

Kingston Range

CDCA 222

KINGSTON RANGE WILDERNESS STUDY AREA (WSA)

(CDCA-222)

1. THE STUDY AREA — 300,549 acres

The majority of the Kingston Range WSA is located in northeastern San Bernardino County, although the study area's northwest corner extends into Inyo County. The WSA is located near the eastern edge of the California Desert Conservation Area (CDCA). The nearest communities are Baker, California, 50 miles southwest; Barstow, California, 110 miles southwest; and Las Vegas, Nevada, 50 miles northeast. The study area contains 282,931 acres of public land under the jurisdiction of the Bureau of Land Management (BLM), 16,205 acres of State land, and private ownerships totalling 1,413 acres (see Map 1 and Table 1).

Beginning at the northeast corner, the eastern WSA boundary follows the paved Excelsior Mine Road to a utility transmission line right-of-way road, which forms the first three and one-half miles of the southern boundary. The boundary leaves this road to skirt private property and public lands heavily impacted by mining activity in the Shadow Mountain area, then returns to the road for another four miles. Once again skirting a section of private property and public lands containing mining activity, the final six miles of the southern WSA boundary returns to follow the transmission line road. The transmission line, maintenance road, and portions of the WSA are within an energy and utility transmission corridor identified by the BLM in the CDCA Plan, and by the 1980 Western Regional Corridor Study. From the southwest corner, the western WSA boundary winds around the Silurian Hills, primarily following dry washes and roads, but sometimes running cross-country to exclude areas of mining activity. At the north end of the Silurian Hills, the boundary follows a road around the east side of Silurian Dry Lake, emerging on State Highway 127 at the site of Renoville. At this point, the boundary cherrystems an improved road that reaches for 15 and one-half miles deep into the heart of the WSA. This road forks, with one branch going to the Eastern Star Mine and the other to Kingston Spring. Returning again to State Highway 127, the western boundary follows the highway north for five and one-half miles, then swings sharply east to exclude the Dumont Dunes Off-Highway Vehicle (OHV) Area. The west WSA boundary then once again follows the highway for just over seven miles, finally swinging northeast to meet the Excelsior Mine Road at the WSA's northwest corner. The northern boundary follows this road for less than one and one-half miles. The remainder of the irregular northern boundary runs south of and roughly parallel to the Tecopa Road, excluding private property, mine access roads, and areas of heavy mining activity, finally emerging again on the Excelsior Mine Road at the WSA's northeast corner.

The WSA is easily accessible by two-wheel drive vehicle along State Highway 127, the Excelsior Mine Road, and via the cherrystemmed roads to the Eastern Star Mine and Kingston Spring. Off-highway vehicle trails provide additional access into the interior of the study area.

The diverse terrain of the Kingston Range WSA includes several valleys, bajadas, major washes, hills, and mountains of varying form. Within the northeast portion of the study area is the Kingston Range proper--the highest and most colorful of the WSA's mountains. Some 17 miles of continuous ridgeline is above 6,000 feet, capped by 7,323-foot Kingston Peak. The range can be envisioned as an island of montane environments in a sea of desert lowlands. A bajada slopes south from the Kingston Range and leads to the very broad, often steep-walled Kingston Wash. South of the wash lie the Shadow Mountains, a large series of low-lying rounded peaks with gently meandering interior canyons and numerous erosion channels. The Dumont Hills to the west of the Kingston Range are a series of hills standing out from a highly eroded bajada separating the range from Silurian Valley.

The vegetation is creosote bush scrub at lower elevations and juniper-pinyon woodland at higher elevations. A small stand of white fir occurs at upper elevations north of Kingston Peak. Several unusual plant assemblages are formed within the WSA. (See the discussion under Wilderness Characteristics.)

Portions of two Areas of Critical Environmental Concern (ACEC) are within the WSA. The northwestern portion of the WSA includes about 70% of the Amargosa Canyon ACEC, established to protect permanent flowing water and associated wetland habitats, and cultural resources reflecting 8,000 years of human occupation. Approximately 50% of the Salt Creek Hills ACEC is included in the west side of the WSA, just south of the Dumont Dunes. This ACEC contains resources similar to that of Amargosa Canyon.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA). Four alternatives were analyzed in the Draft and Final Environmental Impact Statement (EIS) for the CDCA Plan, protection, use, balanced and no action, and a summary of the area's wilderness values was included in Appendix III of the Final EIS.

| | | | |
|----|-------------------------------------|---------|---|
| 2. | <u>RECOMMENDATION AND RATIONALE</u> | 35,463 | acres recommended for wilderness |
| | | 248,562 | BLM acres recommended for nonwilderness |

Partial wilderness is the recommendation for the Kingston Range WSA. The 248,562 acres in this WSA recommended nonsuitable are released for uses other than wilderness. The majority of the WSA will be managed for low-intensity, carefully controlled use. In addition to the Federal acreage recommended for wilderness, BLM recommends that 1,094 acres of State land be acquired through exchange or purchase and designated as wilderness. With acquisition of these inholdings, a total of 35,463 acres are recommended for wilderness. Appendix 1 lists all inholdings and provides additional information on their acquisition. This recommendation will be implemented in a manner which will use all practical means to avoid or minimize environmental impacts.

The Balanced Alternative is the environmentally preferable alternative as outlined in the CDCA Plan and further explained in the California Wilderness Study Overview.

The partial wilderness recommendation is based on the following rationale: (1) the lands recommended for wilderness contain the WSA's most outstanding wilderness values, as well as some noteworthy special features; (2) the recommended nonsuitable portion of the study area has potential for other resource uses, namely mining, livestock grazing, energy transmission, and motorized recreation; and (3) the 86% of the WSA recommended nonsuitable is largely void of special features. Those special features that do exist are concentrated in the existing ACECs, and can be protected, and in some cases better managed, through that designation.

The lands recommended for wilderness designation possess an outstanding primitive character exemplifying the qualities described in Section 2(c) of the Wilderness Act. The diverse topography and relatively dense vegetation offer a degree of visual screening which enhances primitive recreation activities and offers numerous opportunities for solitude. Opportunities for hiking, backpacking, nature study, photography, and desert peak climbing are outstanding and limited only by the interests of the desert recreationist. With over 500 plant species present, the WSA is one of the most botanically diverse areas within the CDCA. All or portions of five unusual plant assemblages are within the recommended wilderness area. A designation of wilderness for the recommended suitable portion of the Kingston Range WSA will also protect 16 square miles containing an immense concentration of significant cultural resources. At the time of wilderness inventory, the majority of these resources were unknown. Surveys completed by the University of California, Santa Cruz, in 1983, resulted in 42 new sites being recorded. The suitability recommendation will preclude any further vehicular use of approximately eight miles of primitive access routes of travel.

The majority of areas with moderate to high mineral potential have been excluded from the recommended wilderness area. Manageability is further enhanced because the recommended wilderness area contains only 14 unpatented lode mining claims. In contrast, the recommended nonsuitable portion of the WSA contains considerable acreage with moderate to high potential for a variety of locatable minerals: talc, gypsum, lead, silver, zinc, copper, zeolites, molybdenum, and iron. The area also has vast acreage with moderate potential for sodium or geothermal energy, which are leasable mineral resources. The recommended nonsuitable area contains 603 mining claims. Considering the area's mineral potential, it is probable that a sizable portion of these claims would prove to have a valid discovery. There are approximately 60 miles of routes of travel including primitive ways, washes and other unmaintained routes of access which will remain available for vehicular use.

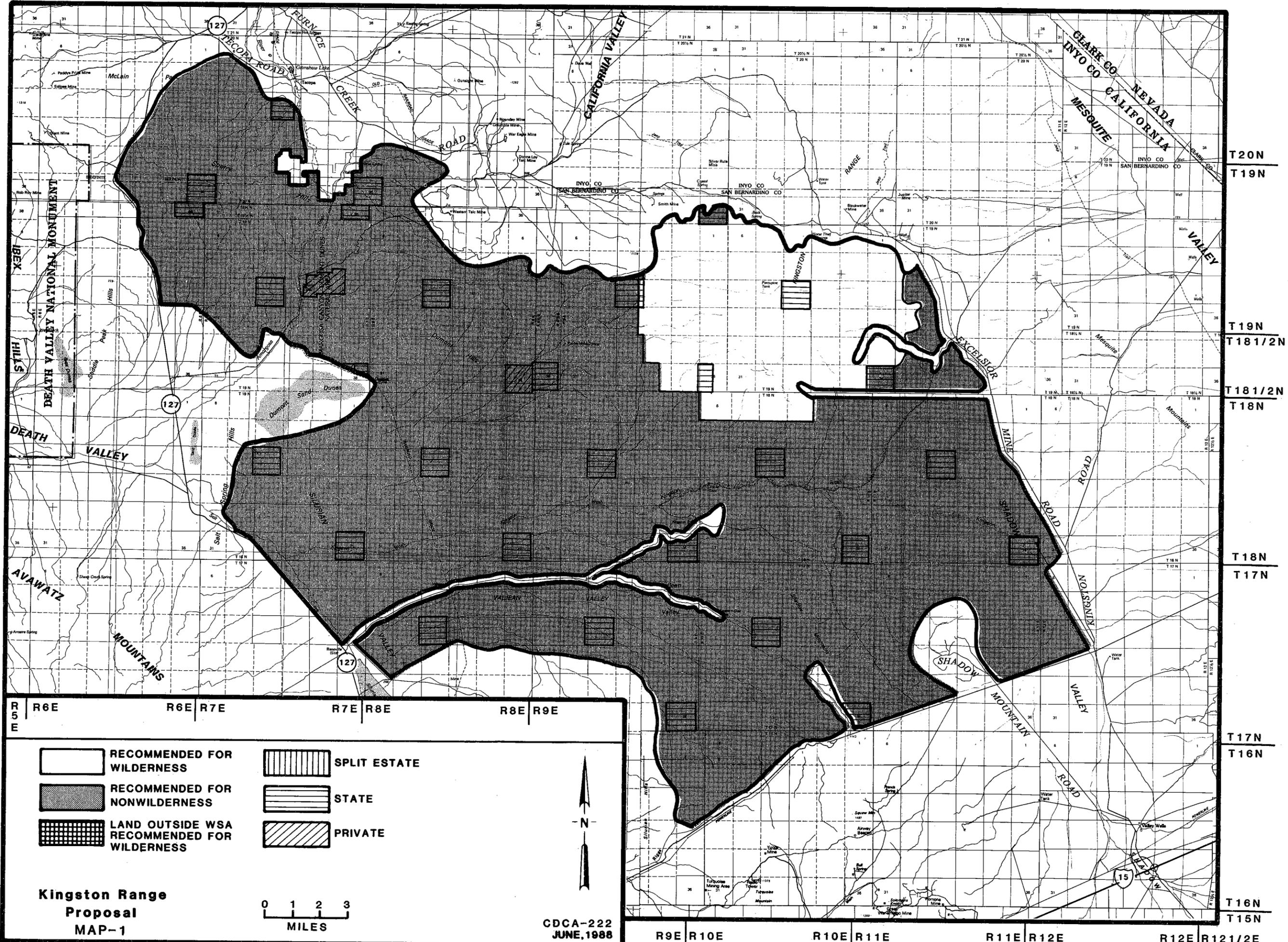
The WSA contains portions of the Horsethief Springs and Valley Wells Grazing Allotments, both of which are grandfathered uses, and the proposed Tecopa Grazing Allotment, which is within the recommended nonsuitable area of the WSA. Wilderness designation of the entire WSA would constrain additional

development of the grandfathered allotments to accommodate increased numbers of livestock, and would eliminate the possibility of establishing the proposed new allotment.

The southern boundary of the recommended nonsuitable portion of the WSA is within an energy and utility transmission corridor designated by both the CDCA Plan and the 1980 Western Regional Corridor Study. Wilderness designation of this area could constrain the placement of future facilities within the corridor.

The portion of the WSA recommended nonsuitable receives almost no hiking or backpacking use. Recreation use levels in general are low, but what does take place is almost exclusively vehicle dependent. Predominant activities include OHV touring and sightseeing, rockhounding, camping, nature study, and research. Kingston Wash, which bisects the area from west to east, is a favored OHV tour route. A segment of the proposed statewide Draft OHV trail system identified in the California Statewide Motorized Trails Plan passes through the recommended nonsuitable portion of this WSA. Sperry Wash Canyon is known among rockhounds as yielding some of the finest petrified wood in the desert. On the 248,563 acres recommended nonsuitable, vehicle use is currently allowed on all designated open routes, including washes, unless a route is specifically designated closed. Because of its large size, wilderness designation of the entire area would mean a significant curtailment of motorized recreation opportunities in this region of the desert.

Again within the nonsuitable area, the special biological and cultural resources contained in the two ACECs can be adequately protected by the corresponding special management prescriptions established for these areas. Legitimate scientific research, which would be constrained by wilderness designation, would be allowed to continue unhampered by additional regulation, thereby potentially increasing the contribution these areas could make to the body of scientific knowledge in both biological and anthropological disciplines.



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|-------|-------|---------------|---------------|---------------|
| R 5 E | R 6 E | R 6 E R 7 E | R 7 E R 8 E | R 8 E R 9 E |
|-------|-------|---------------|---------------|---------------|

| | | | |
|--|---|--|--------------|
| | RECOMMENDED FOR WILDERNESS | | SPLIT ESTATE |
| | RECOMMENDED FOR NONWILDERNESS | | STATE |
| | LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS | | PRIVATE |

Kingston Range Proposal MAP-1

0 1 2 3
MILES

CDCA-222
JUNE, 1988

T 20 N
T 19 N
T 19 N
T 18 1/2 N
T 18 1/2 N
T 18 N
T 17 N
T 17 N
T 16 N
T 16 N
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R 9 E | R 10 E | R 10 E | R 11 E | R 11 E | R 12 E | R 12 E | R 12 1/2 E

TABLE 1 - Land Status and Acreage Summary of the Study Area

| <u>Within Wilderness Study Area</u> | | <u>Acres</u> |
|---|--------------------------|------------------|
| BLM | (surface and subsurface) | 282,931 |
| Split Estate | (BLM surface only) | 0 |
| Inholdings | | |
| State | | 16,205 |
| Private | | 1,413 |
| Total | | <u>300,549</u> |
| <u>Within the Recommended Wilderness Boundary</u> | | <u>Acres</u> |
| BLM | (within WSA) | 34,369 |
| BLM | (outside WSA) | 0 |
| Split Estate | (within WSA) | 0 |
| Split Estate | (outside WSA) | 0 |
| Total BLM Land Recommended for Wilderness | | <u>34,369</u> |
| Inholdings ¹ | | |
| State | | 1,094 |
| Private | | 0 |
| <u>Within the Area Not Recommended for Wilderness</u> | | <u>Acres</u> |
| BLM | (surface and subsurface) | 248,562 |
| Split Estate | (BLM surface only) | 0 |
| Total BLM Land Not Recommended for Wilderness | | <u>248,562</u> |

¹ Appendix 1 is a detailed description of inholdings and split estate tracts included within the study. For purposes of this report, split estate lands are defined only as those lands with Federal surface and non Federal subsurface (minerals). Lands that have Federal minerals but non Federal surface should be classified in this report by the owner of the surface estate.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

A. Wilderness Characteristics

1. Naturalness: The recommended wilderness portion of the Kingston Range WSA contains a few springs that have been developed, but are still natural in appearance. Some mineral exploration activities including adits, posts and monuments associated with mining claim location, and occasional traces of vehicle use on ways or in washes, are all substantially unnoticeable within the WSA.

Impacts to naturalness in the recommended nonsuitable portion of the WSA includes examples of all the manmade features mentioned above, plus some additional ones. Over 15 miles of the old Tonapah-Tidewater Railroad line runs from north to south through the western portion of the area recommended nonsuitable. Although the tracks and many of the ties have been removed, the railroad bed is still evident. In addition, a primitive OHV trail has developed alongside the old railroad bed, and has become a popular OHV tour route. Silurian Valley is located between the railroad grade and State Highway 127 on the WSA boundary and is laced with a network of OHV trails, many of them originating at the Dumont Dunes OHV Area immediately to the north.

The extreme northeastern portion of the area recommended nonsuitable includes an approximate two and one-half mile stretch of the paved Excelsior Mine Road.

Around the cherrystemmed portion of the improved route leading to Kingston Spring, intensive mineral exploration and development has substantially altered natural conditions. The State of California is actively leasing its section of land south of the spring for the extraction of pharmaceutical grade clay.

A mill site with associated dwellings and outbuildings exists in the northwestern portion of the WSA, in T.20N., R.8E., Section 29. Approximately one mile of a powerline passes through this area, with a service drop for the mill site. Both the powerline and the service drop are authorized by rights-of-way.

Abandoned homesites are scattered throughout the recommended nonsuitable area, at the old townsites of Sperry, Valjean, and Dumont, and isolated outlying areas. These sites typically consist of piles of debris and the collapsed, rotting remains of old structures.

2. Solitude: Aided by topography and low visitation, opportunities for solitude are present throughout the area. At present, human use is limited to fall hunting, mineral exploration and development, and trips to maintain ranch improvements.

Although the WSA does not include the Dumont Dunes OHV area, its exclusion from the WSA resulted in a large, seven-mile long by two- to seven-mile wide indentation in the western WSA boundary. Because of its intrusive shape, the sights and sounds of OHV play activity within the OHV area affect a large zone within the WSA.

This WSA is periodically overflowed by military aircraft as part of the national defense mission taking place in approved military operating areas and flight corridors. The visual intrusions and associated noise create periodic temporary effects on solitude which are deemed necessary and acceptable as a part of the defense preparedness of the nation.

3. Primitive and Unconfined Recreation: The recommended suitable area presents opportunities for hiking, hunting, nature study, and photography. One of the most interesting features of this area is the superb long distance views framed by the granite boulders and wooded slopes of the Kingston Mountains. Kingston Peak is recognized as a challenge for climbers and is included on the Sierra Club's list of "California Desert Peaks."

Within the recommended nonsuitable portion of the WSA, quality primitive recreational opportunities are available at the Amargosa Canyon and Salt Creek Hills ACECs. The rest of the recommended nonsuitable portion of the WSA contains vast expanses of featureless landscape that, while it presents no barriers to constrain primitive recreation, also provides nothing to attract such use.

4. Special Features: There are several geologic formations within the WSA important for the fossils they contain. The oldest are the Pahrump Group at an age of 1,200 million years. The Pahrump Group is highly important to the study of evolutionary development because the oldest evidence of eukaryotic or mitotic cells have been found here. Another major milestone in the evolution of life on earth is recorded in the local strata, one of the few places where rocks spanning the transition between the Pre-Cambrian and Cambrian Ages are displayed. This period, some 570 million years ago, marked the origin of animals with shell-like outer coverings, and the subsequent widespread occurrence of microfossils such as trilobites.

Five unusual plant assemblages (UPAs) occur either totally or partially within the recommended wilderness area. The first are riparian areas within the Amargosa Gorge and near Horsethief Springs. The second is a stand of enormous Nolina wolfii, some of them as much as 15 feet high and over ten feet in girth. They are found only here and in Joshua Tree National Monument. This extensive stand of giant Nolina occurs on the slopes and ridges of Tecopa Pass and along steep, rocky exposed slopes from 3,200 to 7,300 feet in elevation. The giant Nolina, with its tree-like stature and yucca-like form has a discontinuous distribution across the Mojave Desert and its occurrence in the eastern Mojave Desert is

limited to the Kingston Range. The third unusual plant assemblage is a calciphyte assemblage of rare limestone endemics and the fourth, a small enclave of white fir (Abies concolor), consisting of some 150 trees scattered between 6,900 and 7,200 feet along two steep canyons north of Kingston Peak. This is one of three relic stands of white fir in the California Desert. The fifth unusual plant assemblage is a portion of the huge Shadow Valley-Cima Dome Joshua tree forest, one of the densest concentrations of Joshua trees in the world.

Of the 505 species of native plants found in the Kingston Range, 32 species are considered endangered, rare, or of limited distribution by the California Native Plant Society (CNPS). Six species on the CNPS lists are currently under review for Federal listing as endangered or threatened species: pygmy agave, willow brickelbrush, Kingston bedstraw, Death Valley beard-tongue and Kingston rock cinquefoil.

The high elevations wooded with pinyon, juniper and white fir attract a number of species of birds that do not normally occur in the desert. The avifauna includes birds restricted to the relic white fir groves and many species which are at least partially dependent on it. Among these are the Virginia's warbler and the hepatic tanager which in the last decade in California, have only been recorded in this habitat. The presence of these and other species of birds has been noted in only two other eastern Mojave mountain ranges.

The Kingston Mountains are one of four localities in California in which confirmed sightings of the banded gila monster (Heloderma suspectum) have been made. The remaining three localities all have had one gila monster sighting whereas the Kingston Mountains have had three separate confirmed sightings of this lizard. The gila monster is fully protected under California law and is a BIM sensitive species in California. Although it is not under status review by the United States Fish and Wildlife Service (US F&WS) for Federal listing as threatened or endangered, it is being considered for the State list of rare species.

The rugged mountains of the WSA provide ideal habitat for an estimated 50 desert bighorn sheep, a BIM sensitive species. Bighorn are present in many of the Mojave Desert mountain ranges, but water availability is the main factor limiting their populations. In some canyons in the southern Kingston Range, tinajas (natural water tanks) hold water for considerable periods after a rain. The tinajas in Sheep Tank Canyon are particularly well developed, occurring for several kilometers in the canyon bottom and reaching depths of more than ten feet. They are partially fed by small springs. Tinajas are also notable at Spotted Toad Spring, in a

tributary south of Kingston Peak, and in the canyon south of the Omega Mine. The four major springs in the central corridor of the Kingston Range all have dependable water supplies that have been used by bighorn sheep at one time or another.

Wild and free-roaming burros are found within the WSA, included in the Clark Mountain Herd Management Area.

The Kingston Range is highly concentrated with cultural resource sites dating back as early as A.D. 500. In addition to 42 new sites recorded by the University of California, Santa Cruz, in 1983, a wide variety of archaeological sites had been previously recorded including eight base camps, 19 temporary camps, two rock art sites, pottery scatters, lithic scatters and quarries, two agave roasting pits and numerous occurrences of isolated artifacts.

The preceding paragraphs describe the special features within the recommended suitable area. The recommended nonsuitable portion of the WSA is largely lacking in special features, with the notable exceptions of the Amargosa Canyon ACEC and the Salt Creek Hills ACEC.

Permanent flowing water and associated wetland habitats in the Amargosa Canyon ACEC provide food, cover, and nesting space to a great variety of birds. Several fish, mammals, insects, and mollusks inhabiting the Amargosa River drainage are animals with very limited distribution or low populations. The Amargosa vole (Microtus californicus scirpensis) and the least Bell's vireo (Vireo bellii pusillus) are listed as endangered by the State of California and are currently under status review by the U.S. F&WS for possible Federal listing as threatened or endangered. The California Yellow-billed cuckoo (Coccyzus amaericanus occidentalis) has been listed as rare by the State of California.

The Amargosa Canyon ACEC's permanent flowing water has attracted humans for at least 8,000 years. Four distinct aboriginal cultural complexes are represented here: Paleo-Indian, Lake Mohave/Pinto, Amargosa, and Shoshonean. Identifiable remains include sleeping circles; gravel figures; chopper tools; worked flakes; a variety of diagnostic projectile points, including Pinto, Gypsum, Elko, and Rose Springs; metates; mortars; pottery; scrapers; and pendants. There is no doubt that additional cultural resources exist in the canyon, but little formal work has been done here to date.

Amargosa Canyon has also been the scene of important historical developments. The first was the establishment of the Old Spanish Trail about 1830. This trail became a major Spanish supply route and served as a primary means of entrance into California until well after the Spanish/Mexican period. The trail was used by large numbers of immigrants, traders, miners, and horse and mule pack trains. A portion of the Tonopah and Tidewater Railroad line, built to transport borax from the Death Valley region, was constructed

through the canyon around 1906. The line was used until approximately 1940. The rails were removed during World War II, and all bridges have vanished from the effects of weathering, erosion, and vandalism. However, the railroad grade remains very evident to this day. Both the railroad line and the Old Spanish Trail played important roles in the settlement and development of California.

Within the Salt Creek Hills ACEC, Salt Creek is one of a very few streams in the California desert situated on a valley floor rather than on a mountain or in a deep, rocky gorge. Subterranean water is forced to the surface at this point and runs intermittently for approximately one mile. The water and associated vegetation support a variety of wildlife species which do not occur in nearby drier habitats. Breeding bird surveys show that bird densities are many times higher and contain higher species diversity than other desert habitats. Nine species are on the Audubon Society's "Blue List" of declining species. A plant known in this general area, Centaurium namophilum, has been Federally listed as an endangered species.

Salt Creek also contains important historic and prehistoric cultural resources. The area was first occupied by Europeans around 1850, and was the site of the first hard rock gold mine in the Mojave Desert. A large number of historical structural remains, including mine shafts, cabins, roads, head frames, water tanks, and walls still exist, although many have been vandalized. The majority of prehistoric sites within the ACEC are small temporary camps. Based on projectile point typing, the main prehistoric occupation appears to have been during the Pinto (7,000 to 4,000 years ago) and Amargosa (4,000 to 1,000 years ago) Periods. Very little formal archeological work has been done at Salt Creek.

B. Diversity in the National Wilderness Preservation System

1. Assessing the diversity of natural systems and features as represented by ecosystems: This WSA contains 213,701 acres of the American Desert/Creosote Bush ecosystem and 69,230 acres of the American Desert/Juniper-Pinyon Woodland ecosystem. The WSA is an ecological transition zone. The Kingston Range is important for the study of the interaction of biotic influences of the Great Basin and Mojave Desert. The flora and fauna of both geographic regions meet in the Kingston Range with numerous species reaching their northern and southernmost distribution limits.

Table 2 - Ecosystem Representation

| <u>Bailey-Kuchler Classification Domain/Province/PNV</u> | <u>NWPS Areas</u> | | <u>Other BLM Studies</u> | |
|--|-------------------|--------------|--------------------------|--------------|
| | <u>areas</u> | <u>acres</u> | <u>areas</u> | <u>acres</u> |
| <u>NATIONWIDE</u> | | | | |
| American Desert/Creosote Bush | 1 | 343,753 | 117 | 4,054,497 |
| American Desert/Juniper-Pinyon Woodland | 1 | 21,485 | 24 | 637,974 |
| <u>CALIFORNIA</u> | | | | |
| American Desert/Creosote Bush | 1 | 343,753 | 88 | 3,440,693 |
| American Desert/Juniper-Pinyon Woodland | 1 | 21,485 | 16 | 416,723 |

2. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The WSA is within a five-hour drive of five major population centers. Table 3 summarizes the number and acreage of wilderness areas and other BLM study areas within a five-hour drive of these population centers.

Table 3
Wilderness Opportunities for Residents
of Major Population Centers

| <u>Population Centers</u> | <u>NWPS areas</u> | | <u>Other BLM Studies</u> | |
|-------------------------------|-------------------|--------------|--------------------------|--------------|
| | <u>areas</u> | <u>acres</u> | <u>areas</u> | <u>acres</u> |
| <u>California</u> | | | | |
| Anaheim-Santa Ana | 25 | 2,823,534 | 153 | 5,703,616 |
| Bakersfield | 32 | 4,071,358 | 128 | 3,998,548 |
| Los Angeles-Long Beach | 27 | 2,876,234 | 135 | 4,958,751 |
| Riverside-San Bernardino | 22 | 2,031,054 | 205 | 7,658,649 |
| <u>Nevada</u> | | | | |
| Las Vegas | 46 | 3,507,293 | 311 | 11,186,463 |

3. Balancing the geographic distribution of wilderness areas: The closest designated wilderness is Joshua Tree Wilderness in Joshua Tree National Monument, 120 road miles southwest. Nine BLM study areas recommended for wilderness designation are within 50 air miles of the Kingston Range WSA, six in the California Desert District and three in Nevada's Las Vegas District.

C. Manageability

The Kingston Range WSA is manageable as wilderness. However, several factors complicate manageability throughout the WSA, but especially on the portion recommended nonsuitable.

The southern and western boundaries of the recommended suitable area follow unsurveyed section lines; the northern and eastern boundaries follow arbitrary contour lines. Exact on-the-ground boundary location is difficult due to the fact that no natural terrain features are followed. However, within a mile inside the recommended wilderness boundary, the terrain is such that inadvertent use by vehicles would be almost impossible.

A total of 617 mining claims indicate substantial industry interest in the mineral resources within the Kingston Range WSA. Of these, 603 are within the recommended nonsuitable area, while only 14 have been located in the portion of the WSA recommended for wilderness. The area's mineral potential makes it probable that some of these claims would withstand a validity examination, allowing development to occur even with wilderness designation. Unless the valid rights could be acquired, maintenance of wilderness values could not be assured.

Designating the recommended nonsuitable portion of the study area as wilderness has potential to conflict with development of future communication and energy transmission facilities. The south boundary is within an energy transmission corridor designated by the CDCA Plan, which is also delineated as a four- to six-mile wide utility corridor identified by the 1980 Western Regional Corridor Study. Wilderness designation of this portion of the Kingston Range WSA could prohibit full development of the corridor, forcing installation of new energy transmission lines in other corridors or in areas not previously disturbed. Depending upon which WSAs are ultimately designated wilderness within the CDCA, there may be constraints placed upon the long-term energy and communication transmission capabilities in the southwestern United States.

Portions of two grazing leases exist within the Kingston Range WSA. The WSA provides an estimated 4,700 animal unit months (AUMs) of forage, of which 600 AUMs are within the recommended suitable area. If the recommendations of this report are adopted, future grazing management conflicts will be minor. However, if a larger area were to be designated wilderness, it could preclude some future improvements as well as a proposed new grazing allotment.

A portion of the Clark Mountain Burro Herd Management Area is within the WSA. Plans for burro removal from this area could be affected by wilderness designation, as some of the techniques employed are not compatible with wilderness management.

Military overflights in this WSA must be considered to maintain the integrity of the existing and future national defense mission as well as the wilderness resource.

D. Energy and Mineral Resource Values

1. Summary of information known at the time of the preliminary suitability recommendation: The Kingston Range WSA is located in parts of three different BLM Geology-Energy-Minerals (G-E-M) Resource Areas (GRAs), the Kingston Range, Halloran and Dumont Dunes GRAs. At the time of the recommendation process the WSA was classified as having specific occurrence potential for silver, lead, copper, and gold, industrial minerals including talc, gypsum, zeolites, and bentonite, and common mineral materials (e.g., sand and gravel). The area was also considered as having potential for leasable mineral resources such as oil, gas, sodium, and geothermal energy.

A high potential for the occurrence of zeolites and bentonite was recognized in the northwest corner of the WSA. In 1979, a major company was drilling on part of a zeolite deposit which was known to extend into the WSA. Bentonite was being mined in McClain Park outside the northwest boundary of the WSA. This deposit is thought to extend into the WSA. A large area with a high occurrence potential for talc occurs along the northern boundary of the WSA in the area recommended for nonwilderness. The high occurrence potential for gypsum is also found along the northern border, adjacent to a former gypsum producer near China Ranch.

A small area along the northern border of the WSA was classified as having a moderate occurrence potential for lead, zinc, and silver. This area is adjacent to the Alexander Mine just north of the WSA. The Alexander Mine is comprised of north-trending quartz veins in Precambrian Noonday dolomite containing lead-zinc-silver mineralization. The Precambrian metasedimentary sequence here is of a similar age and lithology to those rocks north of Tecopa Pass (Tecopa mining district about five miles north of WSA), where large quantities of silver-lead and zinc ore were mined. Total production is not known.

The central and eastern parts of the WSA including Valjean Hills-Rabbit Hole Spring Area and the Kingston Range has not had a detailed analysis of the mineral occurrence potential. Nevertheless, the north and northeast parts of the WSA have high occurrence potential for talc, iron, silver-lead, and copper. The main block of the Kingston Range in the northeastern corner of the WSA is a granitic batholith with moderate potential for copper, iron, silver, gold, and molybdenum. An area indicated in the northeast part of the WSA with a high potential for copper, iron, and silver is mainly in the dolomitic rocks adjacent to the Kingston pluton. Other high and moderate potential occurrence zones for gypsum, copper, lead, molybdenum, and silver in the southeast part

of the WSA are based on small mines located within the area (See Map 2). Production and reserves are not known. As of December, 1979, there were over 25 claims within this WSA.

An area in the northwestern portion of the WSA was identified as having a high potential for sand and gravel due to known deposits and proximity to the county maintained road. Also, an area in the northwest segment of the recommended nonwilderness portion of the WSA was classified as having a moderate potential for metasomatic type tungsten deposits (skarn).

The northwestern and western portions of the area recommended nonsuitable for wilderness designation were classified by the U.S. Geological Survey (USGS) in 1979 as prospectively valuable for sodium and geothermal energy. Both the sodium and geothermal areas were classified by BLM in 1980 as having a moderate potential for occurrence.

Classification of mineral resource potentials shown on Map 2 for the recommended nonwilderness portion of the WSA are based on data available in 1980 during the preliminary recommendation process.

2. Summary of significant new mineral resource data collected since the preliminary suitability recommendation which should be considered in the final recommendation: The USGS and U.S. Bureau of Mines BOM conducted mineral surveys of the portion of the WSA recommended suitable for wilderness designation. USGS Bulletin 1709, released in 1987, assessed the results of these surveys. The mineral potentials delineated in the USGS bulletin correspond closely with BLM's 1980 mineral potential classifications for the portion of the WSA recommended suitable for wilderness designation. However, the USGS/BOM data are more defined and therefore are used on Map 2.

Bulletin 1709 indicates that there are at least six talc deposits either within or immediately outside the northeast portion of the WSA in the Kingston Range. Their combined resource totals approximately 1.7 million tons of talc, of which 430,000 tons are within the study area. Talc occurs in lenses 20 feet to 150 feet thick and up to 1000 feet long, within alteration zones caused by contact metamorphism of dolomite by diabase intrusions. The Beck Mine, one-quarter mile north of the WSA is an excellent example of an iron-skarn deposit. The iron rich lenses at the Beck Mine are up to 150 feet wide, and up to 1500 feet long, with reserves identified as 7.2 million tons of iron ore averaging between 45 to 56% iron. Talc, iron-skarn, and bedded iron deposits occur in the upper Cambrian Kingston Peak Formation and are classified as having a high and moderate potential for occurrence along the eastern side of the portion of the WSA recommended suitable for wilderness designation and along the northern border of the WSA.

A high potential for the occurrence of copper-iron-silver deposits include the Momi Mine and extension, the U-Sun-Up prospect, and the Horse Thief prospect all within the recommended wilderness portion of the WSA. The Momi Mine contains 40,000 tons of identified resource averaging 24.6 percent iron and 5.6 percent copper, and from one grab sample 0.3 ounce per ton silver was reported. The other prospects listed above have similar metals, of lesser grade and no identified reserve.

There has been documented past production of talc and iron from within the WSA.

As of December 1987, there were a total of 617 unpatented mining claims within the WSA recorded with BLM, as summarized in the mining claims below. Unpatented lode mining claims are located in the north and south-central areas of the portion of the WSA recommended suitable for wilderness designation. Unpatented mining claims are located throughout the recommended nonwilderness portion of the WSA; however, heavy concentrations of placer claims are in the western and southeastern portions. Lode mining claims in the recommended nonwilderness portion of the WSA are concentrated in the west and southeast. As of December 1987, there is one current exploration plan of operations on file with the BLM within the WSA.

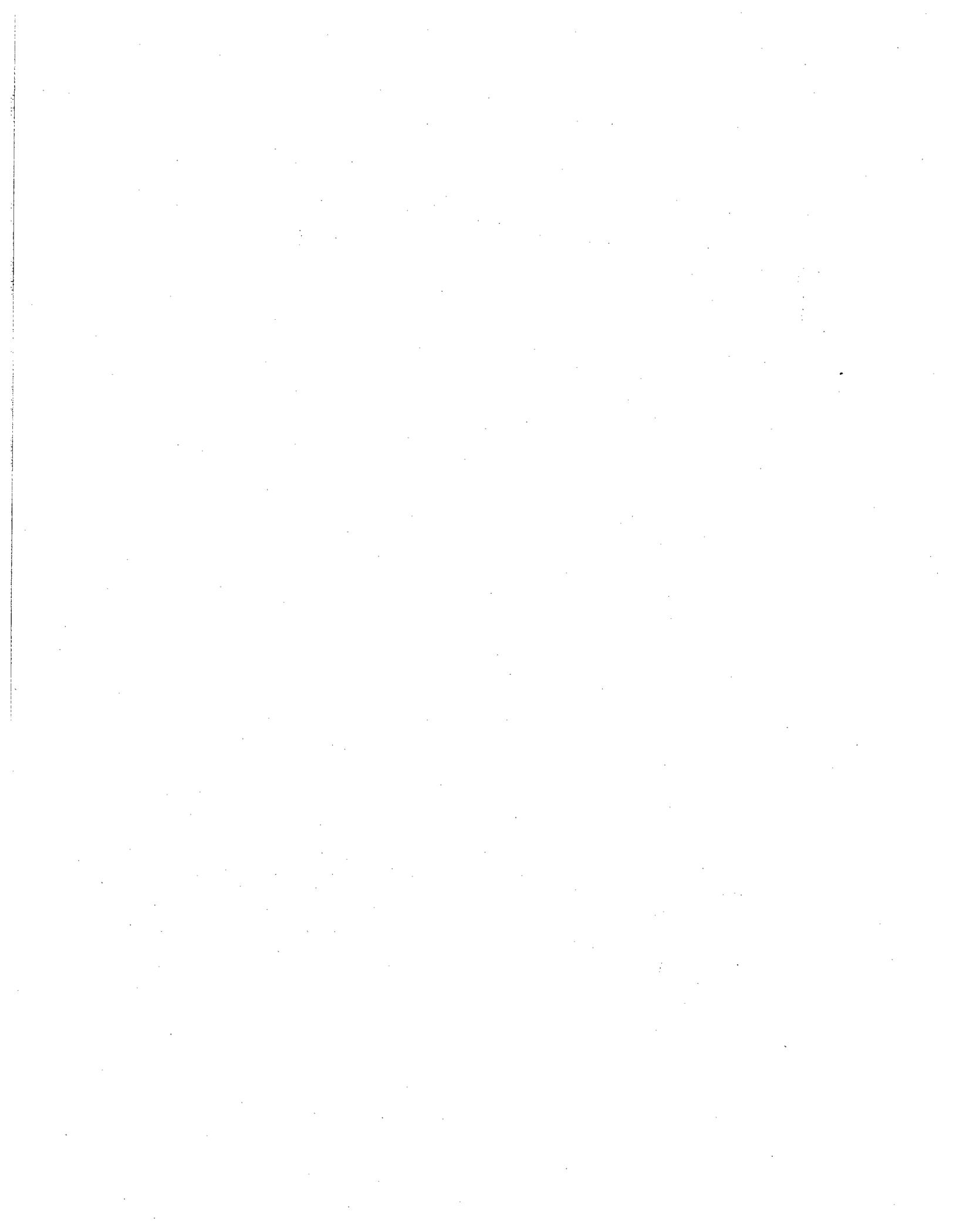
Unpatented mining claims are summarized in the following table taken from BLM records dated December, 1987.

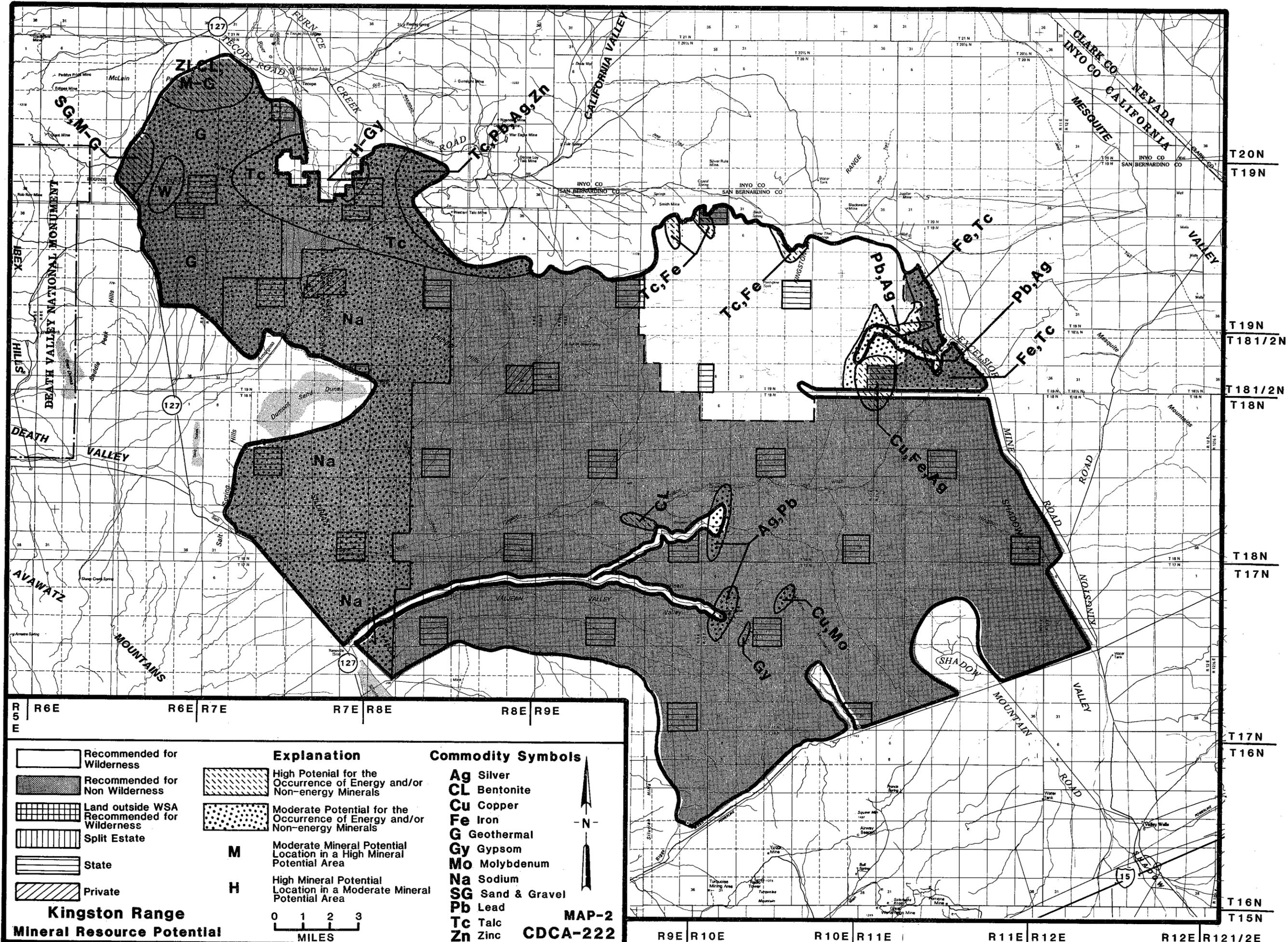
Table 4 - Mining Claims

| TYPE | NUMBER | | | ACRES | | |
|--------------|-----------|------------|------------|------------|---------------|---------------|
| | SUITABLE | NONSUIT. | TOTAL | SUITABLE | NONSUIT. | TOTAL |
| Lode | 14 | 157 | 171 | 280 | 3,140 | 3,420 |
| Placer | 0 | 443 | 443 | 0 | 17,720 | 17,720 |
| Mill Site | 0 | 3 | 3 | 0 | 15 | 15 |
| Total | 14 | 603 | 617 | 280 | 20,875 | 21,155 |

E. Summary of Environmental Consequences of the Proposed Action

1. Impact on Wilderness Values: Wilderness values will be maintained on the 14% of the WSA to be designated wilderness. On the remainder of the WSA, wilderness values will gradually decline in areas with moderate to high mineral potential as a result of exploration and development activities. Values will also gradually decline in areas exposed to continued OHV recreation. Large portions of the WSA will remain largely unvisited and undeveloped, and will retain most of their wilderness values.





| | | | | |
|--|-------|---|---------------|--|
| R 5 E | R 6 E | R 6 E R 7 E | R 7 E R 8 E | R 8 E R 9 E |
| <p>Recommended for Wilderness</p> <p>Recommended for Non Wilderness</p> <p>Land outside WSA Recommended for Wilderness</p> <p>Split Estate</p> <p>State</p> <p>Private</p> | | <p>Explanation</p> <p>High Potential for the Occurrence of Energy and/or Non-energy Minerals</p> <p>Moderate Potential for the Occurrence of Energy and/or Non-energy Minerals</p> <p>M Moderate Mineral Potential Location in a High Mineral Potential Area</p> <p>H High Mineral Potential Location in a Moderate Mineral Potential Area</p> | | <p>Commodity Symbols</p> <p>Ag Silver</p> <p>CL Bentonite</p> <p>Cu Copper</p> <p>Fe Iron</p> <p>G Geothermal</p> <p>Gy Gypsum</p> <p>Mo Molybdenum</p> <p>Na Sodium</p> <p>SG Sand & Gravel</p> <p>Pb Lead</p> <p>Tc Talc</p> <p>Zn Zinc</p> |
| <p>Kingston Range Mineral Resource Potential</p> | | <p>0 1 2 3 MILES</p> | | <p>MAP-2 CDCA-222</p> |

R 9 E | R 10 E R 10 E | R 11 E R 11 E | R 12 E R 12 E | R 12 1/2 E

T 20 N
T 19 N
T 19 N
T 18 1/2 N
T 18 1/2 N
T 18 N
T 17 N
T 17 N
T 16 N
T 15 N

2. Impact on Motorized Recreation: Vehicle use is currently allowed throughout the WSA on all designated open routes, including washes, unless a route is specifically designated closed. The proposed action will reduce the opportunities for certain activities that rely on vehicles, such as touring or rockhounding, within the part of the WSA to be designated wilderness. However, these activities are pursued only to a limited degree within the recommended wilderness portion of the WSA. Extensive opportunities for motorized recreation will remain available on the part of the WSA to remain nonwilderness, and in nearby areas.
3. Impact on Sensitive Plant and Animal Species: Within the recommended wilderness, most surface disturbing activities will be prohibited or greatly limited in scope, providing protection to wildlife habitat and populations. Sensitive plant species will benefit from the reduction in surface disturbance that wilderness management will provide. However, increased frequency of human use may have a negative impact on wildlife species or habitat in specific areas such as springs which are attractive to wilderness users. Within the nonsuitable portion of the WSA, sensitive species are concentrated in the ACECs, and are consequently protected by special actions outlined in the ACEC management plans.
4. Impact on Cultural Resources: Exploration, research, and excavation of the proposed wilderness area's cultural resources will be restricted somewhat by prohibition of vehicle use and constraints on site excavation. Cultural resource preservation will be enhanced by limitations on surface disturbance, but possible increased frequency of use by wilderness enthusiasts may lead to some disturbance of sites. The proposed action will have adverse effects on cultural resources of the nonsuitable part of the WSA if areas are developed for mineral resource values. These impacts will be site-specific and mitigated whenever possible.
5. Impact on Locatable Mineral Exploration and Development: Exploration and development would be unaffected on the nonsuitable part of the WSA, containing 603 mining claims. The recommended wilderness area will be withdrawn from mineral entry. Development of the 14 existing claims will be subject to proof of a valid discovery.
6. Impact on Leasable Mineral Exploration and Development: All of the areas identified as having a moderate to high potential for leaseables (sodium and geothermal energy) are situated in the recommended nonwilderness portion of the WSA, and will therefore be unaffected by the proposed action.
7. Impact on California Statewide OHV Trails Plan: Development of a portion of the statewide OHV trail system within the WSA will be possible, consistent with CDCA Plan guidelines.

8. Impact on Regional Energy Transmission: The proposed action will allow full development of the existing energy and communication transmission corridor, consistent with CDCA Plan guidelines.
9. Impact on Research and Study Activities: Activities will be reduced somewhat in the part of the WSA proposed for wilderness designation by restricting the use of mechanized equipment and vehicles. Within the 86% of the WSA recommended nonsuitable, activities can continue based on guidelines established in the CDCA Plan.

F. Local Social and Economic Considerations

No local social or economic considerations were identified in the CDCA Plan and EIS. Therefore, no further discussion of this topic will occur in this document.

G. Summary of WSA-Specific Public Comments

Public comments were solicited throughout all phases in the development of the CDCA Plan, finalized in 1980. Issues raised by the public during the Inventory and Study Phase were taken into account during development of the Draft Plan Alternatives and Proposed Plan. The following is a summary of all comments received. Known inaccuracies are noted in parentheses.

1. Inventory Phase: Comments directed to the inventory included: (1) a map correction for the location of Baker; (2) statements on unnatural areas that have been excluded; (3) agreement on the naturalness of the area meeting wilderness criteria; and, (4) questions on the validity of deletions. The area has been extensively field-checked to verify public comments. A few minor boundary changes have been made.
2. Study Phase: Forty of the 74 letters received on this WSA opposed wilderness designation. A major concern of opponents was mineral development and potential. The area was said to be a potential source of oil, gas, geothermal energy, lead, zinc, silver, gold, copper, iron, and talc. The Silurian Hills were specifically mentioned as a mineralized zone. A second major concern was that the area remain accessible to rockhounds, since it contains several popular collecting sites. Other recreational activities occurring here which opponents wished to continue were motorized vehicle use and camping. The existence of several mines and their access roads was felt to detract from wilderness quality. Transmission lines, vehicle noise, ranch and mine activities, and highway traffic were sights and sounds believed to degrade wilderness values.

A corridor through the area was requested for a coal slurry transport system. A boundary change was requested to exclude a mining area.

Proponents of wilderness status for this WSA mentioned wildlife, vegetative, geologic, and scenic resources in need of protection. Amethyst and quartz outcrops were scenic elements specifically noted. Wildlife included the Utah black-headed snake and the western red-tailed skunk. Vegetation included saltbush and the white fir forest and unique "giant Nolinias" found on Kingston Peak. One correspondent spoke of the unusual opportunity to view the vast, flat, mountain-encircled Valjean Valley with no transmission lines marching across it to mar the scene. The value of a flat tract of land for wilderness, as opposed to the usually designated mountainous areas, was stressed, since some primitive recreationists are walkers, not climbers.

Many letters urged the addition of the Dumont Dunes to WSA 222, on the basis that the scars of OHV use would disappear rapidly with the cessation of vehicle use under wilderness management.

Many comments were received in response to the Public Input Workbook (3/25/79). Some wanted wilderness in order to protect wildlife and restrict vehicle use. Others wanted continued access for rockhounding, and one considered mineral development a more appropriate use for the area than wilderness. A few comments requested boundary adjustments to eliminate incompatible uses.

3. Draft Plan Alternatives: A variety of comments specific to this WSA was received in response to the Draft Desert Plan. Some were in complete agreement with the Protection Alternative, while others wanted to use ecological boundaries for wilderness instead of highways. Buffer zones around the wilderness area were suggested. Support was also expressed for the Balanced Alternative.

Continued access to collecting sites was requested by rockhounds, and many considered that mineral development was a better use for the area than wilderness. The National Outdoor Coalition (NOC), a coalition of mining, rockhounding, and OHV groups, supported the Use Alternative, which recommended a small portion of WSA 222, the Kingston Range, for wilderness status. The remainder of the WSA would be designated Class "M" (moderate use) or Class "I" (Intense Use). A large number of club members sent in coupons or letters supporting this position. Conservation oriented groups recommended designating the entire area as wilderness and extending it to include the Dumont Dunes and Amargosa Canyon.

4. Proposed Plan: Comments were similar to those for the Draft Plan Alternatives. A large number of respondents supported the idea of expanding the area recommended for wilderness status to include the Shadow Mountains, Kingston Wash, The Dumont Hills, upper Seyah Wash, and part of Valjean Valley. The Resources Agency of the State of California made a similar request.

No comments were received from local governments.

APPENDIX 1
 ESTIMATED COSTS OF ACQUISITION OF NON-FEDERAL HOLDINGS WITHIN
 AREAS RECOMMENDED FOR DESIGNATION
 KINGSTON RANGE WSA (CDCA-222)

| PARCEL No. | LEGAL DESCRIPTION | | | | TOTAL ACREAGE | NUMBER OF OWNERS | TYPE OF OWNERSHIP BY ESTATE | | PRESENTLY PROPOSED FOR ACQUISITION | PREFERRED METHOD OF ACQUISITION | ESTIMATED COST OF ACQUISITION | |
|---------------|----------------------|------|-----|----------|------------------|------------------------|-----------------------------------|----------------------|--|---------------------------------------|-------------------------------------|---------------------------------|
| | TWNSHP | RNG | SEC | MERIDIAN | | | SURFACE ESTATE | SUBSURFACE ESTATE | | | LAND COSTS (\$1000) | PROCESSING COSTS (\$1000) |
| 1 | 19N. | 4E. | 16 | SBM | 160 | 1 | STATE | STATE | YES | EXCHANGE | N/A | 4.0 |
| 2 | 19N. | 9E. | 36 | SBM | 320 | 1 | STATE | STATE | YES | EXCHANGE | N/A | 4.0 |
| 3 | 19N. | 10E. | 16 | SBM | 640 | 1 | STATE | STATE | YES | EXCHANGE | N/A | 4.0 |
| 4 | 20N. | 9E. | 36 | SBM | 360 | 1 | STATE | STATE | YES | EXCHANGE | N/A | 4.0 |

These figures were derived from Bureau Land Records and provide for more detail than GIS estimates and therefore may differ from acreage summaries in Table 1.