

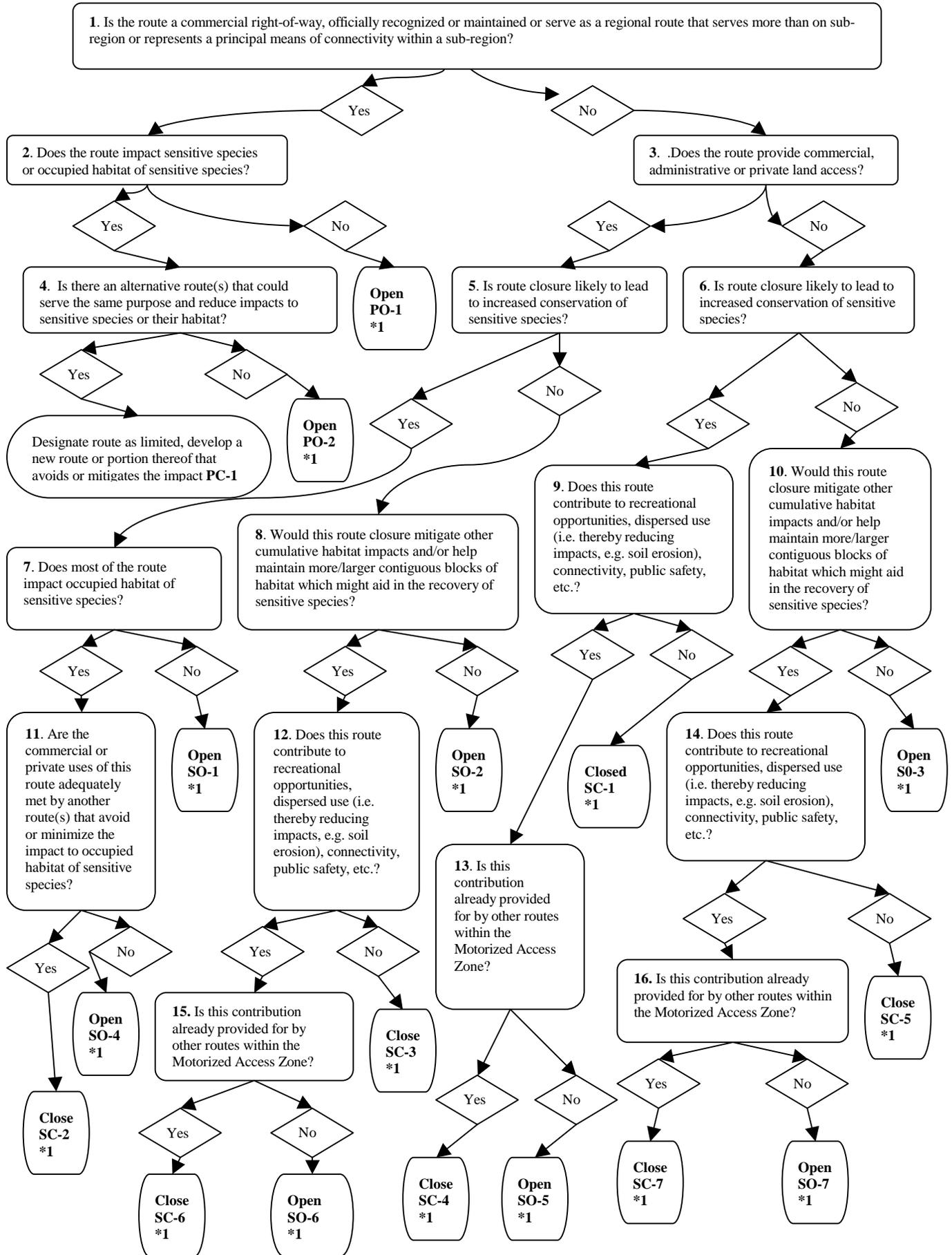
# APPENDICES

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# **APPENDIX A**

## **DECISION TREE**



## West Mojave Route Designation Tree Footnotes

1. **Question 2:** Evaluate and take into account:
  - ?? both season and intensity of use as it relates to impacts to sensitive species or their habitat;
  - ?? the number of sensitive species and/or the amount of sensitive habitat potentially impacted;
  - ?? Other areas already designated or set aside or other measures that may be already contributing to the conservation of these species (e.g. Wilderness Areas and raptor nests, bat grates, etc.)
2. **Question 3:** E.g. utility, military, mining, ranching facilities; monitoring sites; guzzlers).
3. **Questions 8, 10:** I.e. Would this route closure likely lead to a reduction of those indirect impacts suspected of leading to a significant decline in habitat quality (e.g. litter, poaching, harassment, plinking, etc.) or lead to a decline in impacts that directly negatively impact sensitive species?
4. **Questions 11, 13, 15, 16:** When evaluating the duplicity of this route take into consideration the quality of this route, particularly as it relates to public safety.
5. **\*1:**
  - ?? Are there any other special circumstances that would warrant reconsideration? (e.g. unusual public safety issues, Section 106 considerations, current or future community growth/zoning issues, current or reasonably foreseeable land acquisitions or trades (e.g. for mitigation as part of this planning effort or by other resource organizations/agencies), special permits (e.g. Mining Plan of Operations), environmental benefits of a route (e.g. facilitating the maintenance of a guzzler), legal easements, user conflicts, neighboring uses, etc.).
  - ?? Should a limited designation be used in lieu of either an open or closed designation in order to mitigate for impacts?

# **APPENDIX B**

## **SUBREGIONS**

## APPENDIX B SUBREGIONS

One of the first steps in the off road vehicle designation process for the West Mojave was the identification of 20 “subregions” (see also Tables 2-20 and 2-21), which were geographic subdivisions of lands outside of wilderness areas, open areas and ACECs. With the exception of certain BLM Class M lands in Inyo County and in and around the Cady Mountains, and scattered parcels elsewhere, all public lands for which route designations have been recommended are within one of the subregions. The subregions, therefore, constitute the “building block” of the motorized vehicle access network. The following discussion provides a general overview of each subregion, and describes the recreational values present in each.

### B.1 Bighorn Subregion

**General description:** The Bighorn subregion consists of public and private lands found to the southwest of State Highway 247 as it makes a wide arc roughly between its intersection with Camp Rock Road and the community of Yucca Valley, California. The subregion is composed mainly of BLM-managed public lands, with private lands and the San Bernardino National Forest to the west, and primarily private lands to the south. The Bighorn Mountains Wilderness is located within and to the west of the subregion.

The rugged Bighorn Mountains are the eastern foothills of the San Bernardino Mountains. Visitors can experience the rare ecological transition that occurs here, going from yucca and Joshua trees on the desert floor to stands of Jeffrey pine at higher elevations. Mule deer, mountain lions, bobcats, and golden eagles are prominent wildlife of the area. Resident and migratory birds rest along Rattlesnake Canyon Creek, which flows through the wilderness and northward to Johnson Valley. Elevations within the Bighorn subregion range from 3,100 to 6,600 feet.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the subregion are cattle grazing, powerline and pipeline rights-of-way, communication sites, wildlife habitat, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel. The area is a popular destination for National Forest-related recreation to the west, and has been an historical off-highway vehicle destination on the south side.

The designated routes provide for vehicle access to the following subregion features: Rattlesnake Canyon and the San Bernardino National Forest, to the south and east. In addition, the designated routes provide for access to the boundary of the Bighorn Mountains wilderness. Vehicles are not permitted in wilderness, but hiking, camping, and horseback riding are encouraged.

## **B.2 Coyote Subregion**

**General Description:** The Coyote subregion, located approximately 20 miles northeast of Barstow, California, is defined by the Fort Irwin Military Reservation (National Training Center) on the north, Interstate-15 on the south, the Calico Mountains on the southwest, and the Soda Mountains Wilderness Study Area (WSA) on the east. The extensions of this subregion consist primarily of public lands on either side of the Soda Mountains WSA.

Coyote Dry Lake, Alvord Mountain, and a portion of the Calico Mountains are found within the subregion. Elevations range from 1,700 to 3,600 feet.

The Calico Early Man Site is found at the south end of the subregion. This National Register Property was designated as an ACEC by the 1980 CDCA Plan. A management plan was prepared in 1984. The plan designated a network of vehicle access routes, a network designed to protect the evidence of ancient human occupation. This ACEC is located within the Superior-Cronese tortoise DWMA

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are powerline and pipeline rights-of-way, wildlife habitat, cattle grazing, recreational mining, rockhounding, hiking, upland gamebird hunting, and off-highway vehicle use restricted to open routes of travel. The recommended route network provides vehicle access for all of these, as well as for access to each block of non-federal land within the area.

## **B.3 East Sierra Subregion**

**General Description:** The East Sierra subregion, located approximately 10 miles west of Ridgecrest, is defined by Highway 14 on the east; Highway 178 on the south; the Bakersfield BLM Field Office and Sequoia National Forest boundaries on the west; and the Class L and Class M boundary in the Coso Junction and Rose Valley area on the north. The Owens Peak and Sacatar Trail wilderness areas (49,009 and 33,132 acres) are located within this sub-region.

All or parts of three ACECs are found within the East Sierra subregion: Fossil Falls, Sand Canyon and Last Chance Canyon. Route designation for Fossil Falls and Sand Canyon was designated by their management plans and is not changed by the Designation Project or the West Mojave Plan. For the Last Chance Canyon ACEC, Alternative A would adopt the 1985-87 route designations, except for the east access to Mesa Springs, which was recommended for closure by the 1982 ACEC management plan. This network would be effective on an interim basis, until the completion of a collaborative and community-based program to develop a revised motorized vehicle access network for the El Paso Mountains, including all of the Last Chance Canyon ACEC outside wilderness. Participants in this effort would include the City of Ridgecrest, Kern County, BLM and interested stakeholders. When it is completed, the revised network for the El Paso Mountains would be incorporated into the CDCA and West Mojave Plans through plan

amendment.

The region consists primarily of the eastern face of the southern Sierra Nevada. Elevations range from 2,400 feet along Highway 14 to 8,453 feet above sea level on top of Owens Peak. The mountainous terrain has deep, winding, open and expansive canyons, many of which contain springs with extensive riparian vegetation. This area is a transition zone between the Great Basin, Mojave Desert and Sierra Nevada ecoregions. Vegetation varies considerably with a creosote bush scrub and Joshua tree woodland community on the bajadas, and cottonwood and willow riparian vegetation in the canyons at lower elevations. Above 5,000 feet, the canyons and ridges are dominated by pinyon-juniper woodland with sagebrush and grey pine.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are: domestic sheep and cattle grazing, mineral exploration, utility and aqueduct corridor maintenance, communication site maintenance, recreational vehicle touring/sightseeing, dispersed hiking and camping, rock climbing, upland gamebird and deer hunting, bird watching, wildflower viewing, rock hounding, mountain biking and equestrian use. Much of this sub-region is designated as wilderness.

Biological values of special concern include habitat for desert tortoises, bats, Mohave ground squirrels, special status plants, and raptors (both nesting and foraging areas). The area has a number of special habitats (extensive riparian corridors and desert washes and springs). Cultural resources are significant in the area, especially in the canyon bottoms.

The proposed route designations provide for vehicle access to the following features: Owens Peak Wilderness, Sacatar Trail Wilderness, Short Canyon, Sand Canyon, Ninemile Canyon, the LADWP Aqueduct, No Name Canyon, and Indian Wells Canyon. They also provide for vehicle access to dispersed camping throughout the Eastern Sierra. The designations provide access to hiking trailhead opportunities along the boundary of the Owens Peak and Sacatar Trail Wildernesses, Short Canyon, Sand Canyon and No Name Canyon. The designations provide access to staging areas for mountain bike and equestrian recreation throughout the subregion.

The proposed designations provide for vehicle access to and through the subregion's prime chukar, Gambel's quail, and deer hunting areas. Vehicle access to popular rock hounding sites and historic Depression-Era mining sites in Indian Wells Canyon are provided. Also, vehicle access for livestock operations is provided.

The proposed designations provide for vehicle access to every known active mineral exploration area, and provide access along each authorized utility and aqueduct corridor within the area. Vehicle access to all authorized communication sites are also provided for.

## **B.4 El Mirage Subregion**

**General Description:** The El Mirage subregion, located northwest of the community of

Adelanto and due north of BLM's El Mirage Off-Highway Vehicle Area is defined by Edwards Air Force Base to the north and west, State Highway 395 to the east, and the El Mirage Off-Highway Vehicle Area immediately to the south. The western boundary is not well defined, consisting of private and Federal lands. The subregion is located in both Los Angeles and San Bernardino Counties.

The Shadow Mountains, in the southwestern corner, trend northwest-to-southeasterly, and have a maximum elevation of 3,996 feet. The greater area is characterized by bajadas, dry lakebeds, washes, rugged hills, and desert mountains. Vegetation consists of three basic types, creosote bush scrub, saltbush scrub and alkali sink scrub, all of which are typical of the western Mojave Desert. Creosote bush scrub is by far the dominant vegetative type.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are powerline and pipeline rights-of-way, rockhounding, cattle grazing, recreational mining, upland gamebird hunting, hiking and camping, wildlife habitat, and off-highway vehicle use restricted to open routes of travel.

Particular designated routes provide access to various blocks of non-federal land within the area.

## **B.5 El Paso Subregion**

**General Description:** The El Paso subregion, located approximately 10 miles southwest of Ridgecrest, is defined by the El Paso Mountains wilderness area and "old" U. S. 395 to Inyokern on the north, U.S. Highway 395 on the east, the Garlock Road and Red Rock Canyon State Park on the south, and Highway 14 on the west. The subregion is 83,474 acres in size, with 92% federal land (76,998 acres) managed by the BLM and 8% private and state land (6,475 acres). Numerous landowners own the private lands. The El Paso Mountains wilderness is surrounded by this subregion on three sides.

The region consists of prominent volcanic peaks (El Paso Mountains), broad valleys, rolling foothills, badlands, sloping bajadas, braided washes, and narrow canyons. Elevations range from 2,000 feet on the southern boundary to 5,244 feet above sea level on top of Black Mountain. Creosote bush scrub and saltbush scrub are the predominant plant communities in the lowlands, with numerous desert washes, remnant stands of native perennial bunchgrasses on the mountain tops, scattered Joshua tree woodland, and small riparian plant communities at a few of the widely spaced springs.

The El Paso Mountains contain three West Mojave endemic plants: Red Rock poppy, Red Rock tarplant and Charlotte's phacelia. They are well known as a raptor nesting area and support abundant populations of upland game birds.

**Recreation Activities/Resource Uses Overview:** Primary resource uses occurring in this

subregion are: domestic sheep grazing, mineral exploration, utility corridor maintenance, communication site maintenance, and various recreational activities. The BLM's CDCA Plan identified four sites within the subregion with excellent potential for interpretation and education: Burro Schmidt's Tunnel; the El Paso Mountains; the Garlock Fault; and the Goler Grabben.

In particular, the El Paso Mountains are heavily used for a variety of recreational activities. The area contains excellent opportunities for upland game bird hunting (chukar and Gambel's quail) and rock and mineral collecting. Other activities include recreational vehicle touring/sightseeing, dispersed hiking and camping, mountain biking, and equestrian recreation. The subregion is also used for commercial 4-wheel drive and dual sport motorcycle tours and competitive equestrian endurance rides.

## **B.6 Fremont Subregion**

**General Description:** The Fremont subregion is located approximately 30 miles northwest of Barstow, California. U.S. Highway 395 provides access to the Fremont subregion from the west, and State Highway 58 from the south. Several public roads are located within the subregion including Harper Lake Road, Santa Fe Avenue, and Lockhart Road. The Grass Valley Wilderness and the Red Mountain subregion (within BLM's Ridgecrest Resource Area) bound the subregion to the north, State Highway 58 to the south, the Black Mountain Wilderness and Superior subregion to the east, and U.S. Highway 395 to the west. The Fremont subregion encompasses a total of approximately 222,750 acres, which includes 52% (116,274 acres) Federal land managed by the BLM, and 47% (105,494 acres) private and State land.

The southern portion of the Fremont subregion includes Water Valley, a relatively large, open and flat area with scattered low rolling hills. This area also includes about half of Harper Dry Lake, which is the lowest point of the subregion at 2,018 feet. A portion of Harper Lake is within a BLM Area of Critical Environmental Concern (ACEC), in support of the birds and wildlife in that area. Vegetation in the Water Valley consists mainly of creosote bush scrub and saltbush scrub, and some scattered Joshua trees. A large number of unimproved roads cross the valley along with public infrastructure facilities that include high voltage transmission lines, wood pole power lines, and telephone lines. In addition, the valley includes intermixed grazing and ranching lands with associated fences and structures.

The northwest portion of the subregion includes primarily flat terrain, undulating slightly with some prominent rocky buttes. Vegetation is limited to creosote bush scrub, typical of that found throughout the Western Mojave. U.S. Highway 395 bounds this area to the west, and Fremont Peak to the east. Fremont Peak is located within the northern portion of the subregion, and rises abruptly to 4,584 feet above the flat valley surrounding it. The creosote bush scrub community in this area is limited to the bajada and foothills, extending only about one-third of the way to the top of Fremont Peak. The higher elevations of Fremont Peak are rocky hillsides with widely scattered plants of the Mojave mixed woody scrub community. Old mines and OHV tracks are located throughout the Fremont Peak area.

East of Fremont Peak, the northern portion of the subregion includes the Gravel Hills. This topographically varied area consists of low rolling mountains with vegetation limited to typical low desert shrubs found throughout the West Mojave. The far northeast portion of the subregion borders the Black Mountain Wilderness Area, and includes a portion of the Black Mountain ACEC, established for the protection of sensitive cultural resources. The foothills surrounding Black Mountain provide varying topography and areas of sharp relief.

The Barstow woolly sunflower ACEC is located within the Fremont subregion. This ACEC protects a rare West Mojave endemic plant which is found on shallow soils throughout the subregion.

**Recreation Activities/Resource Uses Overview:** Primary resource uses occurring in the subregion include cattle grazing, power line and pipeline rights-of-way, wildlife habitat, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel.

The Fremont subregion includes all or portions of four grazing allotments. These include the following:

- Gravel Hills Allotment (ephemeral designation)
- Harper Dry Lake Allotment (ephemeral/perennial designation)
- Superior Valley Allotment (ephemeral designation)
- Monolith Cantil Allotment (ephemeral designation)

Mineral resources in the subregion include leaseable economic mineral resources (energy, geothermal, oil and gas), primarily at the southeast portion. Small areas in the northern portion of the subregion have the potential for locatable energy and other strategic mineral resources.

Limited areas of known high and very high cultural resource sensitivity occur within the western portion of the subregion. These mostly represent the remains of mining activity and historic travel. The prehistoric remains include a wide range of site types. Areas within the eastern portion of the subregion include known locations of high and very high cultural resource sensitivity/significance, located primarily within the Black Mountain ACEC (established for the protection of prehistoric and Native American resources). The extremely high diversity of site types in this area range from complex to simple, as well as a number of sites listed within a National Register District. Many of the sensitive resources in this area represent historic activities, mostly mining and travel. The prehistoric resources represent habitation, extractive activities, and lakeside adaptations.

The suggested vehicle route network provides recreational OHV enthusiasts access to popular OHV areas at Cuddeback Lake and the Fremont Valley, and also maintains a substantial portion of the dual-sport network that runs throughout the subregion. The suggested routes also provide motorized access for rockhounding, recreational mining, equestrian recreation, recreational vehicle touring/sightseeing, and game bird hunting.

## B.7 Granite Subregion

**General Description:** The Granite subregion, is defined by State Highway 247 on the east, the Stoddard Valley Off-Highway Vehicle Area on the north, private lands on the west, and private lands on the south. The Granite Mountains, Sidewinder Mountain, North Lucerne Valley, and Stoddard Ridge are all found within this subregion. Elevations range from 3,000 feet to 4,900 feet.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are cattle and sheep grazing, powerline and pipeline rights-of-way, rockhounding, communication sites, hiking, camping, wildlife habitat, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel.

Some designated routes provide access to many blocks of non-federal land within the area.

## B.8 Juniper Subregion

**General Description:** The Juniper subregion, located east of Hesperia and south of Apple Valley, is defined by a large block of BLM-managed public lands with the San Bernardino National Forest on the south and private lands on the east, west, and the north. Juniper Flats is a diverse landscape of mountains, canyons, impressive boulder fields and washes. Elevations range from 3,000 feet to 6,000 feet.

Within the subregion is an ACEC for the Juniper Flats Cultural Area. The ACEC contains springs and riparian habitat in a dense stand of junipers and was an important Native American habitation and special use site.

The Willow fire in 2000 burned over the entire region, leading to a temporary closure of the ACEC until vegetative recovery had begun.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are cattle grazing, powerline and pipeline rights-of-way, equestrian riding, wildlife habitat, recreational mining, hiking, hunting, and off-highway vehicle use restricted to open routes of travel. Within Juniper Flats ACEC, open recreational travel routes are posted with markers installed at intervals. Off-Highway Vehicle touring is appropriate here. Several routes in Juniper Flats have been closed to vehicle travel to protect riparian habitat and cultural sites.

There are equestrian riding opportunities in the subregion as well as hiking opportunities. Equestrian use is extensive, though staging areas and parking areas for horse trailers are limited. The washes provide good hiking trails for experiencing natural conditions and for bird watching. A BLM-contracted bird survey in 2001 detected 61 species in Grapevine Canyon and 73 species

in Arrastre Canyon. Mountain and California quail were abundant breeding gamebirds, and the canyons were used extensively by neotropical migrants. Tracks were seen of mountain lions in upper Arrastre Canyon, and badger, deer and bobcat were observed in the two canyons. Several species of reptiles were also observed (Laymon, 2001). The Juniper subregion also provides habitat for the San Diego horned lizard and the gray vireo, two unlisted species proposed for protection in the West Mojave Plan.

Visitors can camp at Bowen Ranch, a private facility, and at locations throughout the National Forest to the south. Many visitors access Deep Creek Hot Springs in the National Forest from the Juniper Flats area. Equestrians access other areas of the National Forest from Grapevine Canyon and utilize a network of trails near Arrastre Canyon and Round Mountain.

Route designation for the Juniper Flats ACEC was prescribed in the 1988 management plan, and will be adopted into the CDCA Plan with this Plan Amendment. The route designations adopted in 1985 and 19087 for the remainder of the Juniper subregion will also be incorporated into the CDCA Plan.

## **B.9 Kramer Subregion**

**General Description:** The Kramer subregion is located south of State Highway 58, between the cities of Hinkley and Kramer Junction. State Highway 58 and Edwards Air Force Base bound the subregion on the north, State Highway 395 on the west, and private lands to the east and south. The Kramer subregion encompasses a total of approximately 133,129 acres, which consists of 84,020 acres (63 percent) federal land managed by the BLM, and 49,109 acres (37 percent) private and State land.

The Kramer subregion is largely an area of alluvial soils and low rolling hills incised by braided, seasonal washes draining toward the Mojave River. Elevations range from 2,273 feet to 3,021 feet. The Kramer Hills, Iron Mountain, and Buckthorn Wash are found within the subregion. The Kramer Hills provide the most topographically varied portion of the subregion, and consist of low-lying, rolling hills composed of a complex of sedimentary and volcanic rocks. Iron Mountain, located in the northeastern portion of the subregion, also provides prominent areas of topographic relief. Most of the subregion is covered with creosote bush scrub and saltbush scrub plant communities. Joshua trees are scattered throughout the Kramer Hills and upper washes, in association with creosote and cholla.

State Highway 58 on the north and U.S. Highway 395 on the west provide access to the subregion. Several public roads are located within the subregion including Shadow Mountain Road, Harper Lake Road, and Helendale Road.

**Recreation Activities/Resource Uses Overview:** Current land uses include routes for several power lines and gas pipelines, as well as scattered homesteads. Recreational uses within the subregion include primarily OHV activity, and rockhounding in the Kramer Hills. Primary

recreation activities and other resource uses occurring in the subregion are power line and pipeline rights-of-way, wildlife habitat, mining, hunting, and off-highway vehicle use restricted to open routes of travel.

The Kramer subregion includes portions of two grazing allotments. The majority of the subregion falls within the Stoddard Mountain grazing allotment. The southernmost portion of the subregion includes a small portion of the Buckhorn Canyon Allotment.

Mineral resources within the subregion are located primarily within Iron Mountain and the Kramer Hills. Gold has been produced at the Kramer Hills, which also includes occurrences of uranium, magnesite and feldspar. Considerable exploration of uranium occurred in the Kramer Hills during the 1970s. At Iron Mountain, limestone, marl, quartzite, and asbestos have been produced. In addition, there are occurrences of clay, copper, and mica in this area. The U.S. Geological Survey has classified the subregion as prospectively valuable for sodium, potassium, oil, and gas. Mining and homestead sites established in the late 19th and early 20th century exist in the area, some of which may have historical significance.

The suggested route network provides for vehicle access to the Kramer Hills, Iron Mountain, and other areas located throughout the Kramer subregion; provides access to sites appropriate to recreational target shooting; provides opportunities for general dispersed camping and back country touring; provides access through each of the primary upland gamebird hunting areas; provides access to popular rockhounding locations; provides access to known areas important for recreational mining; provides motorized access facilitating mountain bike recreation throughout the subregion; maintains vehicle access for a variety of terrain, a variety of trip lengths and access to remote areas for the equestrian community; provides the recreational OHV enthusiasts a variety of opportunities from which to choose, and it maintains a substantial portion of the dual-sport network (for on-street/off-street motorcycles) which runs throughout the subregion.

## **B.10 Middle Knob Subregion**

**General Description:** The Middle Knob Subregion, located approximately 40 miles southwest of Ridgecrest, is defined by Highway 14 on the east; Highway 58 on the south; the CDCA boundary on the west; and the Jawbone Butterbrecht ACEC on the north. Numerous landowners own the private lands.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the subregion are recreational vehicle touring/sightseeing (such as in the proposed Middle Knob ACEC), camping and hiking (such as within the proposed Middle Knob ACEC and the Pacific Crest National Scenic Trail), hunting, domestic sheep and cattle grazing, utility corridor maintenance, communication site maintenance, wind energy, and mineral exploration.

In addition, the subregion has a variety of special habitats (pavement plains, vernal pool, springs and grey pine woodland) and artificial waters (small game guzzlers). Biological values of special concern include habitat for desert tortoises, Mohave ground squirrels, raptors (nesting and foraging areas), and special status plants. Further, cultural resources are significant in the subregion.

## **B.11 Morongo Subregion**

**General Description:** The Morongo Subregion is located east of Highway 62 and west of Joshua Tree National Park. Much of the subregion is located in the Little San Bernardino Mountains. Elevations in the area range from 1700 feet on the canyon floor to 5000 feet at the ridge tops.

The area is noted as a breeding location for many riparian birds, the site of the endangered triple-ribbed milkvetch, and a critical watering area for bighorn sheep and mule deer that live in the region.

The subregion has a desert climate with hot, dry summers and moderate winters. Rainfall is scarce, with an average annual total of only 8 inches. Big Morongo Creek emerges from the mountains northwest of Morongo Valley and flows intermittently on the surface of the creek bed. The water percolates quickly into sandy soils as it crosses the Morongo Basin, but as it enters Big Morongo Canyon it encounters alternating layers of sandy and cemented rock. The harder layers bring the water to the surface in a series of perennial springs, whose waters disappear into the sandy layers farther downstream. Within the Subregion are some of the oldest rocks in the state of California, dated at almost two billion years. They consist of former granitic rocks that have been altered by heat and pressure to form gneisses and schists.

**Recreation Activities/Resource Uses Overview:** Within the subregion there exists habitat qualities which have earned much of the area both national and international reputation among bird watchers. Big Morongo Canyon is a desert oasis with perennial surface water in springs and streams that support an extensive willow and cottonwood forest.

Big Morongo Canyon ACEC, located within the subregion, is a 28,274 acre wildlife refuge and National Watchable Wildlife Site. Preserve programs and displays seek to provide educational opportunities for children, youth, and adults to further their understanding of desert and marsh ecosystems, and the function and importance of a preserve on local, regional, and global levels. Numerous trails, including boardwalk trails through the marsh and stream habitats, meander through the Preserve, which is managed by the BLM.

## **B.12 Newberry-Rodman Subregion**

**General description:** The Newberry/Rodman subregion, located just south of Newberry Springs, California, is defined by Interstate-40 on the north, the Twentynine Palms Marine Corps

Base and the Johnson Valley Off-Highway Vehicle Area on the south, and Camp Rock Road on the west. The subregion is 81,585 acres in size, with 73.6% Federal land (60,012 acres) managed by the BLM and 26.3% private and State land (21,481 acres). Catellus Development Corporation is the primary private landowner.

The general region consists of two small rugged mountain ranges and the surrounding foothills, valleys, sloping alluvial fans, washes, lava flows, and canyons. The entire area shows evidence of volcanic geologic activity, which provides for dramatic views. Elevations range from 1,800 feet to 5,100 feet in the Newberry Mountains. Creosote bush scrub is the predominant plant community in the lower elevations, with a desert willow-dominated plant community found in the dry desert washes, and remnant stands of perennial bunchgrasses in the higher elevations. Joshua tree woodland and small, riparian plant communities may also be found here in select locations. Many raptor nesting sites are found in the region. Kane Wash, which runs in a southwesterly to northeasterly direction, bisects the subregion, separating the Newberry Mountains wilderness and the Rodman Mountains wilderness. Access to this subregion is from Interstate-40, a power line road to the southeast, and Camp Rock Road on the west side.

A wide diversity of cultural site types are found here, some of which are associated with a National Register District. The Serrano tribe lived in the region, resulting in rock art and other cultural sites. Parts of the Rodman Mountains are designated as an ACEC to protect cultural resources. Most of this area is within the Rodman Mountains Wilderness. In addition to the desert tortoise, the prairie falcon and the golden eagle are found in the subregion, and the area is a potential reintroduction area for bighorn sheep. The Ord Mountain grazing allotment is located in the subregion. Much of the area is highly scenic in character, and both hiking/backpacking and upland gamebird hunting opportunities are plentiful.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and other resource uses occurring in the subregion are cattle grazing, mineral exploration/production, utility corridor maintenance (2 major utility corridors), communication site maintenance, recreational vehicle touring/sightseeing, dispersed hiking and camping, equestrian recreation, upland gamebird hunting, and rockhounding.

The Ord grazing allotment is located within this subregion. This allotment consists of 154,848 acres, of which 14,820 are private.

In regards to mineral values in the subregion, construction materials (crushed rock, sand and gravel) are being produced from the northwest area of the Newberry Mountains (Cal West Quarry). There has been production of placer gold at the Camp Rock mine. Cinders have and are being produced from Pipkin cinder cone (Malpais Crater) in the south-central part of the subregion. Borates (Fort Cady Minerals) and specialty clays (Rheox) are being produced in the eastern part of the subregion. BLM classified the western portion of the subregion as having a moderate to high potential for the occurrence of copper, silver, lead, tungsten and gold based on past exploration and production. The eastern portion of the subregion has a high potential for borate minerals and clay deposits.

A utility corridor runs along the northern boundary of the subregion, while another utility corridor crosses from north to south.

Excellent hiking/backpacking and upland game hunting opportunities exist in the Newberry and Rodman Mountains. There are three highly rated interpretive sites within the subregion, the Newberry Mountain Caves, Pipkin Cinder Cone, and the Rodman Mountain petroglyphs. Other federal plans relating to this subregion include the Johnson Valley Off-Highway Vehicle Area Management Plan.

The suggested route network provides for vehicle access for these resource uses and recreational activities. Further, they provide access to each block of non-federal land within the subregion.

### **B.13 North Searles Subregion**

**General Description:** The North Searles subregion, is located approximately 28 miles northeast of Ridgecrest, immediately north of Pioneer Point and the community of Trona. Slate Range Crossing on the north, the crest of the Slate Range on the east, the Inyo-San Bernardino County line on the south, and the China Lake Naval Air Weapons Station (NAWS) boundary on the west define the subregion. Numerous landowners own the private lands. The Great Falls Basin ACEC, Argus Mountains wilderness and the Great Falls Basin Wilderness Study Area are surrounded by this subregion on three sides.

The general region consists of the upper part of Searles Valley, part of the ancient lakebed above Searles Lake. It is encircled by two prominent mountain ranges on the west, and east and north - the Argus and Slate ranges, respectively. The area is made up almost entirely of gravel, sand, and silt lakebed sediments. Elevations start as low as 1600 feet on the southern Inyo-San Bernardino County boundary, climbing to more than 5300 feet above sea level to the west in the Argus Range and to 4950 feet above sea level in the east along the crest of the Slate Range. Due to its location along the highway to Death Valley National Park (Highway 178) and close proximity to the community of Trona, visitation is generally high throughout the year, especially in the cooler months. Mojave saltbush and creosote bush scrub are the predominant plant communities in the lowlands, with rabbitbrush dominating communities in the washes. Joshua trees are found in sparse stands at a few locations at upper elevations in the Argus and Slate ranges. Small riparian communities exist at isolated seeps and springs throughout the Argus Range. These communities, made up mostly of willow and baccharis, comprise the sole critical habitat for a threatened species, the Inyo California towhee. This is a subspecies of towhee endemic only to the southern Argus Range. The many small seeps and springs also attract upland game hunters, as well as more casual visitors from the surrounding local area.

In the fall of 1999, the BLM initiated a series of yearly cleanups of a popular party place at the base of the falls in Great Falls Basin with volunteers from several Trona community service

organizations and local businesses. Volunteers picked up trash, sifted for glass, dispersed fire rings, sandblasted graffiti, rehabilitated hill climbs, and donated more than \$20,000 worth of boulders, heavy equipment and equipment operators to block off further vehicle trespass to Austin Springs, the base of the falls, and to various unauthorized hill climbs in the immediate vicinity. To date, the project has been very successful in implementing the many provisions of the ACEC plan for the area. Vehicle access also has been restricted at several other springs in the area, notably North Ruth, Nadeau, and Christmas to prevent overnight camping within 200 yards of a wildlife watering source per California State Fish and Game regulations (California Administrative Code 730(6)(b)). Fence enclosures have been built around other springs in the area to protect towhee critical habitat from damage by wild burros.

The subregion contains the Indian Joe Canyon Ecological Reserve, a Department of Fish and Game property protecting significant riparian habitat.

Access to this subregion is from Highway 178 and its extension, the Trona-Wildrose road.

**Recreation Activities/Resource Uses Overview:** Casual OHV recreational use involving dune buggies, quads, and motorcycles takes place within the subregion. The majority of these users are local residents. They come from Trona and the associated communities of West End, Argus, and Pioneer Point, or from Homewood Canyon. Gem and mineral collecting also occurs throughout the Argus and Slate Ranges. In October, the Searles Valley Gem and Mineral Society puts on a Gem and Mineral Show. The subregion is also used for interpretative museum and commercial 4-wheel drive, dual sport motorcycle and equestrian tours, as well as for equestrian competitive endurance rides.

Numerous dispersed camping opportunities exist along the route network. Vehicles are generally permitted to pull off within 300 feet of any route in the area to make camp with one exception. California State Fish and Game Code regulations specifically prohibit overnight camping within 200 yards of a wildlife-watering source. While some staging areas off of Highway 178 exist, most off road vehicle enthusiasts stage from their own homes in the adjacent communities of West End, Argus, Trona, Pioneer Point, and Homewood Canyon. There are many unmaintained dirt roads that directly connect these communities to the route system in the area. For these users, there is no need to go on pavement except to cross the Trona-Wildrose road occasionally to access routes on the opposite (east) side of Highway 178. Virtually all trails in this subregion are full-size 4x4 as opposed to single-track routes. Many of these trails offer challenges requiring strong 4x4 driving skills, particularly in rocky and mountainous stretches of the Slate and Argus Ranges.

Other uses occurring within the subregion are birdwatching, climbing, equestrian rides, hiking, target shooting, hunting, and rockhounding. The Kerncrest Audubon Society participates in regular bird censuses of Indian Joe Canyon and the Great Falls Basin is popular with backpackers, including the Sierra Club and Desert Survivors.

## **B.14 Ord Subregion**

**General Description:** The Ord subregion, located southeast of Barstow, California, is defined by State Highway 247 on the west, the U.S. Marine Corps Firing Range on the north, Camp Rock Road on the east, and greater Lucerne Valley on the south. The Newberry Mountains Wilderness lies immediately to the northeast, the Johnson Valley and Stoddard Valley Off-Highway Vehicle Areas to the southeast and northwest respectively, and private land of Lucerne Valley to the south.

Apart from the portion north of Power Line Road and a small portion to the south, the subregion consists of the BLM's Ord Mountain Route Designation Pilot Planning Unit. The Planning Unit consists of approximately 126,000 acres, located between the Stoddard Valley and Johnson Valley Off-Highway Vehicle Areas. As such, it is a popular connector between the two. In early 1995, the Ord Mountain Pilot Project was initiated as an opportunity to conduct OHV route planning and vehicle access planning for the West Mojave Plan.

The subregion includes three important desert peaks in close proximity to one another, Ord Mountain, East Ord Mountain, and West Ord Mountain; as well as Daggett Ridge and portions of East Stoddard Valley and North Lucerne Valley. Elevations in the area range from 2,500 feet to 6,309 feet above sea level.

The Ord Mountain area consists of valleys, rolling and jagged hills, sloping bajadas, braided washes, and barren playas. The creosote brush scrub plant community is the dominant vegetative assemblage found within the subregion. Plant species within this community include creosotebush, burrobrush, Mormon tea, allscale saltbush, golden cholla, and beavertail cactus. A BLM sensitive species, the Mojave monkeyflower, is found here.

Reptile fauna found in the area include desert tortoise, desert banded gecko, desert horned lizard, rosy boa, and Mojave rattlesnake. Notable avian species include golden eagle, prairie falcon, roadrunner, burrowing owl, and loggerhead shrike. Mammalian fauna include desert woodrat, antelope ground squirrel, black-tailed jackrabbit, kit fox, and coyote.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are cattle grazing, powerline and pipeline rights-of-way, rockhounding, rock climbing, communication sites, camping, hiking, wildlife habitat, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel.

The Ord Planning Unit consists of a precise vehicle network, restricting access to only essential routes of travel; all other historical routes are either closed or are limited to access by certain individuals for specific reasons, such as maintenance crews and ranch operators.

The recommended route network provides for vehicle access to the following features.

Stoddard Valley Off-Highway Vehicle Area, to the west, and Johnson Valley Off-Highway Vehicle Area, to the southeast. In addition to these, the historic Ord Mountain Road and the Daggett Wash Road are accessible by four-wheel-drive vehicles and motorcycles. Mining operators used these two historic roads to haul their ore to the railhead in Daggett, California. Hercules Rock, on the south of the subregion, is a popular destination for rock climbers.

In addition, the network provides for access to the boundary of the Newberry Mountains wilderness, to the east; vehicular travel is not permitted within wilderness, but hiking, camping, and horseback riding are encouraged.

Many visitors to this area take advantage of the many hunting opportunities for small game birds found here. Hunting is enhanced in the region by a variety of water sources to be found here, including springs and guzzlers.

The recommended route network also provides access to various blocks of non-federal land within the area.

## **B.15 Pinto Subregion**

**General Description:** The Pinto Mountain subregion, located immediately southeast of Twentynine Palms and north of Joshua Tree National Park, is defined by State Highway 62 to the north, and Joshua Tree National Park, to the east, west, and south.

The smaller, north-south-trending Twentynine Palms Mountains are located in the western portion of the region and the larger, east-west-trending Pinto Mountains cover its southern half. Historic mines associated with the Old Dale Mining District cover the eastern half of the area. Sand dunes are found to the northeast of the subregion, the greater part of which is within the Sheephole Valley Wilderness. The Bullion Mountains are located directly to the north.

Most of the area is dominated by steep but generally rounded hills, vegetated with the creosote bush scrub community. Vegetation becomes more diverse in the washes, consisting of smoke tree, catclaw and desert willow. Stands of Mojave yucca exist within many of the interior valleys. Elevations range from 1,300 to 4,500 feet.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in the area are cattle grazing, powerline and pipeline rights-of-way, wildlife habitat, rockhounding, mining and recreational mining, hunting, and off-highway vehicle use restricted to open routes of travel.

Some of the designated routes provide access to each block of non-federal land within the area.

## **B.16 Red Mountain Subregion**

**General Description:** The Red Mountain subregion, located approximately 20 miles southeast of Ridgecrest, is defined by U.S. Highway 395 and the Kern County line on the west; the Spangler Hills Off-Highway Vehicle Management Area on the north; the China Lake Naval Air Weapons Station B Range on the east; and the Barstow Field Office management boundary on the south. 120,199 acres in size, the area is 82% (98,043 acres) Federal land managed by the BLM and 18% (22,156 acres) private and State land. Numerous landowners own the private lands. The subregion borders the Golden Valley and Grass Valley wilderness areas.

Elevations in the subregion range from 2,568 feet on the Cuddeback Playa to 5,260 feet on Red Mountain. Creosote bush and Mojave saltbush are the predominant plant communities in the lowlands, with cheesebush-dominated plant communities found in the washes, remnant stands of native perennial bunch grasses on the mountaintops and scattered Joshua tree woodland.

**Recreation Activities/Resource Uses Overview:** The subregion is used for commercial 4-wheel drive and dual sport motorcycle tours and competitive equestrian endurance rides. Further, additional activities in the subregion include commercial filming, mineral exploration, utility corridor maintenance, recreational vehicle touring/sightseeing, dispersed hiking and camping, and upland game bird hunting.

Superior Valley, Monolith Cantil, Lava Mountains, and Pilot Knob are grazing allotments located within the subregion. The first three are ephemeral sheep allotments, and the Pilot Knob Allotment is an ephemeral cattle allotment, which is currently leased to the Desert Tortoise Preserve Committee. Sheep grazing is not currently allowed in the majority of tortoise critical habitat.

The BLM's mineral resource potential classification shows a moderate potential for the occurrence of placer gold deposits in the Randsburg and Atolia mining districts. A high potential for lode and placer gold occurs immediately outside the south boundary of the subregion. There are no active mining operations in the Red Mountain Subregion based on reports from the California Division of Mines and Geology filed under the California Surface Mining and Reclamation Act of 1975 (SMARA). BLM records show, as of March 2001, there are eight lode-mining claims north and west of Randsburg, and two lode claims located on some older workings on a small hill west of the Black Hills.

There are approximately 246 placer mining claims in the subregion. The placer claims are clustered in the center of the subregion, with dense clusters in the Atolia mining district and at the Summit Diggings area south of the Summit Range. Small clusters of placer claims are also located in the center of the subregion near Blackhawk Well. Most of the placer mining claims are association placers, each aggregating about 160 acres. As of March 2001, there were five plans of operation and eleven notice level operations authorized by BLM in the subregion pursuant to 43 CFR 3809. Most were approved for small placer operations in the Summit Diggings area or assessment work in the remaining area of the subregion.

A utility corridor crosses the western portion of the subregion, running parallel to Highway 395. The corridor contains existing facilities.

Various opportunities for outdoor recreation are present in the subregion. Some of the best upland game bird hunting in the eastern Kern and San Bernardino Counties is available in the Lava Mountains, Red Mountain and Blackwater Well areas. During years when winter rainfall is suitable, seasonal wildflower displays are exceptional in the Golden Valley and Grass Valley areas. Red Mountain Spring (formerly called Squaw Spring) and Steam Well are two cultural heritage sites in the subregion. Both of these sites contain rock art. A route proposed for the California Statewide Discovery Trail crosses from south to north.

Other recreational opportunities and experiences available in the Red Mountain subregion include dispersed camping; four wheel drive and motorcycle touring; target shooting; rock hounding; hiking in the Golden Valley wilderness and climbing Red Mountain; mountain biking and equestrian recreation; and land sailing on Cuddeback Dry Lake. Several outfitters also use the area for recreational activities operated under recreation use permits including equestrian endurance rides, dual sport events and jeep tours.

Commercial filming in the subregion occurs primarily on Cuddeback Dry Lake where an average of 15 permits a year is issued for advertising and motion picture projects.

## **B.17 Ridgecrest Subregion**

**General description:** The Ridgecrest subregion, located south and east of the city of Ridgecrest, is defined by U.S. Highway 395 and the boundary of the Spangler Hills Open Area on the south; the city of Ridgecrest and the China Lake Naval Air Weapons Station on the north and west; and BLM Route RM 138 on the east. 22,465 acres in size, the area is 94% (21,115 acres) Federal land managed by the BLM and 6% (1,350 acres) private land. Numerous landowners own the private lands.

The general region consists of the rolling Rademacher and Spangler Hills. Sloping bajadas, braided washes, and narrow canyons characterize the general topography. Elevations range from 1,900 feet at the northeastern point of the subregion, to over 3,400 feet above sea level in the hills directly south of the City of Ridgecrest in the western portion of the subregion. Creosote bush scrub is the predominant plant community in the subregion, with cheesebush-dominated plant communities found in the washes, remnant stands of native perennial bunch grasses on the mountain tops and scattered Joshua trees.

**Recreation Activities/Resource Uses Overview:** The subregion contains two livestock grazing allotments. The Spangler Hills Allotment is located in the eastern-most portion of the subregion. This allotment is identified by the 1980 Desert Plan as an ephemeral allotment requiring a minimum of 200 pounds of dry vegetation per acre before the livestock are turned out to graze. The Cantil Common Allotment, an ephemeral grazing allotment, covers the remainder

of the subregion. Sheep grazing occurs in the area in the spring when the annual vegetation meets the minimum requirements. The northern portion of the subregion contains a portion of the Centennial Wild Horse and Burro Herd Management Area.

The BLM's Mineral Resource Potential Classification identifies most of the subregion as having a moderate potential for the occurrence of placer and lode gold deposits, with a high potential for placer, principally hydrothermal lode gold deposits, identified in the western area of the subregion (Rademacher Mining District). In addition, there is a high potential for construction aggregates (sand and gravel) in the western portion of the subregion, with aggregates mined at the Bowman and Inyokern pits outside the western boundary. There are no active mining operations in the subregion filed under the California Surface Mining and Reclamation Act of 1975 (SMARA), based on reports from the California Division of Mines and Geology. Some interest has been expressed in the far western portion of the subregion as evidenced through mining claim locations. BLM records show, as of March 2001, that there are six lode-mining claims and six placer mining claims in this portion of the subregion in the Rademacher Hills. There is one plan of operation and one pending (April 2001) notice level operation in the Rademacher Hills area of the subregion filed pursuant to the regulations at 43 CFR 3809. There are no aggregate resources being developed within the subregion, and the subregion is not valuable, prospectively or otherwise, for Leasing Act minerals.

A utility corridor crosses the northern portion of the subregion, in an east/west direction. This corridor contains existing facilities.

The Ridgecrest Subregion supports a wide variety of recreation opportunities and experiences including, but not limited to, four wheel drive and motorcycle touring, hunting and target shooting, paintball, stargazing, photography, exploring mining sites, social gatherings, rockhounding, hiking and running, limited dispersed camping, mountain biking and equestrian recreation.

The most prominent recreation feature in the subregion is the Rademacher Hills, located south of the City of Ridgecrest. The Rademacher Hills offer a 12.5-mile network of trails open to hiking, jogging, horseback riding and mountain biking. This area forms the backdrop for the City of Ridgecrest and provides an urban-public land interface that is fast becoming a popular recreation site for local residents. Motorized trails through the Rademacher Hills provide access from the City of Ridgecrest to the 57,000 acre Spangler Hills OHV Area. A link to the Statewide Motorized Discovery Trail is proposed to connect the trail to the City of Ridgecrest through the Rademacher Hills.

The subregion is also used by a variety of recreation permit holders who use the public lands for mountain bike races, ultra-marathon running events, high school cross country running competitions, equestrian trail rides and endurance events, dual sport motorcycle tours, jeep tours, and other activities.

The area is used for commercial 4-wheel drive and dual sport motorcycle tours and

competitive equestrian endurance and mountain bike events.

## **B.18 Sleeping Beauty Subregion**

**General Description:** The Sleeping Beauty subregion, located approximately 3 miles west of Ludlow, California, is defined by Interstate-40 on the south by the northern edge of the public land Multiple Use Class L (limited) boundary on the north

The northern half of the subregion includes Sleeping Beauty Mountain, a part of the southern Cady Mountains. The southern half is a large, sweeping bajada sloping southward to Interstate 40. The larger washes draining the southern Cady Mountains support disjunct occurrences of white-margined beardtongue, a rare plant. Elevations within the subregion range from 1,300 to 3,980 feet.

Access to this subregion is generally from Interstate 40, via Lavic off-ramp.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and resource uses occurring in this subregion are cattle grazing, power line and pipeline rights-of-way, wildlife habitat, hiking and camping, recreational prospecting and mining, vehicle touring, utility corridor maintenance, and mineral exploration.

## **B.19 South Searles Subregion**

**General Description:** The South Searles subregion, is located approximately 8 miles northeast of Ridgecrest, immediately north of Randsburg Wash Road and the Spangler Hills Open Area. Randsburg Wash Road defines the subregion on the south, the China Lake Naval Air Weapons Station (NAWS) boundaries on both its east and west sides, and by the Inyo-Kern County line on the north. Numerous landowners own the private lands. The Trona Pinnacles National Natural Landmark and ACEC is surrounded by the subregion on all four sides.

The general region consists of the lower part of Searles Valley surrounding Searles Lake. It is encircled by two prominent mountain ranges, the Argus and Slates, on the west and east, and by the Spangler Hills on the south. The area abuts the upper half of Searles Valley above Searles Lake to the north - an area covered by the North Searles Subregion. The area is made up almost entirely of gravel to sandy to silty lakebed sediments. Elevations within this subregion are generally quite low, keeping to within 1600-2500 feet on the valley floor, to more than 2800 feet at selected high points in the Argus Range. Visitation is generally high, particularly in cooler, winter months, due to the presence of the Trona Pinnacles, and the subregion's general location along a highway to Death Valley National Park (Highway 178) and close proximity to the communities of Trona and Ridgecrest. Mojave saltbush and creosote bush scrub are the predominant plant communities on the valley floor, with rabbitbrush dominating plant communities in upper elevation washes.

Access to this subregion is primarily from Highway 178 and its Trona-Wildrose extension. The subregion can also be accessed from the Randsburg-Wash road, north of the Spangler Hills Open Area.

**Recreation Activities/Resource Uses Overview:** In general, the area absorbs a lot of casual OHV recreational use involving dune buggies, quads, and motorcycles. Most of these users are local residents. They come from Trona and the associated communities of West End, Argus, and Pioneer Point, or from Homewood Canyon. Some gem and mineral collecting also occurs, primarily in the foothills of the Argus Range on the western edge of the subregion. In October, the Searles Valley Gem and Mineral Society put on a Gem and Mineral Show. The subregion is also used for interpretative museum and commercial 4-wheel drive, dual sport motorcycle and equestrian tours.

Vehicles are permitted to pull off within 300 feet of a route to make camp in the subregion, except in the vicinity of the Pinnacles where visitors are asked to camp only in already impacted sites. Laws and regulations prohibit camping or staying within 200 yards of waters, which includes the natural seeps and springs in the Argus Range. Currently, all access routes on public land in this subregion comply with applicable law.

Most trails in the subregion are full-size 4x4 as opposed to quad or single-track routes, which exist only in the extreme southwestern corner of the subregion. While some staging areas off of Highway 178 exist, most off-road vehicle enthusiasts probably stage from campsites within the Trona Pinnacles or from various campsites within the Spangler Open Area just outside the subregion. Local people most likely enter this area directly from their homes in West End, South Trona, and Argus. For access to good riding areas, they must cross highway 178, traveling approximately 7 miles south of town to reach the Pinnacles or more than 12 miles to reach the Spangler Open Area.

The area offers very few opportunities for backcountry touring and sightseeing outside of the Trona Pinnacles National Natural Landmark. Climbers have not been observed in great numbers within the subregion. Equestrian use is tied to spring sources or in the case of organized, commercial and/or competitive events to regular vehicle routes for staging the necessary water and periodic veterinarian checks. Most people who hike in the area are locals who are simply exploring their own backyards.

Access to hunting areas is limited within the subregion. Hunting thus requires a good deal of hiking in the subregion. Hunters are known to pursue chukar over steep rocky terrain for long distances. Chukar and California quail are the primary targets although jackrabbits and mourning dove are hunted as well.

Non-motorized trails for mountain bikers do not exist in the area. However, mountain biking is popular along Highway 178 and with campers at the Pinnacles.

Rockhounding occurs throughout the area, in specific localities, mostly in the foothills of

the Argus and Slate Ranges. During October's Gem and Mineral Show, the Searles Valley Gem and Mineral Society offers information about and several tours to various collecting and other sites of local interest in the valley.

Target shooting occurs throughout the area and is generally permitted wherever the terrain offers a safe backstop. However, the ACEC Plan for The Trona Pinnacles specifically prohibits target shooting anywhere within the vicinity of the National Landmark.

## **B.20 Superior Subregion**

**General Description:** The Superior subregion, located north of Barstow, is bounded by Fort Irwin (National Training Center) and China Lake Naval Weapons Center on the north, the Fremont subregion and Black Mountain Wilderness on the west, and private lands and Interstate-15 on the south. The subregion is 271,528 acres in size, with 192,877 acres (72 percent) of Federal land managed by the BLM, and approximately 77,359 acres (28 percent) either private or State owned land. The major private landowner is the Catellus Development Corporation.

The Superior subregion encompasses numerous features that include Mount General, the Waterman Hills, Mud Hills, Fossil Canyon, Owl Canyon, and the Inscription Canyon area, known for its great quantity of rock art. The northern portion of the Superior subregion includes the Superior Valley, an area characterized by low-lying, flat open areas containing two dry lakes: an unnamed, small dry lake at the western edge and the larger Superior Dry Lake at the eastern boundary. The central portion of the subregion includes the Black Mountain Lava Flows, Lane Mountain, and the Paradise Range.

The Rainbow Basin, located in the south-central portion of the subregion, is an ACEC and is not included in the Superior subregion. Access to areas within the Rainbow Basin (which include the Mud Hills, Fossil Canyon, Owl Canyon campground, and the Rainbow Basin National Natural Landmark) is obtained via the Superior subregion. The southern portion of the subregion encompasses Mud-Water Valley, Waterman Hills, and outlying areas of Barstow. Elevations range from approximately 2000 feet in the southeast to 4,522 feet at the peak of Lane Mountain in the central-eastern portion of the subregion.

Vegetation in the northern portion of the subregion is similar to other areas in the West Mojave. In the Lane Mountain area, vegetation consists of creosote/mixed desert scrub association with scattered Joshua Trees and golden cholla. The Paradise Range in the northeast include a series of volcanic, rocky hills that exhibit little vegetation on the slopes, with the exception of scattered creosote. Vegetation is similarly sparse within the Black Mountain Lava Flows at the central portion of the subregion. The vegetative cover in the southern portion of the subregion generally is sparse, and includes occasional Joshua Trees.

The Superior subregion is criss-crossed by a number of roads, mainly unimproved. Access

from population centers to the Superior Valley in the north is provided via Copper City Road, an improved road via Fort Irwin Road, and a paved highway. Due to these access routes, the Superior Valley is easily reached, as demonstrated by the noticeable presence of recreational visitors in this portion of the subregion. Access to the subregion from the south is obtained from Interstate 15, State Route 58, and Irwin Road.

**Recreation Activities/Resource Uses Overview:** Primary recreation activities and other resource uses occurring in the subregion are rockhounding, camping, picnicking, powerline and pipeline rights-of-way, mining and recreational mining, hunting, and off-highway vehicle use.

Excellent opportunities for both hiking and backpacking exist in the Black Mountains, Opal Mountains, and Calico Mountains. Major activities include camping, rockhounding, hunting, and motorcycle free play. The hard, smooth surfaces of two dry lakes in the Superior Valley provide excellent conditions for land sailing. The OHV community also utilizes this portion of the subregion, although the flat terrain is less than ideal for their activities.

The suggested vehicle route network provides the recreational OHV enthusiast an expansive variety of opportunities from which to choose. Routes vary from long, flat graded utility corridor routes or the flats of Superior Valley; technical jeep routes in the Calico Mountains; technical single-track motorcycle routes in the Mud Hills; lengthy remote touring routes around the Black Mountain wilderness or through the Grass Valley wilderness corridor; short quickly accessible routes into the Mitchell Range or Waterman Hills; and those that provide a loop opportunity to those that are "dead-ends".

Additionally, the suggested route network provides access to a variety of destinations ranging from historic mining sites (e.g. Calico Mountains), prehistoric cultural zones (e.g. Inscription Canyon), upland springs (e.g. Sweet Water Spring), geologically unusual areas (e.g. Rainbow Basin), rock-hounding areas (e.g. Opal Mountain), recreational mining (e.g. Coolgardie area); and mountain bike recreation throughout the subregion.

# **APPENDIX C**

## **ROUTE DESIGNATION MAPS AND TABLES**

## **C.1 ROUTE DESIGNATION MAPS**

Maps of the route network can be found on the attached compact disk (CD Rom). Maps are full color, 1:24,000 scale USGS topographic quads; where applicable, the route number is attached for easy cross-referencing to the tables presented in Section R.4. Maps can be viewed using the Adobe reader on your home or local library computer. You will find that this will enable you to view any section of the route network at a variety of scales, and to print your own maps from the attached files. Please note that an index map is also provided. Subregion and motorized access zone boundaries are indicated on the map.

## **C.2 ROUTE DESIGNATION TABLES**

The tables presented on the following pages address each of the more than 5,200 specifically enumerated motorized vehicle routes that are found within the ten subregions for which a revised network is being proposed to replace the existing 1985/87 motorized vehicle access network. A separate table is presented for each motorized access zone within each subregion. The tables identify, for each route, the following:

- ?? Universal Trans Mercator (UTM) coordinates for the route,
- ?? The route number,
- ?? The decision tree code (when the decision tree process was applied to a particular route, and the decision branch followed to its end, a distinctive code was assigned to that end point, allowing the documentation of the thought process that led to the final recommendation),
- ?? Whether the route is recommended as open or close, and
- ?? Reasons for the open or closed recommendation.