative

This is the no action alternative, so the air quality would be the same as existing conditions.

Alternative 1

Compared to existing conditions, the air quality should improve under this alternative. Compared to the proposed action, the air quality should also be improved. Total emissions would be reduced from all sources. There will be fewer roads open for use than the current situation and for the proposed action. (Currently recreational users drive on roads that are not designated as open since many roads do not have any designation.) The Yuha area would have very few routes that are designated as open, which should result in a significant decrease in the use of this area. In addition the designation of roads and the enforcement of the designation and land use should result in less off route travel. The off route travel creates new roads which increases the particulate matter emissions due to vehicular use and wind. Overall, there are significantly fewer miles of routes and fewer routes that are designated open under this alternative compared to the existing condition and to the other alternatives, so this alternative should have the most improvement in air quality.

Alternative 2

Compared to existing conditions, the air quality would be about the same under this alternative. Total emissions would be about the same from all sources. There will be a similar number of routes that are designated as open and a similar number of miles of routes compared to the current situation. Overall, this alternative should produce a decreased air quality compared to the proposed action and alternative 1.

Conformity Statement

The 1990 amendments to the federal CAA require federal agencies to ensure that their actions conform to the applicable SIP. The SIP is a plan that provides for implementation, maintenance, and enforcement of the NAAQS, and it includes emission limitations and control measures. Conformity to a SIP, as defined in the CAA, means conforming to the purposes of the SIP to reduce the severity and number of violations to the NAAQS and achieve timely attainment of such standards.

Pursuant to Section 176(c) of the Clean Air Act, as amended by the 1990 amendments, and the General Conformity Rule at 40 CFR Parts 51 and 93, the air quality analysis establishes that the emissions associated with the proposed action are below the *de minimis* levels and are not regionally significant because they do not exceed 10 percent of the total emission inventory for any criteria pollutants in the SSAB. If the difference between emissions of criteria pollutants associated with the proposed action and those of the no action alternative would be below specified the *de minimis* levels and the proposed alternative emissions would not be regionally significant (i.e., greater than 10 percent of the emissions budget of the Air Basin), then no further evaluation is needed for the pollutant in any year. If the net emissions would be equal to or greater than the *de minimis* levels for the pollutant in any year, a formal Conformity Determination is required for that pollutant.

Implementation of the proposed action and alternative 1 would not adversely affect the attainment of the SIP. Consequently, the proposed action and alternative 1 is exempt from the conformity determination requirement of the General Conformity Rule.

Mitigation Measures

Currently Rule 800 Fugitive Dust Control Requirements for Control of Fine Particulate Matter (PM-10) as approved by the Imperial County Air Pollution Control District (ICAPCD) includes exempt activities under section E. Exemption E.9 states "The recreational use of public lands, including but not limited to Off-Road Vehicles, all-terrain vehicles, trucks, cars, motorcycles, motorbikes or motorbuggies." This exempts the project area from Rule 800. However, ICAPCD has informed BLM of its intent to update their PM10 SIP. It is anticipated that the updated SIP will require BLM to develop and implement a dust control plan for the land that it manages in Imperial County. BLM will work with ICAPCD to develop a Dust Control Plan.

Initially dust control activities will be conducted to reduce the amount of dust in the project area without monitoring activities. The ICACPD is in the process of revision the SIP. Once EPA approves this plan, then BLM, in conjunction with EPA and ICACPD through implementation of the SIP, will determine the need for monitoring. However, it is not anticipated that air monitors may be located in the project area. At the request of a regulatory agency, monitors will be installed at locations identified by the regulatory agencies to provide additional information to direct these mitigation measures.

Area Critical Environmental Concern (ACEC):

Proposed action:

Under this alternative, conditions for wildlife and cultural resources in the ACECs (see table below for the list of ACEC's) would improve modestly over conditions under the No Action Alternative. Due to restrictions on camping and vehicle routes, the potential for mortality, injury and disturbance to wildlife would be less, as would habitat degradation associated with these activities.

No Action Alternative:

Under this alternative, conditions are likely to continue as before, or perhaps deteriorate, especially in the 3 western ACECs, as recreational OHV use increases. Conditions in the Southern East Mesa ACEC are likely to continue to improve, as this area has dropped in popularity with vehicles for a number of reasons (Wright, 2002).

Alternative 1:

Conditions for wildlife and cultural resources under this alternative are likely to improve dramatically in the Yuha Basin ACEC and to lesser extent in the San Felipe ACEC. This improvement would be a result of the high level of camping and vehicular restrictions it imposes, i.e. camping only at the Dunaway Staging Area in the Yuha Basin ACEC, only at designated sites in other ACECs and not along Kane Springs Road in the San Felipe ACEC. Only county roads and two touring routes would remain open in the Yuha Basin ACEC greatly reducing adverse impacts to wildlife and other resources in this area.

Alternative 2:

This alternative would have the largest adverse impact on ACECs because it allows the largest mileage of open routes in ACECs and has liberal rules on camping in the Yuha Basin ACEC (anywhere within 50' of the route centerline). Adverse impacts to wildlife and cultural resources in ACECs would be maximized under this alternative.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)			
ACEC Number	ACEC	Primary Reason(s) for Establishment	Acreage
61	San Sebastian Marsh/San Felipe Creek	Cultural Resources, Riparian habitat, and Wildlife habitat (Desert Pupfish)	6,565
64	Yuha Basin	Cultural Resources and Wildlife habitat (Flat-tailed Horned Lizard)	40,069
65	Lake Cahuilla # 2	Cultural Resources	1,214
66	Lake Cahuilla # 3	Cultural Resources	2,528
69	Lake Cahuilla # 5	Cultural Resources	5,592
70	East Mesa Flat-tailed Horned Lizard Habitat	Wildlife habitat (Flat-tailed Horned Lizard) and Cultural Resources	42,768
71	Lake Cahuilla # 6	Cultural Resources	4,724
82	West Mesa	Cultural Resources and Botanical & Wildlife Resources (Flat-tailed Horned Lizard habitat)	20,295
Source: Table 15, p. 104, *California Desert Conservation Areas Plan 1980 As Amended* (08/17/1999)			

Cultural Resources:

Notable adverse effects can occur and have occurred to cultural resources through the construction or creation of and use of routes. Motorized vehicles can physically damage or even destroy artifacts and cultural resource features such as geoglyphs, trails, and campsites when driven over such resources. Similarly, camping and camping associated recreational vehicles can physically damage and destroy cultural resources. Four alternatives have been analyzed for potential adverse effects to historic properties (cultural resources).

Proposed action

Under the Proposed action, the protection of cultural resources within the Yuha Basin ACEC will increase significantly. The Yuha contains cultural resource sites that are considered sacred by Native American tribes, a large archaeological district, numerous prehistoric trails, and Lake Cahuilla shoreline sites. Because of the large number of routes within the Yuha Basin ACEC, the majority of the archaeological sites are located near or adjacent to current routes. This alternative would reduce the number of routes within the Yuha Basin ACEC, which would result in a decrease in the number of significant archaeological sites near or adjacent to open routes, which could be adversely affected by vehicles.

Restricting access to only street legal vehicles and limiting camping to designated areas within the Yuha Basin ACEC would also have a positive effect on the protection of archaeological sites. In the past,

camping has been allowed within 25' feet of the centerline of a route. Limiting camping and the types of vehicles that can access the Yuha Basin ACEC would decrease the impacts and threats to existing archaeological resources by strictly controlling and focusing the recreational use of this area.

The San Sebastian Marsh is a sensitive natural habitat and contains significant cultural and archaeological resources. Access to the San Sebastian Marsh area is via the Kane Springs Road, a historic stage route that was maintained by the County of Imperial before the construction of Hwy 78. Designating Kane Springs Road as open with no camping would help to protect the natural, archaeological, and cultural resources within the San Sebastian Marsh area.

Limiting camping to 50' from centerline within the lizard management area would modestly benefit cultural resources. Although this alternative would designate few routes open within the East Mesa area, which is located east of the agricultural area and the Imperial Sand Dunes, there are relatively few cultural resources in this area. The majority of the archaeological and cultural sites that are eligible for National Register of Historic Places are located along the shoreline of Lake Cahuilla and within four Areas of Critical Environmental Concern (ACEC). The existing shoreline outside of the ACECs, has been extensively mined for mineral materials or is within the Ormesa Geothermal plant. Only two north-south routes would be designated on the East Mesa. Of the two, only one is along the shoreline. Some camping does occur in this area of the shoreline road, but generally by seasonal visitors that park their motor homes in flat gravel pits or along the Coachella Canal. Continued camping would not result in adversely affecting significant cultural resources.

The Gallegos (1980) study showed that there was a limited number of archaeological sites located 0.4 miles east of the shoreline, and few of these were determined to be significant. Thus the east-west routes within the East Mesa lizard management area are not likely to pass near significant archaeological resources except where these routes cross the Lake Cahuilla shoreline. Camping along these routes would have no impact except within the shoreline area. However, since this is not a popular recreation or camping area the threat to archaeological resources from camping along the east-west routes would be minimal.

Camping along open routes within the lizard management area and north of the Yuha Basin ACEC are more likely to have an effect on resources eligible for the National Register of Historic Places (NRHP). Three north-south routes would be designated within this area, one of which is an access route for the Imperial Irrigation District power line, named the R-Line that is located just south of the Superstition Mountain and crosses Lake Cahuilla shoreline areas in two locations. A recent archaeological survey (Underwood 1998) of the route found one site within the lizard management area, IMP-170, is eligible for the NRHP. This site includes a fenced area that was erected in the late 1980s to protect cremations. It is located within the West Mesa ACEC area and within a federal register designated no camping zone. Because Imp-170 is located north of the Plaster City Open Area it is still vulnerable to un-permitted off route driving, but not to impacts due to camping.

The second north-south route parallels the Plaster City Rail Road and is located between 6 and 15 miles west of the shoreline of Lake Cahuilla except north of the Fish Creek Mountains where the route crosses the section of shoreline that extends west toward Anza Borrego State Park, then circles east before it curves around the Superstition Hill. No systematic survey of this route has been conducted, but because the majority of the route is located away from the shoreline area, it is not likely that camping would have an effect on eligible archaeological sites. The Plaster City Rail Line, itself a potentially eligible property, is still in use but the public is not likely to camp along the tracks.

The San Felipe Corridor was surveyed in 1989. The survey width was 450', therefore wide enough to consider a 50' camping zone. Eligible properties were found during the survey, but the route was changed to avoid impacts to archaeological sites. Use of this route and camping within 50' of centerline would not be expected to adversely affect cultural resources.

The heaviest used east-west route in the lizard management area is located within Carrizo Wash, but two other east-west routes located north of Carrizo Wash cross the shoreline north of the Superstition Mountains and lead to the Superstition Mountain Recreation Area. These routes are generally used for crossing from the Fish Creek Mountain area to access the recreation area, and a few people occasionally camp along these routes. Although there is a potential to impact eligible sites, the probability is low.

The routes in the Superstition Hills are all within steep channels. Camping along these routes, therefore, is not likely and adverse effects to sites from camping are unlikely.

The BLM lands east of the Ocotillo Wells State Vehicle Recreation Area (OWSVRA) are managed by California State Parks through a Memorandum of Understanding between these agencies. The routes on BLM land are limited use and tend to be located at the bottom of steep channels. The state parks is in the process of identifying potential impacts to eligible archaeological properties within the OWSVRA and is developing plans to protect eligible sites from impacts from OHV use and camping within a 300' zone along these routes

The routes east of the town of Ocotillo are located in an area that has abundant agave and other plants harvested by the Native Americans. Ash stains from agave roasting pits have been noted in a route just east of the Anza Borrego State Park, and are likely to occur along other routes in this area. Some camping does occur during the winter, but usually near the trail heads for the Wind Caves and Fossil Canyon located within the Coyote Mountains. Camping along routes in this area could potentially impact archaeological resources along routes, but the probability is low.

The Elliot Mine area has been a very popular recreation and camping spot for many years. The area is heavily impacted from these activities and not likely to still contain eligible cultural resources. For example, Smugglers Cave is a cultural resource site, but recreational camping in recent years has resulted in destruction and/or removal of cultural resources adjacent to and within the rock shelter. A 300' camping zone along routes in this area would not result in further loss of integrity to Smugglers Cave or other sites.

There are very few routes on the east side of the valley, north of Mammoth Wash, and most of these provide access to mineral material sites or private land. Generally, people who recreate in this area, camp along the shore of the Salton Sea in the State Recreation Area located near Bombay Beach, or camp at the "slabs," also known as Camp Dunlap, located east of Niland.

No Action Alternative

Under the No Action Alternative, all eligible archaeological sites that are currently threatened or potentially threatened will continue to be in jeopardy. Camping will continue along approved routes in the Yuha Basin ACEC at the current allowable distance from routes within the lizard management areas.

Alternative 1

Alternative 1 would pose the least potential impacts to cultural resources by use of routes of travel and camping adjacent to routes. There are recorded sites along the county road and the touring routes that are eligible for inclusion on the National Register of Historical Place. Fences already protect three eligible archaeological sites located along these routes, and signing routes, increasing the Law Enforcement presence, and public education, would protect the remaining sites.

Archaeological and cultural sites outside of the Yuha Basin ACEC would also be better protected because camping would only be allowed within designated camping areas. Also, there would be a potential to close more routes if their use affects cultural resources. For example, routes that are deemed to "no longer physically present" would be designated closed.

Alternative 2

Under Alternative 2, there would be more potential for impacts to archaeological and cultural resources within the Yuha Basin ACEC, than under the no action alternative. The width of camping off open routes would increase from 25' to 50' from the centerline, thus camping would be more likely to impact sites located near open routes.

The Law Enforcement presence would be increased and the routes would be signed in an effort to control the off-route driving. However, camping can be as destructive as off route driving, therefore the increase in Law Enforcement, for example would not offset the potential impacts to cultural resources because of the increased camping requirement.

Impacts from camping within the area outside of the Yuha Basin ACEC would not be much different from the impacts noted in the preferred alternative.

Limiting camping to 50' from centerline within the lizard management area could modestly benefit cultural resources. Although this alternative would designate few routes open within the East Mesa area, which is located east of the agricultural area and west of the Imperial Sand Dunes, there are relatively few cultural resources in this area. The majority of the archaeological and cultural sites that are eligible for the National Register of Historic Places are located along the shoreline of Lake Cahuilla and within four Areas of Critical Environmental Concern (ACEC). The existing shoreline outside of the ACECs has been extensively mined for mineral materials or is within the Ormesa Geothermal plant. Only two north-south routes would be designated on the East Mesa. Of the two, only one is along the shoreline. Some camping does occur in this area of the shoreline

The heaviest used east-west route in the lizard management area is located within Carrizo Wash, but two other east-west routes located north of Carrizo Wash cross the shoreline north of the Superstition Mountains and lead to the Superstition Mountain Recreation Area. These routes are generally used for crossing from the Fish Creek Mountain area to access the recreation area, and a few people occasionally camp along these routes. Although there is a potential to impact eligible sites, the probability is low.

The routes in the Superstition Hills are all within steep channels. Camping along these routes is not likely, and adverse effects to cultural resources from camping are not likely.

The BLM lands east of the Ocotillo Wells State Vehicle Recreation Area (OWSVRA) are managed by California State Parks through a Memorandum of Understanding between these agencies. The routes on BLM land are limited use and tend to be located at the bottom of steep drainages. The state parks is in the process of identifying potential impacts to eligible archaeological properties within the OWSVRA and is developing plans to protect eligible sites from impacts from OHV use and camping within a 300' zone along these routes

The routes east of the town of Ocotillo are located in an area with an abundance of agave and other plants harvested by the Native Americans. Ash stains from agave roasting pits have been noted in a route just east of the Anza Borrego State Park, and are likely to occur along other routes in this area. Some camping does occur during the winter, but usually near the trailheads for the Wind Caves and Fossil Canyon located within the Coyote Mountains. Camping along routes in this area could potentially impact archaeological resources along routes, but the probability is low.

The Elliot Mine area has been a very popular recreation and camping spot for many years. The area is heavily impacted from these activities and not likely to still contain eligible cultural resources. For example, Smugglers Cave is a cultural resource, but recreational camping in recent years has resulted in destruction and/or removal of cultural resources adjacent to and within the rock shelter. A 300' camping zone along routes in this area will not result in further loss of site integrity.

There are very few routes on the east side of the valley, north of Mammoth Wash, and most of these provide access to mineral materials sites or private land. Generally, people who recreate in this area camp along the shore of the Salton Sea in the State Recreation Area located near Bombay Beach, or camp at the "slabs," also known as Camp Dunlap, located east of Niland.

Farmland, Prime / Unique:

Proposed action: This alternative does not involve prime or unique farmlands.

No Action Alternative: This alternative does not involve prime or unique farmlands.

Alternative 1: This alternative does not involve prime or unique farmlands.

Alternative 2: This alternative does not involve prime or unique farmlands.

Floodplains:

Proposed action: This alternative does not impact floodplains.

No Action Alternative: This alternative does not impact floodplains.

Alternative 1: This alternative does not impact floodplains.

Alternative 2: This alternative does not impact floodplains.

Native American Relations:

Proposed action:

Many Native American tribes have expressed concerns that cultural resources in this area are fragile and can be destroyed by off highway vehicle use. The Native American tribes have expressed a desire to preserve the cultural resources in the project area. Native Americans generally support efforts to encourage users to stay on designated roads. This alternative would not negatively impact Native American relationships as it protects the bighorn sheep and limits the use of the Yuha Basin ACEC that is of cultural significance to the tribes.

No Action Alternative:

Many Native American tribes have expressed concerns that cultural resources in this area are fragile and can be destroyed by off highway vehicle use. The Native American tribes have expressed a desire to preserve the cultural resources in the project area. Native Americans generally support efforts to encourage users to stay on designated roads since this protects the cultural resources. Native American tribes would be concerned about the potential for off road travel and new roads that could develop. In addition, Native Americans have been supportive of protecting the bighorn sheep and their habitat. This alternative would have a notable negative effect on Native American relations as it does not protect the bighorn sheep and could impact cultural resources in the Yuha Basin ACEC.

Alternative 1:

This alternative would not impact Native American relationships as it protects the bighorn sheep and restricts access to the Yuha Basin ACEC, which is culturally significant to the Native American tribes.

Alternative 2:

Many Native American tribes have expressed concerns that cultural resources in this area are fragile and can be destroyed by off highway vehicle use. The Native American tribes have expressed a desire to preserve the cultural resources in the project area. Native Americans generally support efforts to encourage users to stay on designated roads since this protects the cultural resources. Native American tribes would be concerned about the potential for off road travel and new roads that could develop. In addition, Native Americans have been supportive of protecting the bighorn sheep and their habitat. This alternative would have a notable negative effect on Native American relations as it does not protect the big horned sheep and could impact cultural resources in the Yuha Basin ACEC.

Social Economic:

The social impacts are described in terms of effects to social well being for all alternatives. The types of things that could affect social well being includes the types and the quantities of the recreational experience that is available. It also includes the perception of conflict concerning resource use and an individual's sense of control over decisions relating to their experience. Other beliefs that could affect a person's social well being includes an individual's sense of control over their future and their sense of job security.

No alternative would likely affect the demographics included in the affected environment. The affects on major social trends included in the affected environment would be expected to be the same for all alternatives. However, the projected growth rate of the recreational use may be somewhat lower than in the past for all alternatives, particularly the proposed action and Alternative 1, due to the perception that there may be less recreational opportunities in the future. This perception could result in a delay or hesitation to make major purchases for OHV use.

It is expected that no alternative will actually change the economics of the local or extended 9 county communities. It is anticipated that the more restrictive alternatives will result in a movement of the recreational users to the nearby open areas, rather than resulting in a curtailment of the OHV related activities.

Proposed action:

Environmental advocacy groups would likely support this alternative, as they believe that the current management does not provide sufficient protection to natural resources. This alternative would limit the recreational use of the public land and increase the conservation of natural resources. The condition of the resources on public land is important to these groups as they place value in wildlife, plant species, wilderness, cultural resources, and solitude. Members of environmental advocacy groups would have an increased sense of well being.

This alternative is fairly responsive to the OHV and other vehicle recreational users, OHV related business owners and the economics of the local communities. The local community would have a sense of well being due to a perception of job security.

This alternative would reduce conflict between the OHV recreational users and the environmental advocacy groups.

No Action Alternative:

Affects to all groups would continue as they have in the past. This alternative is most responsive to the OHV and other vehicle recreational users, OHV related business owners and the economics of the local communities. This alternative is most responsive to the desires of groups and individuals who would like the current route network to remain unchanged. The local community would have a sense of well being due to a perception of job security.

Environmental advocacy groups do not support this alternative, as they believe that the current management does not provide sufficient protection to natural and cultural resources. The condition of these resources on public land is important to these groups as they place value in wildlife, plant species, wilderness, cultural resources, and solitude.

This alternative would allow the continued conflict between the OHV recreational users and the environmental advocacy groups.

Alternative 1:

Environmental advocacy groups would support this alternative, as they believe that the current management does not provide sufficient protection to natural resources. This alternative would limit the

recreational use of the public land and increase the conservation of natural and cultural resources. The condition of these resources on public land is important to these groups as they place value in wildlife, plant species, wilderness, cultural resources, and solitude. Members of environmental advocacy groups would have an increased sense of well being.

This alternative is least responsive to the OHV and other vehicle recreational users, OHV related business owners and the economics of the local communities. The local community would have a reduced sense of well being due to a perception of job insecurity.

This alternative could greatly increase the continued conflict between the OHV recreational users and the environmental advocacy groups.

Alternative 2:
This alternative is most responsive to the OHV and other vehicle recreational users, OHV related business owners and the economics of the local communities. This alternative is most responsive to the desires of groups and individuals who would like to see a large route network. The local community would have a sense of well being due to a perception of job security.

Environmental advocacy groups do not support this alternative, as they believe that this alternative does not provide sufficient protection to natural and cultural resources. The condition of these resources on public land is important to these groups as they place value in wildlife, plant species, wilderness, cultural resources, and solitude.

This alternative could greatly increase the continued conflict between the OHV recreational users and the environmental advocacy groups.

Wildlife:

Proposed action:

Under this alternative, decreased mortality, disturbance, habitat degradation and injuries to most wildlife species would be expected. This decrease would result from the reduced acreage impacted by routes and camping. Specifically, the number of acres directly impacted by vehicle routes would drop to 2,216 from 2,302, a decrease of about 4% and the number of acres that could potentially be impacted by camping would drop from 80,745 to 32,469, a decrease of 60%. Particularly benefited would be ground dwelling animals such as snakes, rodents, insects and lizards that are less able to avoid vehicles. However, larger animals such as deer, coyotes or bobcats could also be positively affected by increases in vegetative cover and decreases in disturbance.

T&E Wildlife:

Proposed action.

Impacts to the flat-tailed horned lizard would probably decline in the Yuha Desert under this alternative because of camping restrictions, route closures and the limitation on OHV's. Fewer mortalities and less habitat degradation would be expected because of fewer routes and more restricted camping. The limitation on OHVs would also eliminate a major portion of the off-road activity in the Yuha. However, increased impacts to the lizard could occur in the Superstition Mountains and Plaster City

Open Areas as OHV riders displaced from the Yuha move north. Some of these riders could also go off-road in the West Management Area, where OHV's would still be permitted. This could potentially off-setting beneficial impacts to the lizard in the Yuha Desert. Beneficial impacts to the lizard in East Mesa would be minor since this area is not popular with motorists at this time, nor is it likely to become so in the near future. Most of the OHV impacts in this area are associated with smugglers and Border Patrol neither of whom is covered by this proposal.

Disturbance impacts to lambing bighorn sheep would be reduced from January to July due to the closure of routes during this period. Most sheep benefits would be expected to occur from February to April, during the peak of lambing.

Minor beneficial impacts to the Yuma clapper rail, black rail, southwestern willow flycatcher, arroyo toad, mountain plover and least Bell's vireo could occur from reduced disturbance near San Felipe Creek, Pinto Wash and the All-American Canal. Impacts to the desert pupfish would be reduced relative to the No Action Alternative because camping would no longer be allowed along Kane Springs Road. Such camps can often be a jumping off point for OHV touring in San Felipe Creek. Such touring may result in mortality of pupfish or assist the spread of salt-cedar in the creek bottom. Salt-cedar eliminates the water needed by the fish.

Overall, this alternative would reduce threatened and endangered species impacts relative to Alternative 2 and the No Action Alternative. However, beneficial impacts would not be as great as under Alternative 1.

Critical Habitat and Management Area Impacts:

About 3,800 acres of sheep critical habitat and 3,500 acres of flat-tail management area habitat could be directly impacted by route displacement or camping under this alternative. An unknown acreage could also be impacted by noise, dust, disturbance and exotic plant vectoring associated with camping and vehicle routes. Pupfish critical habitat, although not open to camping or routes, could be indirectly impacted by salt cedar vectoring associated with the vehicle use of Kane Springs Road. No acres of critical habitat for the other listed species would be impacted directly or indirectly.

No Action Alternative:

Wildlife: Continued mortality, disturbance, habitat degradation and injuries to wildlife at the current or higher levels would be expected under this alternative. This is because the current road network and camping rules would remain in effect. Adverse impacts from routes would be less than under Alternative Two (2,302 acres vs. 2,430) but more than under Alternative One (1,685 acres) or the Preferred Alternative (2,216 acres). As with the Preferred Alternative, relatively slow-moving ground dwelling animals such as snakes, rodents, insects and lizards would be particularly impacted. However, decreases in vegetative cover, increases in disturbance and decreases in their prey base could also harm larger animals. Given the rising human population in the Southern California area, adverse impacts to wildlife would probably increase under this alternative. An exception to this trend could be in southern East Mesa, which has experienced a drop in vehicular impacts since the early 1990's (Wright 2002).

T&E Wildlife: Adverse impacts to the flat-tailed horned lizard from off-road vehicle travel and camping would greater than under the Preferred Alternative or Alternative 1 but less than under Alternative 2. The large existing road network and 300' camping restriction would continue to result in flat-tail

mortalities and habitat degradation, especially in the eastern Yuha Desert and central West Mesa. Increased mortalities would be expected, particularly in the densely populated eastern side of the Yuha Desert and West Mesa. These areas contain the heart of flat-tail populations in the Imperial Valley. While current data (Wright 2002) don't show a significant change in the lizard encounter rate in these areas since 1979, escalating vehicular impacts in these areas could eventually reduce these populations.

Disturbance impacts to lambing bighorn sheep could increase from January to July, if interest in vehicle travel in this area increases. Most disturbances would be expected to occur from February to April during the peak of lambing. Harmful disturbance impacts to the desert pupfish, Yuma clapper rail, black rail, southwestern willow flycatcher and least Bell's vireo could occur from increased vehicle travel near San Felipe Creek and the All-American Canals. Camping along Kane Springs road, south of San Felipe Creek could adversely impact the pupfish if such camps are used as jumping off points for OHV excursions into the Creek bed.

Alternative 1:

Wildlife: Greatly decreased mortality, disturbance, habitat degradation and injuries to wildlife would be expected with the reduction in vehicle routes and camping this alternative would require. The number of acres impacted by vehicles in sheep critical habitat and 3 lizard management areas would be substantially less under this alternative than under the other three alternatives (only 160 acres of sheep habitat vs. about 200 acres for the other alternatives; only 727 acres of flat-tail habitat in management areas vs. 939 to 1,219 for the other alternatives). Reductions in camping impacts would be similarly high with only 40 acres of sheep critical habitat impacted under this alternative and only 20 acres of flat-tail habitat in management areas impacted. These values are much higher for the other alternatives. Under those alternatives, between 2,542 and 29,233 acres of flat-tail habitat in management areas or sheep critical habitat would be open to camping and could potentially be impacted. For these reasons, biological impacts would be greatly reduced under this alternative. However, an increase in impacts to biological resources in the Superstition Mountains and Plaster City Open Areas could be expected as OHV riders move to these remaining areas to avoid this alternative's restrictions. Such a potential increase could further impede the movement of wildlife from the Yuha Basin into West Mesa, a movement already greatly inhibited by the presence of Interstate 8.

Benefits to wildlife would be particularly large in the Yuha Desert where virtually all routes would be closed and camping prohibited. Particularly benefited would be ground dwelling animals such as snakes, rodents, insects and lizards that are susceptible to being run over and crushed. However, larger or more mobile animals such as deer, sheep or birds could be helped by increases in vegetative cover and reductions in disturbance. An increase in prey abundance could also help these animals, for example more lizards for shrikes to eat. Adverse impacts to soil microbes would also be reduced as surface impacts declined. This decline could enhance long-term soil productivity providing greater support for the food web.

T&E Wildlife: Under this alternative adverse, impacts to the flat-tailed horned lizard from vehicle travel and camping would decrease substantially, especially in the Yuha Management Area, where virtually all vehicle travel would be barred. Benefits would be especially high in the dense flat-tail area on the eastern side of the Yuha Management Area. Decreased mortalities would be expected in this area, where densities approach 2 lizards per acre at some locations, e.g. Pinto Wash. More limited benefits to the flat-tail horned lizard would occur in the western Yuha, where densities are much lower (about 1 lizard per 50 acres).

Most disturbance impacts to lambing bighorn sheep would cease on a year-round basis because travel on all routes in Critical Habitat would cease, in theory at least. Harmful impacts to the Yuma clapper rail, black rail, southwestern willow flycatcher, arroyo toad, mountain plover and least Bell's vireo, to the limited extent that they currently occur, would be reduced. Impacts to the pupfish would be the same as they are under the Preferred Alternative and Alternative 2 because the main vehicle route near critical habitat, Kane Springs Road, would remain open and camping would be prohibited along it.

Critical Habitat and Management Area Impacts:

About 200 acres of sheep critical habitat and 950 acres of flat-tail management area habitat could be directly impacted by route displacement or camping under this alternative. An unknown acreage for both species could also be impacted by noise, dust, disturbance and exotic plant vectoring associated with camping and vehicle routes. Pupfish critical habitat, although not open to camping or routes, could be indirectly impacted by salt cedar vectoring associated with the vehicle use of Kane Springs Road. This is particularly likely after rains when seeds of these plants can stick to tires and be carried considerable distances. No critical habitat for the other listed species would be impacted directly or indirectly by this alternative.

Alternative 2:

Wildlife: Under this alternative adverse impacts to wildlife from routes could be expected to increase slightly (about 1,000 acres) over the No Action Alternative. This increase would occur in the Yuha Desert and Central East Mesa. However, overall almost 50,000 fewer acres would be open to camping so this reduction would more than off-set adverse impacts from increased vehicular travel. Mortality, disturbance, injury, devegetation and soil compaction would all likely decrease relative to the status quo but would still be more than under the Proposed Action and Alternative One. As with all the other alternative small ground dwelling animals such as lizards, snakes, rodents and insects, which are less able to avoid vehicles, would be most impacted by the route network. The larger predators of these animals could also suffer as their food base was depleted. Displacement of users to the Plaster City and Superstition Mountains Open Areas would probably not be very great under this alternative because of it's proposed level of use in the Yuha Desert. Therefore, the displacement impacts to wildlife described under Proposed Action and Alternative One would not occur to any great extent.

T&E Wildlife: Under this alternative adverse impacts to the flat-tailed horned lizard from vehicle travel and camping could be greater than under the Proposed Alternative or Alternative One but less than under the No Action Alternative. Increased mortalities would be expected relative to the Proposed Alternative and Alternative One, particularly in the densely populated eastern side of the Yuha Desert. This area has some of the highest densities of flat-tails in the Imperial Valley with up to 2 lizards per acre in Pinto Wash. Additional mortality could also occur in central East Mesa where more routes would be open than under the Proposed Action and Alternative One. Impacts in West Mesa and southern East Mesa would be about the same as under the other alternatives because the number of routes doesn't change much in these areas. Adverse displacement effects in the Open Areas, as described above for the flat-tail, would not occur to any great extent due to the proposed use terms in the Yuha management area.

Disturbance impacts to lambing bighorn sheep would probably increase year-round, as visitor use levels rise with increasing human population. Harmful impacts to the Yuma clapper rail, mountain plover,

arroyo toad, black rail, southwestern willow flycatcher and least Bell's vireo, to the limited extent that they currently occur, could increase slightly. However, so little habitat for these species is in the project area that the effect is negligible. Impacts to the pupfish would be the same as for the Proposed Action and Alternative 1 because the number of routes in the critical habitat for this species remains the same as in the other alternatives. However, since camping would no longer be allowed along Kane Springs Road, impacts to the pupfish from this activity would be less than under the No Action Alternative.

Critical Habitat and Management Area Impacts:

About 4,000 acres of sheep critical habitat and 5,800 acres of flat-tail management area habitat could be directly impacted by route displacement or camping under this alternative. An unknown acreage for both species could also be impacted by noise, dust, disturbance and exotic plant vectoring associated with camping and vehicle routes. Pupfish critical habitat, although not open to camping or routes, could be indirectly impacted by salt cedar vectoring associated with the vehicle use of Kane Springs Road. This is particularly likely after rains when seeds of these plants can stick to tires and be carried considerable distances. No critical habitat for the other listed species would be impacted directly or indirectly by this alternative.

T&E Vegetation:

Proposed action:

There are no Federally Listed threatened or endangered plants in the planning area. In the East Mesa portion of the planning area, just west of the Imperial Sand Dunes, Wiggin's Croton (*Croton wigginsii*) may occur but to a lesser than the plant species in table 1.1. The remaining species in table 1.1 may occur on the eastern edge of the East Mesa. The preferred alternative would close existing routes in the center of this area, which would likely have a beneficial effect on sensitive plants by reducing route proliferation, camping space, habitat fragmentation, and direct impacts from vehicular activity.

There are no known threatened or endangered plants in the Yuha, West Mesa, or the project area to the west. However, the plants listed in table 1.2 do occur in this part of the project area. Although the current status of these plants on BLM lands is unknown, each of these plants could benefit significantly from the proposed action in the form of route reduction. Designated camping in the Yuha Desert would also benefit the Crucifixion Thorn Natural Area, which has received vehicular impacts over the past 2 years.

No Action Alternative:

There are no known threatened or endangered plants in the project area, but impacts to sensitive species would continue to occur, and route proliferation may increase under this alternative throughout the project area. Tables 1.1 and 1.2 indicate sensitive species that are found throughout the project area. Route proliferation, camping, direct impacts, and habitat fragmentation would likely impact these species.

Alternative 1:

Although there are no known threatened or endangered plants in the project area, tables 1.1 and 1.2 indicate sensitive species that occur throughout the project area. Alternative 1 would also benefit these

sensitive species by decreasing erosion associated with route proliferation, off route vehicle travel, and direct impacts to sensitive species.

Alternative 2:

Although there are no known threatened or endangered plants in the project area, tables 1.1 and 1.2 indicate sensitive species that occur throughout the project area. Alternative 2 would also somewhat benefit these sensitive species by decreasing erosion associated with route proliferation, off route vehicle travel, and direct impacts to sensitive species. On the other hand, this alternative would likely increase these impacts by designating routes not currently approved by the BLM, which would likely result in route proliferation, soil erosion, and direct impacts to sensitive species.

Water Quality:

Proposed action: Water quality will not be affected by this alternative.

No Action Alternative: Water quality will not be affected by this alternative.

Alternative 1: Water quality will not be affected by this alternative.

Alternative 2: Water quality will not be affected by this alternative.

Wastes, Hazardous / Solid:

Proposed action:

The proposed actions do not involve the generation of hazardous or solid waste. The proposed action does not involve land that contains hazardous or solid waste. Waste is occasionally encountered in the area of the project due to illegal dumping. Typical waste that is found in the area is general domestic trash and tires. If waste is found during this project, the BLM will arrange for legal disposal.

No Action Alternative:

The proposed action does not involve the generation of hazardous or solid waste. The proposed action does not involve land that contains hazardous or solid waste. Waste is occasionally encountered in the area of the project due to illegal dumping. Typical waste that is found in the area is general domestic trash and tires. If waste is found during this project, the BLM will arrange for legal disposal.

Alternative 1:

This alternative does not involve the generation of hazardous or solid waste. This alternative does not involve land that contains hazardous or solid waste. Waste is occasionally encountered in the area to illegal dumping. Typical waste is found in the area is general domestic trash and tires. If waste is found during this project, the BLM will arrange for legal disposal.

Alternative 2:

This alternative does not involve the generation of hazardous or solid waste. The alternative does not involve land that contains hazardous or solid waste. Waste is occasionally encountered in the area of the project due to illegal dumping. Typical waste that is found in the area is general domestic trash and tires. If waste is found during this project, the BLM will arrange for legal disposal.

Wetlands/Riparian Zones:

San Sebastian Marsh and San Felipe Creek are located in western Imperial County. They are bounded on the north by State Highway 78, on the east by State Highway 86, on the southeast by the Superstition Hills, and on the south and west by the Lower Borrego Valley. Approximately 11 miles of San Felipe Creek, Carrizo Wash, and Fish Creek Wash have been designated as critical habitat for the endangered desert pupfish by the United States Fish &Wildlife Service (USFWS). This critical habitat also includes a 100-foot riparian buffer zone. No new routes are proposed for this area.

Proposed Action:

The proposed action would have a positive effect on the San Felipe creek/ San Sebastian marsh area by changing Kane Springs Road to an open route with no camping allowed along the road. The no camping designation may reduce habitat degradation for the threatened Desert Pup fish.

No Action Alternative:

This alternative will not provide any additional protection for the Desert Pup fish.

Alternative 1:

This alternative would provide the most protection for the San Felipe creek/ San Sabastian marsh, the Desert Pup fish and its habitat by not allowing camping off of designated routes.

Alternative 2:

This alternative would provide the least amount of protection for the San Felipe creek/San Sabastian marsh area. The increased number of routes may increase the amount of degradation of the Desert Pup fish and its habitat.

Wild and Scenic Rivers:

Proposed Action:

The proposed action does not involve designated Wild and Scenic Rivers or waters being considered for designation as Wild and Scenic.

No Action Alternative:

This alternative does not involve designated Wild and Scenic Rivers or waters being considered for designation as Wild and Scenic.

Alternative 1:

This alternative does not involve designated Wild and Scenic Rivers or waters being considered for designation as Wild and Scenic.

Alternative 2:

This alternative does not involve designated Wild and Scenic Rivers or waters being considered for designation as Wild and Scenic.

Wilderness:

Proposed Action:

All routes in the wilderness areas will be designated as closed. The wilderness areas will not be notably impacted by this alternative.

No Action Alternative:

All routes in the wilderness areas will be designated as closed. The wilderness areas will not be notably impacted by this alternative.

Alternative 1:

All routes in the wilderness areas will be designated as closed. The wilderness areas will not be notably impacted by this alternative.

Alternative 2:

All routes in the wilderness areas will be designated as closed. The wilderness areas will not be notably impacted by this alternative.

Visual Resources:

The degree to which an action affects the visual quality of the landscape can be measured in terms of the impacts to the elements of form, line, color, and texture of the landscape. The landscape is a focal one, with a limited central focus point and which has a repetitive creosote vegetation sequence. The overall texture is a medium one, with patchy and broken vegetation dominant. The desert colors are muted shades ranging from desert brown and sand beige to juniper green (Munsell Soil Color Charts).

The VRM Objective class for the involved BLM lands is Class 3. Visual resource management objectives for Class 3 lands are to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Conducting the proposed action would not raise the contrast rating.

Proposed Action:

The proposed action will help reduce route proliferation, which will help maintain the visual integrity of this resource area. Unauthorized routes will be rehabilitated.

No Action Alternative:

This alternative will have a notable effect in the visual integrity of the resource area. Unauthorized routes will not be rehabilitated and route proliferation will most likely continue

Alternative 1:

This alternative will help reduce route proliferation, which will help maintain the visual integrity of this resource area. Unauthorized routes will be rehabilitated.

Alternative 2:

This alternative will possibly increase route proliferation, which will degrade the visual integrity of this resource area.

Recreation:

The following table shows the number of miles of open, closed, limited, and undesignated routes for each alternative.

Type	**No Action**	**Proposed Action**	**Alternative 1**	**Alternative 2**
Open	1432	1116	912	1487
Closed	345	922	1260	635
Limited	27	279	148	43
Undesignated	513	**	**	**

**NOTE: Undesignated occurs only in the "No Action" alternative

The potential acreages that could be directly impacted by camping and vehicle routes under each of the above alternatives are shown below.

Impacted Acres	No Action	Proposed	Alternative 1	Alternative 2
Camping FTHL	29,233	2,542	20	4,629
Camping PBHS	9,111	3,814	40	3,855
Camping PUPF	425	0	0	0
Camping Overall	80,745	28,725	120	31,410
Direct Route Impacts FTHL	1,039	939	727	1,219
Direct Route Impacts PBHS	207	207	160	215
Direct Route Impacts PUPF	8	8	8	8
Direct Route Impacts Overall	2,302	2,216	1,685	2,430

NOTE: *Flat Tailed Horned Lizard (FTHL) *Peninsular Bighorn Sheep (PBHS) *Pup Fish (PUPF)

The following table contains a summary of OHV designations, camping and parking restrictions for each alternative.

OFF-HIGHWAY VEHICLE DESIGNATIONS				
Actions	**Proposed action**	**No Action Alternative**	**Alternative 1**	**Alternative 2**
OHV DESIGNATION				
Open Routes*	All routes currently open except as noted below.	All routes currently open except as noted below.	All routes currently open except as noted below.	All routes currently open.
Yuha Basin ACEC	All routes designated limited to street legal vehicles only.	All routes open. Street legal and OHV registered vehicles are allowed.	All routes closed except for county roads and two touring routes.	All routes open. Street legal and OHV registered vehicles are allowed.
Peninsular Bighorn Sheep Critical Habitat	All routes in Coyote Mountains are limited to seasonal closures from January through June.	None. All routes are open year round.	All routes are closed.	All routes are open year round.
Desert Pupfish	Change Kane Springs Road to no camping along the route.	No change.	Change the Kane Springs Road to no camping along the route.	Change the Kane Springs Road to no camping along the route.
Flat-Tailed Horned Lizard (FTHL) [Proposed for listing as Threatened.]	Reduction in the number and miles of open routes in the East Mesa, West Mesa, and	None.	Largest reductions in the number and miles of open routes in the East Mesa, West Mesa,	Least reductions in the number and miles of open routes in the East Mesa, West Mesa,

OFF-HIGHWAY VEHICLE DESIGNATIONS				
Actions	**Proposed action**	**No Action Alternative**	**Alternative 1**	**Alternative 2**
	Yuha (cf., Yuha Basin ACEC) FTHL Management Areas		and Yuha (cf., Yuha Basin ACEC) FTHL Management Areas	and Yuha (c.f., Yuha Basin ACEC) FTHL Management Areas.
Routes previously not designated	Open routes with unique recreation opportunity or connect to other routes.	Undesignated routes will remain undesignated	Open a few routes with unique recreation opportunity or connect to other routes.	Open multiple routes with unique recreation opportunity or connect to other routes.
Juan Bautista de Anza National Historic Trail (NHT)	Designate the segment of the NHT and designate the segment as an open route.	No new routes would be designated.	Designate the segment of the NHT and designate the segment as an open route.	Designate the segment of the NHT and designate the segment as an open route.
Back Country Discovery Route	Authorized inclusion as an open route	No new routes would be designated.	Authorize inclusion as an open route.	Authorize inclusion as an open route.
Safety Hazard associated with the routes.	Close the specific routes.	Close the specific routes.	Close the specific routes.	Close the specific routes.
Closed Routes	All routes not designated open or limited.	Closed routes would remain closed, although this alternative will also have many routes that are not designated and as such are managed as closed.	All routes not designated as open or limited.	All routes not designated open or limited.
CAMPING/PARKING RESTRICTIONS				
Project Area (except for areas listed below)	Within a 300' centerline width.	Within a 300' width of a route.	Only at designated locations.	Within a 300' centerline width.
Yuha Basin ACEC	Only at designated locations.	Within a 35' centerline width.	Only at the Dunaway Staging Area.	Within a 50' centerline width.
Elliot Mine Area	Within a 25' centerline width.	Within a 25' centerline width.	Only at designated locations.	Within a 25' centerline width.
Flat-tailed Horned Lizard Management Areas (except Yuha Basin ACEC)	Within a 50' centerline width.	Within 300' of a route.	Only at designated locations.	Within a 50' centerline width.
Imperial Sand Dunes Recreation Area (ISDRA)	Closed to camping within a mile of the ISDRA.	Within 300' of a route	Closed to camping within a mile of the ISDRA.	Closed to camping within a mile of the ISDRA.

Proposed Action*:*

The proposed action will reduce the number of open routes available for Off Highway Vehicle (OHV) enthusiasts by 22 percent. Reduction in routes designated "open" are generally perceived negatively by the OHV community and positively by the environmental community.

The proposed action will have its greatest effect to OHV activities within the Yuha Basin ACEC where restrictions preclude the use of non-street legal vehicles and Coyote Mountains area of critical habitat for Peninsular Bighorn Sheep where routes will be closed from January 1st through June 30th. January through April is part of the heavy use season for OHV activities within the planning area.

The proposed action increases the number of routes designated as "limited" which may have a negative affect to OHV use, rock hounding, and camping.

Camping restriction within the Yuha Basin ACEC will probably negatively affect OHV enthusiasts by forcing them to camp within designated sites.

The proposed action will probably positively affect recreational activities such as hiking, bird watching, equestrian, cycling within the Yuha Basin ACEC due to the reduction in open routes and the elimination of camping off route.

Rock hounding will probably be negatively effected by the proposed action within the Yuha Basin ACEC due to the no parking off route restrictions. This restriction will increase the distance this enthusiast will have to travel by foot to reach a desired location.

No Action Alternative:

This alternative will probably have no negative effect to OHV enthusiasts due to no new route closures and camping restrictions would be implemented.

Negative and or positive effects to other forms of recreation will probably not change under this alternative.

Alternative 1:

This alternative would reduce the number of open routes available to OHV enthusiasts by 36 percent. Reduction in "open" routes is generally perceived negatively by the OHV community and positively by the environmental community.

This alternative will negatively affect OHV enthusiasts by eliminating most of the vehicle access within the Yuha Basin ACEC and restricting camping to only designated sites within the planning area.

OHV enthusiasts will also be negatively affected by the seasonal closures to all routes within Peninsular Bighorn Sheep habitat from January 1st through September 15th.

This alternative would probably have positive affects for recreational opportunities such as hiking, birding, equestrian use, and cycling within the Yuha Basin ACEC due to the reduction in open routes for OHV activities. These activities may be positively affected by the seasonal closures to OHV activities

within Peninsular Bighorn Sheep habitat. However, this alternative could limit vehicular access for these recreationists.

This alternative would probably have a negative affect to rock hounding within the planning area due to the no parking restrictions off routes.

Alternative 2:

This alternative would increase the number of "open" routes available to OHV enthusiasts by 4 percent. Increases in "open "routes are generally perceived positively by the OHV community and negatively by the environmental community

This alternative would have the largest positive effect for OHV enthusiasts due to the increase in the number of miles of routes designated "open" and the elimination off any seasonal closures of routes within Peninsular Bighorn Sheep habitat.

This alternative would probably have a positive effect for camping due to the increase in the number of "open" routes and the least amount of restrictions to off route camping.

This alternative may have a negative effect to hiking, birding, equestrian use, and cycling due to the increase number of open routes and possible increase in negative interactions with OHV enthusiasts.

Environmental Justice:

Proposed action:

Individuals of all social and economic levels have access to the designated routes of travel and camping areas. There are no fees associated with using the routes of travel. The fees for camping are generally significantly less than fees charged by other agencies and private campgrounds. The social economic profile for the project area, Imperial County, is provided above in the social economic section. It is not believed that any alternative would reduce the total number of recreational users in Imperial County, rather action alternatives may redirect users to more appropriate areas within Imperial County for their chosen activities such as the open areas for OHV play related activities.

No Action Alternative:

Individuals of all social and economic levels have access to use the designated routes of travel and camping acres. There are no fees associated with using the routes of travel. The fees for camping are generally significantly less than fees charged by other agencies and private campgrounds. The social economic profile for the project area, Imperial County, is provided above in the social economic section. It is not believed that any alternative would reduce the total number of recreational users in Imperial County. Use of the limited use areas as open areas will be more likely to continue under this alternative.

Alternative 1:

Individuals of all social and economic levels have access to use the designated routes of travel and camping acres. There are no fees associated with using the routes of travel. The fees for camping are generally significantly less than fees charged by other agencies and private campgrounds. The social

economic profile for the project area, Imperial County, is provided above in the social economic section. It is not believed that any alternative would reduce the total number of recreational users in Imperial County, rather alternatives may redirect users to more appropriate areas within Imperial County for their chosen activities such as the open areas for OHV play related activities. .

Alternative 2:

Individuals of all social and economic levels have access to use the designated routes of travel and camping acres. There are no fees associated with using the routes of travel. The fees for camping are generally significantly less than fees charged by other agencies and private campgrounds. The social economic profile for the project area, Imperial County, is provided above in the social economic section. It is not believed that any alternative would reduce the total number of recreational users in Imperial County, rather action alternatives may redirect users to more appropriate areas within Imperial County for their chosen activities such as the open areas for OHV play related activities.

Energy Policy:

Proposed action:

The act of designating roads is not believed to impact the use of energy. It is believed that recreational users will move to other recreational areas to participate in their preferred activities if one area has limited use rather than abandoning the activity. It is not believed that any alternative would change the recreational users use of energy.

No Action Alternative:

The act of designating roads is not believed to impact the use of energy. It is believed that recreational users will move to other recreational areas to participate in their preferred activities if one area has limited use rather than abandoning the activity. It is not believed that any alternative would change the recreational users use of energy.

Alternative 1:

The act of designating roads is not believed to impact the use of energy. It is believed that recreational users will move to other recreational areas to participate in their preferred activities if one area has limited use rather than abandoning the activity. It is not believed that any alternative would change the recreational users use of energy.

Alternative 2:

The act of designating roads is not believed to impact the use of energy. It is believed that recreational users will move to other recreational areas to participate in their preferred activities if one area has limited use rather than abandoning the activity. It is not believed that any alternative would change the recreational users use of energy.

Cumulative Affects:

Recreation

The demands for OHV recreation in other areas are affected by actions taken in this project. The implementation of increased law enforcement in the Yuha may spatially displace visitors throughout the desert. Some of the areas that are likely to incur an increase in visitor use are the Anza Borrego State Park, Plaster City Open Area, the Imperial Sand Dunes Recreation Area, Ocotillo Wells State Vehicle Recreation Area, and Dumont Dunes Open Areas.

OHV popularity in California continues to rise and legal opportunities for OHV recreation continues to decrease. At this time there is pending legislation that could possibly close another 2.5 million more acres as designated wilderness throughout California and other states (in addition to the 7,661,069 acres designated through the California Desert Protection Acts PL 103-433). The areas in the California Desert District would be lost for any OHV opportunity. Also, several land use plans (listed below) around the desert could limit or close OHV open and limited areas within the California Desert District. These cumulative actions have resulted in the dramatic increase of activity in the existing legal OHV open areas. California State Parks has documented an increase of 52% in the State Vehicle Recreation Areas between FY 86 and FY 00. Street licensed 4WD vehicle registrations in California have also increased 74% (290,651 to 506,585) between 1994 and 2001. Many of these street legal vehicles are used in the project area and other OHV sites.

Land use and recreation plans that affect the cumulative impacts:

- Northern and Eastern Mojave Planning Effort
- Northern and Eastern Colorado Desert Coordinated Management Plan
- West Mojave Habitat Conservation Plan
- Imperial Sand Dunes Recreation Area Management Plan

Cumulatively, these actions, and trends could cause the displacement of OHV activity from the project area to other areas. It is unknown, and difficult to predict, where the visitation shift would occur. It is possible that the shift could occur into areas that currently require little recreational management or have a more sensitive habitat. The increased density of OHV recreation into the remaining legal areas would lead to a decrease in visitor satisfaction and public safety. As visitor density increases, the possibility of conflicts between visitors and the possibility of accidents increases.

Biological

Land use and recreation plans that affect the cumulative impacts:

- Northern and Eastern Mojave Planning Effort
- Northern and Eastern Colorado Desert Coordinated Management Plan

- West Mojave Habitat Conservation Plan

- Imperial Sand Dunes Recreation Plan

Cumulatively, these actions, and trends could cause the displacement of OHV activity from the project area to other areas or from other areas to the project area. It is unknown, and difficult to predict, where the visitation shift would occur.

The United States Border Patrol frequently utilizes the project area, and other desert areas near the project area for surveillance and apprehension of undocumented immigrants. These activities result in surface disturbance, and some habitat and species loss.

The Salton Sea Restoration Plan, the Coachella Valley Water Management Plan and the IID Water Conservation and Transfer Project and Habitat Conservation Plan each have the potential of surface disturbance, and some habitat and species loss.

The North Baja Pipeline Project is nearly complete. This project had some surface disturbance, loss of habitat and species.

Land Use

BLM is currently revising several plans. Each of these plans will potentially amend the CDCA Plan. Since the record of decision is not signed for these plans, the exact changes cannot be determined. Together these plans may change the land use in the California Desert District. It is possible that the acreages allotted to each multiple land use classification may significantly change.

NECO is intended to protect and conserve natural resources, providing in particular for the recovery of the desert tortoise, while simultaneously balancing human uses of the Colorado portion of the Sonoran Desert ecosystem. The planning area for NECO comprises more than 5.5 million acres and is bordered along the southwest by the ISDRA. The land affected includes the northern and eastern Colorado Desert and the eastern half of Joshua Tree National Park.

BLM is the lead agency for plan development, with cooperation from NPS, the US Marine Corps (USMC), USGS, USFWS, CDFG, Imperial County, and Riverside County. The management plan would become a binding plan for BLM, NPS, and the CMAGR. BLM released a final EIS for the NECO Plan and alternatives in the summer of 2002.

Implementation of NECO would amend the CDCA Plan and would result in beneficial impacts to biological resources in the desert Southwest. Depending on the alternative selected, NECO could result in reduced motorized vehicle access within its planning area, as well as the closing of some desert washes in the western part of Riverside County and two small OHV areas. Few people currently visit the OHV areas proposed to be closed (Ford Dry Lake, which is 1,134 acres, and Rice Valley Dunes, which is 2,790 acres) (Crowe, 2002).

The purpose of the West Mojave Habitat Conservation Plan (West Mojave Plan) is to conserve and protect the desert tortoise and nearly 100 other sensitive plants and animals, as well as the ecosystems on which they depend. The 9.4 million-acre planning area encompasses most of California's western Mojave Desert. It extends from Olancha in Inyo County on the north to the San Gabriel and San Bernardino Mountains on the south, and from the Antelope Valley on the west to the Mojave National

Preserve on the east. About one third of the planning area is private land, approximately one third is within military reservations, and the remainder consists of public lands managed by BLM.

BLM is the lead agency for preparation of a DEIS for the draft West Mojave Plan. The DEIS is anticipated to be released in mid-2003. Implementation of the West Mojave Plan would result in beneficial impacts to biological resources in the western Mojave Desert. Depending on the alternative selected, the West Mojave Plan could result in reduced motorized vehicle access within its planning area and increased management of existing OHV areas (Pilmer, 2002).

The draft Northern and Eastern Mojave Plan (NEMO Plan) includes management actions to protect threatened, endangered, and sensitive species and habitats on federal lands administered by the BLM in the eastern Mojave Desert. The NEMO Plan will amend the CDCA Plan. The NEMO Plan area encompasses about 2.4 million acres of public lands in eastern San Bernardino and Inyo Counties of California.

BLM is the lead agency for preparation of a draft EIS for the draft NEMO Plan and consequent CDCA Plan Amendments, which was released to the public in April 2001. The draft EIS analyzes potential impacts from the implementation of the proposed multiple use classifications for the lands released from wilderness consideration by enactment of the California Desert Protection Act, route designation in some areas, a proposed strategy to accomplish route designation in the remainder of the planning area, and proposed multiple use classification changes to eliminate landfills on public lands.

Implementation of the NEMO Plan would result in beneficial impacts to biological resources in the NEMO planning area. Depending on the alternative selected, the NEMO Plan could result in reduced motorized vehicle access within its planning area and increased management of existing OHV areas (BLM, 2002). The NEMO Plan, however, does not propose increased management of Dumont Dunes, which offers a similar Semi-Primitive motorized OHV experience as the ISDRA (although Dumont Dunes is significantly smaller than the ISDRA) (Aarons, 2002). Dumont Dunes is located approximately 30 miles north of Baker on SR-127, off Dumont Dunes Road. It is approximately 275 miles northeast of the ISDRA.

Imperial Sand Dunes Recreation Area Management Plan is a BLM project to develop a plan to manage the Imperial Sand Dunes Recreation Area for the next 10-15 years. The goal of the plan is to balance the off highway vehicular use of the area while conserving the natural resources. The plan establishes the levels of use for this recreation area and provides an extensive monitoring plan for specific natural resources. The level of use can be adjusted based on the results obtained from the monitoring program. Implementation of the Imperial Sand Dunes Recreation Area Management Plan could result in beneficial impacts to biological resources in the planning area. However, it could also result in displacement of off highway vehicular recreational users to other areas of the desert. A final plan and EIS is expected in September 2002.

The Gateway of the Americas Specific Plan Area (Gateway) is a 1,775-acre master-planned industrial and commercial complex owned by private parties and federal, state, and local agencies. Retail shopping, business offices, and lodging would be developed in response to the traffic from the Port of Entry. Cumulative effects relate to the loss of undeveloped rural land and the development of rural land into industrial, commercial, and transportation-related services. Imperial County prepared the Final EIR for the Gateway Specific Plan in 1997 (Imperial County Planning Department, 1997). The project is in

various stages of development in the initial construction phase (Phase 1). Phase 2 is expected to continue for 20 to 40 years (IID and BOR, 2002).

Road and route proliferation are widespread in the desert of Imperial County and have led to substantial degradation of natural habitats through soil compaction, de-vegetation, disturbance, injury, mortality and exotic plant vectoring. The implementation of the preferred alternative would probably have a net beneficial effect in the flat-tailed horned lizard management areas because vehicular impacts would be reduced in these areas. However, adverse impacts in open areas would probably increase, as motorists moved to areas that have fewer restrictions, such as Superstition Mountains, Ocotillo Wells and Plaster City. These movements could adversely impact the flat-tailed horned lizard and other wildlife species in these areas.

Other impacts in the project area include paved roads, power lines, geothermal plants, irrigation berms, mining, military impacts, Border Patrol activities and illegal immigration. These actions have degraded natural habitats and their associated biota to a wide extent in Imperial County. The impacts would likely increase as the human population of the County grows leading to increased detrimental impacts. The implementation of the Preferred Alternative or Alternative 1 would likely decrease the rate of growth of these cumulative impacts, while the other two alternatives would probably increase the rate of growth in impacts.

Visual

The U.S. Border Patrol has placed numerous tools in the ISDRA to assist in apprehending undocumented immigrants and smugglers. These tools include barriers, shade structures and cameras. These items and the associated Border Patrol activities can have a cumulative effect on visual resources.

Several utility corridors exist in the project area, they too, can have a negative cumulative effect on the visual landscape.

Cultural

The U.S. Border Patrol has placed numerous tools in the project area to assist in apprehending undocumented immigrants and smugglers. These tools include barriers, drag areas and cameras. These activities can have a cumulative effect on cultural resources as the tool and associated activities are ground disturbing.

Several utility corridors exist in the project area; they too, can have a negative effect on the cultural resources due to their ground disturbing nature.

Noise

There are several activities within the project area and general vicinity that could add to cumulative noise effects, including:

> Noise from train movements on the Southern Pacific Railroad tracks San Diego-Arizona tracks and Plaster City Narrow Gage tracks

Noise associated with occasional recreational and support activities, especially both concentrated and dispersed OHV uses of the project area and immediate vicinity

Vehicular traffic noise on major roadways leading to the project area

Intermittent military aircraft maneuvers and military weapons explosions associated with the use of the Chocolate Mountain Aerial Gunnery Range, a gunnery range north of East Mesa, and a gunnery range near Plaster City.

Occasional military aircraft over flights associated with flight corridors located above and adjacent to the project area

Military helicopter use of the project area as a training ground for the use of night vision devices

Mineral exploration, including drilling by Mesquite Mine, Glamis Imperial under existing BLM approvals, and United States Gypsum, a private company.

Construction of utility lines

Border Patrol construction or pursuit activities

Natural sources such as wind, rain, thunder, and wildlife

Air

Gateway of the Americas: The Gateway of the Americas Specific Plan Area (Gateway) is a 1,775-acre master-planned industrial and commercial complex owned by private parties and federal, state, and local agencies. Retail shopping, business offices, and lodging would be developed in response to the traffic from the Port of Entry. Secondary impacts from the Gateway project include short-term air quality impacts in the SSAB as a result of construction activities associated with the development of industrial, commercial, and transportation-related services.

Imperial County prepared the Final EIR for the Gateway Specific Plan in 1997 (Imperial County Planning Department, 1997). The project is in various stages of development in the initial construction phase (Phase 1). Phase 2 is expected to continue for 20 to 40 years (IID and BOR, 2002).

North Baja Pipeline, LLC: North Baja Pipeline, LLC proposes to build and operate a new natural-gas pipeline system that would transport 500 million cubic feet per day of natural gas from a proposed interconnect with an existing El Paso Natural Gas Company pipeline in Ehrenberg, Arizona, to the U.S. and Mexico border. The North Baja Pipeline Project includes construction of roughly 80 miles of pipe, a compressor station, two new meter stations, and other ancillary facilities.

Secondary impacts from the North Baja Pipeline project include short-term air quality impacts in the SSAB as a result of construction activities and later due to maintenance activities. The Federal Energy Regulatory Commission (FERC), the CSLC, and the BLM jointly prepared a DEIS/EIR for the proposed project in July 2001. A Final EIS/EIR was released in the summer of 2002. The construction phase of this project is underway as this document is being completed.

Coachella Valley Water Management Plan: The Coachella Valley Water District (CVWD) prepared the Coachella Valley Water Management Plan to provide an overall program for managing its surface and groundwater resources in the future (CVWD, 2000). Implementation of the Water Management Plan would involve construction of various facilities for treatment of water and development of additional policies to implement increased conservation. The potential environmental impacts of the Water Management Plan have not been fully assessed at this time, but short-term air quality impacts in the SSAB as a result of construction activities are anticipated.

The draft CVWD Water Management EIR is being prepared by CVWD. A Notice of Preparation (NOP) was originally filed with the State Clearinghouse in November 1995. A revised NOP was issued in March 2000. The Draft CVWD Water Management EIR is planned for release in 2002. It is anticipated that the Draft EIR, once completed, will include mitigation measures to reduce and/or avoid air quality impacts.

Imperial Irrigation District Water Conservation Plan: The Imperial Irrigation District (IID) Water Conservation and Transfer Project and Habitat Conservation Plan (Water Conservation and Transfer Project and HCP) consists of the conservation by IID of up to 300,000 acre-feet of Colorado River water per year, and the subsequent transfer of all or a portion of the conserved water to San Diego County Water Authority (SDCWA), CVWD, and/or the Metropolitan Water District of Southern California (Metropolitan). The water conservation program includes the voluntary participation of Imperial Valley landowners and tenants to implement on-farm conservation methods that could include alternative water management techniques, water delivery system alternatives, conveyance facility lining, or other measures.

IID and BOR are the lead agencies for the preparation of a Draft EIR/EIS for the IID Water Conservation and Transfer Project and HCP, which was released to the public in January 2002. A final EIR/EIS is expected in 2002.

As a result of the water conservation program, implementation of the Water Conservation and Transfer Project is anticipated to result in short-term and long-term impacts to air quality in the SSAB. The Draft EIR/EIS includes mitigation measures to reduce and/or avoid air quality impacts from construction activities in the Imperial Valley. However, other indirect air quality impacts in the SSAB are considered significant and unavoidable. Biological resources impacts to desert species, such as the flat-tailed horned lizard, Peirson's milk-vetch, and desert tortoise also would occur. However, the proposed HCP covers incidental take of these species through avoidance strategies and mitigation measures. In addition, depending on the alternative selected, the project could result in adverse socioeconomic impacts in Imperial County. Mitigation measures to avoid such impacts are anticipated to be implemented if the alternative that would result in adverse socioeconomic impacts were selected as the preferred alternative.

Salton Sea Restoration Plan: The Salton Sea Restoration Project includes actions to stabilize the elevation and reduce the salinity of the Salton Sea, pursuant to the Salton Sea Reclamation Act of 1998 [Public Law (PL) 105-372]. To implement this directive, the Salton Sea Authority, as the California lead agency under CEQA, and BOR, as the federal lead agency under NEPA, released a Draft EIS/EIR in January 2000 that evaluated proposed Salton Sea Restoration Project alternatives. A revised Draft EIS/EIR, including different alternatives and revised modeling and impact analysis, is currently being prepared.
Although environmental documentation has not been completed on the Salton Sea Restoration Project, it is anticipated that short-term air quality impacts in the SSAB would occur as a result of construction

activities associated with project implementation. It is also anticipated that the Draft EIS/EIR, once completed, will include mitigation measures to reduce and/or avoid air quality impacts.

Coachella Canal Lining: This project involves the lining of the remaining 33.4 miles of the Coachella Canal, which currently loses approximately 32,350 acre-feet per year through seepage. This canal lining project will adversely affect biological resources by loss of riparian and wetland habitat in Salt Creek and adjacent to the canal, which are supported by canal leakage. Affected desert species include the desert tortoise. The canal lining project will also have short-term air quality impacts in the SSAB associated with construction within the right-of-way of the Coachella Canal.

A revised and updated Draft EIS/EIR for the Coachella Canal Lining Project was circulated for public review by Reclamation and CVWD in September 2000. A Final EIS/EIR was released in April 2001, which was certified by CVWD in May 2001. A ROD is pending. The EIR/EIS includes mitigation measures to avoid and/or compensate for air quality and biological resources impacts.

This project involves lining the 23-mile reach of the existing, unlined canal. The canal lining project will have temporary air quality impacts in the SSAB associated with construction within the proposed right-of-way of the All American Canal. Temporary and permanent impacts to desert scrub and sand dune habitat would result from construction activities. Special-status species known to inhabit or likely to inhabit these desert habitats are flat-tailed horned lizard, Colorado Desert fringe-toed lizard, giant Spanish needles, Peirson's milk-vetch, Wiggin's croton, sand food, and Andrew's dune scarab beetle.

All American Canal Lining: A Final EIS/EIR for the All American Canal Lining Project was released in March 1994. The All American Canal Lining Project EIR/EIS includes mitigation measures to avoid and/or compensate for air quality and biological resources-related impacts to riparian and marsh vegetation, fish in the canal, desert habitat, and special-status species associated with desert habitats.

U. S. Border Patrol Activities: The U. S. Border Patrol drives vehicles, grades unpaved roads, drags unpaved roads and constructs devises such as cameras to assist in the apprehension on undocumented immigrants. These activities can have a negative affect on air quality.

Soil & Geology

The U, S. Border Patrol routinely drives throughout the ISDRA to apprehend undocumented aliens. They also grade roads and install and maintain cameras and other tools used to apprehend undocumented aliens. These activities contribute to the soil erosion and compaction.

BLM has involvement in several mining operations near the project area: Glamis, Mesquite, and community pits. This contributes to cumulative impacts on mineral resources and geology and soils.

Residual Impacts:

Impacts to biological resources would be reduced substantially under the Preferred Alternative and Alternative 1, however they would still occur. Under Alternative 2 and No Action Alternatives, residual impacts would be much greater than under the other 2 alternatives and are likely to increase. These residual impacts include direct mortality, disturbance, de-vegetation, soil compaction and spread of exotic plants. None of these adverse impacts can be completely eliminated by mitigation.

Coordination with other Agencies:

California State Historic Preservation Office -Archaeology: Pursuant to Section 5 of the State Protocol Agreement (1998) between the California State Historic Preservation Office (SHPO) and the Bureau of Land Management - California (BLM), and in accordance with 36 CFR Part 800, this memorandum documents BLM's efforts to identify, evaluate and assess effects for historic properties that might be affected by this undertaking as required by Section 106 of the National Historic Preservation Act.

Native American Consultation: The Western Colorado Desert Routes of Travel (WECO) area is located within the area traditionally occupied by Cahuilla, Kumeeyaay, and Quechan Tribes and contains sites that are known to be important to the tribes. These include all ground figures such as geoglyphs or rock alignments, rock art, sites with cremations or sites that are likely to have cremations. The analysis of the alternatives has considered Native American religious and cultural value.

The following Native American Tribes were notified about the WECO project by letter dated May 20, 2002:

- The Viejas Band of Mission Indians
- Cuyapaipe Band of Mission Indians
- Ramona Band of Mission Indian.
- Manzanita Band of Mission Indians
- Campo Band of Mission Indians
- Jamul Indian Village
- Mesa Grande Band of Mission Indians
- Santa Ysabel Band of Mission Indians
- Torrez-Martinez Desert
- Cahuilla Indians
- Quechan Tribal Council

The analysis of the alternatives has considered Native American religious and cultural values.

Border Patrol: Consultation by this office was done with both the El Centro Border Patrol office,the Calexico Border Patrol office and the Yuma Border Patrol Office on the affects this plan may have on their operations and to consider their concerns.

United States Fish & Wildlife Service: All alternatives require consultation and conference with the Service since they may affect the sheep, lizard, pupfish, vireo, flycatcher and rail.

Other Consultation:

Consultation was conducted with the Imperial County Planning Department and Imperial County Air Pollution Control District.

Consultation was conducted with the Imperial County Department of Parks and Recreation, County Property Services. The need for adequate access for recreation to meet the needs of the county was discussed.

Consultation was conducted with the California Department of Fish and Game and the need for access balanced with the need to protect sensitive species was discussed.

Consultation was conducted with the Executive Secretary to the Imperial County Fish and Game Commission and the need for access to public lands was discussed.

Consultation was conducted with the California Department of Parks and Recreation, Ocotillo Wells State Vehicle Recreation Area and the need for access and protection was dsicussed.

The Imperial County Gem & Mineral Society defined a network of routes that they consider to provide necessary access for their activities.

Additional Description of Mitigation Measures for the Preferred Alternative: (Some mitigation measures were previously described in the environmental impact section.)

Archaeology:

Actions, which occur through, plan implementation and which have the potential to affect cultural resources will be subject to review under Section 106 of the National Historic Preservation Act. The State Protocol Agreement between the Bureau of Land Management, California and the California State Historic Preservation Officer will be followed.

Boundaries will be defined for all designated camping locations within the Yuha Basin ACEC, and all unapproved routes that will be rehabilitated throughout the WECO area. These project areas will be surveyed at the Class III (100%) level. All cultural resources identified during surveys will be evaluated for eligibility to the National Register of Historic Places, and the effect of the project on those properties will be evaluated. Whenever possible, the scope of projects will be redesigned to avoid historic properties. If avoidance is not possible, BLM will consult with the State Office of Historic Preservation to resolve adverse effects.

Law enforcement for off-route travel and unauthorized camping for all areas should continue to be enforced. An effort should also be made to develop educational information including maps and brochures that will inform the public about the approved routes of travel, environmental education, and leave no trace. Routes should be clearly signed, and route signs should be maintained on a regular basis. Conservation of Cultural Resources: All camping in the Yuha Basin ACEC must be strictly limited to the identified camping areas. Law enforcement for off route travel and unauthorized camping for all areas must be enforced. An educational program that includes information about on route travel in limited areas, conservation of known cultural resources, and avoiding cultural resource impacts is required. Clear signing of all routes is required.

Botany, Wildlife:

Conservation of plants, wildlife and their Habitat: All camping in the Yuha Basin ACEC must be strictly limited to the identified camping areas. Law enforcement for off route travel and unauthorized camping for all areas must be enforced. An educational program that includes information about on route travel in limited areas and conservation of plants by avoidance is required. Clear signing of all routes is required.

Preparer(s): Chris Knauf, Natural Resource Specialist
Gavin Wright, Senior Wildlife Biologist
Margaret Hangan, Archaeologist
Dallas Meeks, Arnold Schoeck, Larry Caffey, Recreation Specialists

Date: September 2002

Reviewer: _____
Lynnette Elser, Environmental Coordinator

DRAFT FINDING OF NO SIGNIFICANT IMPACT

for

WESTERN COLORADO DESERT ROUTES OF TRAVEL DESIGNATIONS

Environmental Assessment Number CA-670-EA2002-2

USDI – Bureau of Land Management
California State Office
California Desert District
El Centro Field Office
Imperial County, CA.

BACKGROUND**:** The Western Colorado Desert (WECO) is located in the western half of Imperial County in southern California and offers outstanding recreational opportunities for off-highway vehicle (OHV) touring in the California Desert District. BLM must carefully manage OHV use, so that the conditions of special status species, and other natural and cultural resources are maintained or improved. The type and level of OHV use also must be carefully managed to create an environment that promotes the health and safety of visitors, employees, and nearby residents.

The proposed Western Colorado Desert off-road vehicle route of travel designations updates previous route designations and existing routes in approximately 475,000 acres of Off-Road Vehicle (ORV) Limited areas. In addition, the area includes numerous important historical sites and provides habitat for several sensitive or endangered animal species. Several previous ORV designations have been made for the area. The last review and environmental assessment (EA) was completed in 1997. However, the route designation process for the 1997 review was not completed.

Since the 1997 review and EA, several regulatory changes have taken place that relate to the Western Colorado Desert. The U.S. Fish and Wildlife Service listed the Peninsular Bighorn Sheep as an endangered population. The U.S. Fish and Wildlife Service has proposed the flat-tailed horned lizard as a Federal threatened species. The negotiated settlement to the Center for Biological Diversity=s (CBD) lawsuit against BLM, in part, agreed to complete updating route of travel designations in the Western Colorado Desert (WECO) by 01/31/2003. These changes and the continued population growth in southern California have resulted in a need to reconsider the decisions proposed in the 1997 EA.

BLM has and will consult with a number of entities on the stipulation in general and specific off-road vehicle route designations in particular. These include Imperial County, United States Fish & Wildlife Service, California Department of Fish and Game, California Department of Recreation & Parks, United States Border Patrol, and tribal councils with interest in the project area. The Imperial County Supervisors support as few route closures as possible. The Cahuilla, Kumeyaay, and Quechan tribal councils are concerned about vehicle-related recreation use impacting Native American values.

A copy of the EA may be obtained from the El Centro Field Office, 1661 S. 4th Street, El Centro, CA. 92243. Office hours are Monday through Friday, 7:30 A.M. to 4:30 P.M., closed on holidays.

During the public scoping for this project, many members of the public requested that BLM prepare an Environmental Impact Statement rather than an Environmental Assessment. BLM decided to continue with the preparation of the Environmental Assessment, but on a more detailed and expanded level than is typically written. Based on the potential impacts identified in the environmental assessment, BLM would consider the need for an Environmental Impact Statement. In addition, an expanded Environmental Assessment was chosen over an Environmental Impact Statement because it is believed that negative impacts associated from the project can be mitigated. The end result is expected to be a Finding on No Significance Impact for the proposed actions with mitigations.

ALTERNATIVES CONSIDERED:

The alternatives considered in detail included the proposed action, the No Action Alternative, Alternative 1, and Alternative 2.

The proposed action creates a route network that balances the need to conserve natural and cultural resources while providing off highway vehicle recreation opportunities throughout the project area. In the Yuha, it provides for camping in designated camping areas and designates the routes of travel as limited use, with the limitation to street legal vehicles. The proposed action also designates a seasonal limitation on routes in some sheep habitat. The proposed action allows camping within various widths from designated routes.

The No Action Alternative is the route network that exists on the ground today. It will allow many routes that exist on the ground, but are not designated to remain undesignated. It allows camping within various widths from designated routes.

Alternative 1 is more environmentally conservative than the other alternatives. It allows very limited use of the Yuha, with only a few routes designated as open. It also allows camping only in designated areas throughout the project area. Overall, there are fewer routes available for use in this alternative.

Alternative 2 is more motorized recreation oriented than the other alternatives. It designates more open routes and allows greater camping opportunities.

A complete description of the alternatives analyzed in detail is contained in the EA and the attached set of maps.

PUBLIC INVOLVEMENT:

There is a high level of public interest and visibility associated with off-road vehicle route designations but the interest is typically shown only after a written proposal and environmental assessment is published. For the cooping phase, over 6500 project announcements were mailed to interested parties. The project was published in the Federal Register (03/25/2002) and started a 68-day public comment period. The project was also announced on the El Centro Field Office's Web Page and through press releases. Two public meetings were held. Based upon responses, the mailing list has been reduced to approximately 150 individuals. Only 32 individuals commented during this cooping period by letter, e-mail, and/or testimony at a public meeting. Attendance at the public meetings was 16 people in El Centro and 14 people in San Diego.

FINDING OF NO SIGNIFICANT IMPACT:

Based upon review of the EA and supporting project record, I have determined that the proposed alternative is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27. Therefore, an environmental impact statement is not needed. This finding is based on the following discussion:

Context: The project area falls within habitat for the federal listed desert pup fish, Peninsular Range bighorn sheep, Yuma clapper rail, the southwestern willow flycatcher, and the least bells vireo and the California listed California black rail. The federal listed arroyo toad is found in a few sand washes in the western portion of the project area. The project area also falls within habitat for the flat-tailed horned lizard, which is proposed as threatened by the US Fish and Wildlife Service. The discussion of significance criteria that follows applies to the intended action and is within the context of local importance. The environmental assessment details the effects of the selected alternative. None of the effects identified including direct, indirect and cumulative effects, are considered to be significant.

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

10) Impacts may be both beneficial and adverse.

Due to the selective alternatives design features, the predictive effects would include increased habitat and habitat protection for the flat tailed horned lizard, increased protection for the Peninsular Range big horn sheep, desert pup fish, habitat for the federal listed Yuma clapper rail, the southwestern willow flycatcher, and the least bells vireo and the California listed California black rail 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 a designated as closed and routes that should not be present will result in less air emissions, more habitat and species protection and better conservation of cultural resources. Some adverse impacts are predicted however, of the alternatives, the proposed action provides least amount adverse impacts and provides significantly fewer and less intense impacts compared to the current conditions. Details concerning the effects of the proposed action are included in the environmental assessment.

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

Public health and safety were identified as an issue. The selected alternative is comparable to other route designation projects, which have occurred within the California Desert District. Off highway vehicle use is a high-risk recreational activity. Some risk is a part of this activity. Historic accident locations and other safety factors were considered in developing the alternatives and choosing the proposed action.

10) 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. The selected alternative provides for increased conservation of these areas, while allowing recreational use of the project area. There are ecologically critical areas and wetlands within the project area and the selected alternative provides increase conservation of these areas. There are no park lands, prime farm lands, and wild and scenic rivers within the project area.

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

The effects of the proposed alternative on the quality of the human environment were addressed in the environmental assessment. Although there are effects that are clearly identified, the mitigation for the project greatly offsets these effects. In addition, the effects for the proposed action are fewer and have lower intensity than the current conditions.

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

The proposed action is not unique or unusual. The BLM has experienced implementing similar actions in similar areas and have found effects to be reasonably predictable. The environmental effects to the human environment were fully analyzed in the environmental assessment. 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 alternative 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 alternative establishes a designated route system needed by the BLM for resource management within the El Centro resource area. Any future projects will be evaluated through the NEPA (National Environmental Policy Act) process and will stand on their own as to environmental effects.

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

The proposed action was evaluated in the context of past, present, and reasonably foreseeable actions. These cumulative effects are identified in the environmental assessment. Significant cumulative effects are not predicted.

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 alternative will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor will the proposed alternative cause loss or destruction of significant scientific, cultural, or historical resources. The cultural resource mitigation requirements are identified in this decision record. These mitigation efforts will help in the conservation of cultural resources.

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 will consult with the United States Fish and Wildlife Service in regards to the Peninsular Range big horn sheep, Yuma clapper rail, the southwestern willow flycatcher, and the least bells vireo, arroyo toad, and desert pup fish and habitat for the flat-tailed horned lizard. The proposed action was specifically designed to conserve these species by limiting the type of vehicle in the Yuha, seasonally limiting use in the Peninsular Range big horn sheep habitat, limiting the camping to specific areas in the Yuha, limiting the camping in flat-tailed lizard management areas to within 50 feet of open designated routes, the rehabilitation of impacted areas, not allowing camping along Kane Spring Road, increased law enforcement, clear signing of routes and public education and information.

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

The proposed action 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 Order12898 (Environmental Justice). State, local, and tribal interests were consulted during the environmental analysis process. Furthermore, the proposed action is consistent with applicable land management plans, policies, and programs.

MITIGATION MEASURES:

Archaeology, Wildlife, ACEC, Botany: Conservation of natural and cultural resources: All camping in the Yuha Basin ACEC must be strictly limited to the identified camping areas. Law enforcement for off route travel and unauthorized camping for all areas must be enforced. An educational program that includes information about on route travel in limited areas, conservation of known cultural resources, plants and wildlife, and avoiding cultural resource impacts is required. Clear signing of all routes is required.

Air: Currently Rule 800 Fugitive Dust Control Requirements for Control of Fine Particulate Matter (PM-10) as approved by the Imperial County Air Pollution Control District includes exempt activities under section E. Exemption E.9 states "The recreational use of public lands, including but not limited to Off-Road Vehicles, all-terrain vehicles, trucks, cars, motorcycles, motorbikes or motorbuggies." This exempts the project area from Rule 800. However, ICAPCD has informed BLM of its intent to update their PM10 SIP. It is anticipated that the updated SIP will require BLM to develop and implement a dust control plan for the land that it manages in Imperial County. BLM will work with ICAPCD to develop a Dust Control Plan.

Initially dust control activities could be conducted to reduce the amount of dust in the project area without monitoring activities. The ICACPD is in the process of revision of the SIP. Once EPA approves this plan, then BLM, in conjunction with EPA and ICACPD through implementation of the SIP, will determine the need for monitoring. However, it is not anticipated that air monitors may be located in the project area. At the request of a regulatory agency, monitors will be installed at locations identified by the regulatory agencies to provide additional information to direct these mitigation measures.

IMPLEMENT DATE:

If no protest is received by the close of business (4:30 P.M.) on XXXX, 2002, this decision will become final and may be implemented consistent with elements of the decision. If a timely protest is received, this decision will be reconsidered in light of the statements of reasons for the protest and other pertinent information available and a final decision will be issued which will be implemented in accordance with 43 CFR Part 4.

CONTACT PERSON:

For additional information concerning this decision or the BLM administrative review process contact Lynette Elser, El Centro Field Office, 1661 S. 4th Street, El Centro, CA. 92243; telephone (760) 337-4400

APPROVED BY:

_____ _____

Greg Thomsen, El Centro Field Manager Date