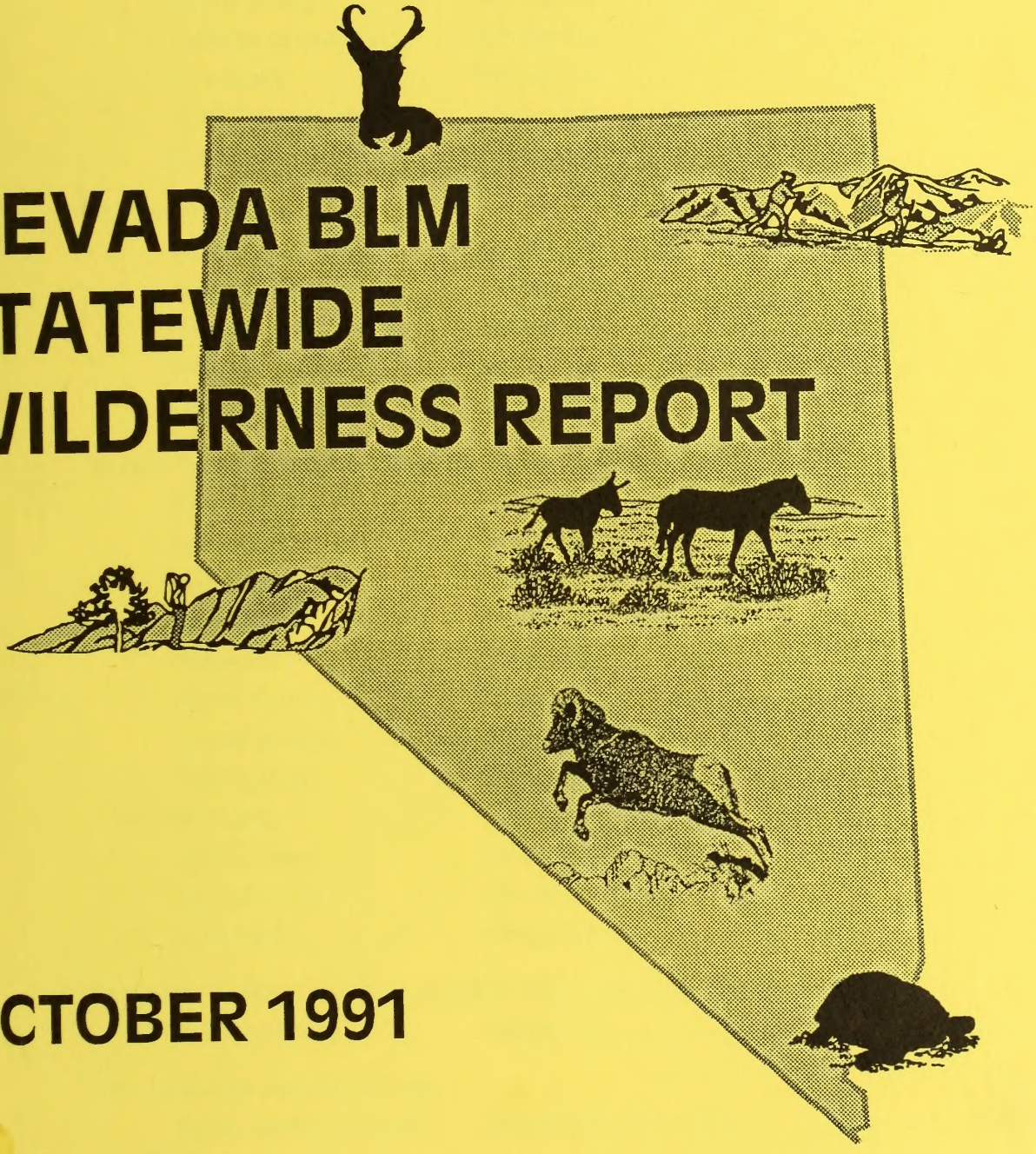
BUREAU OF LAND MANAGEMENT
Nevada State Office

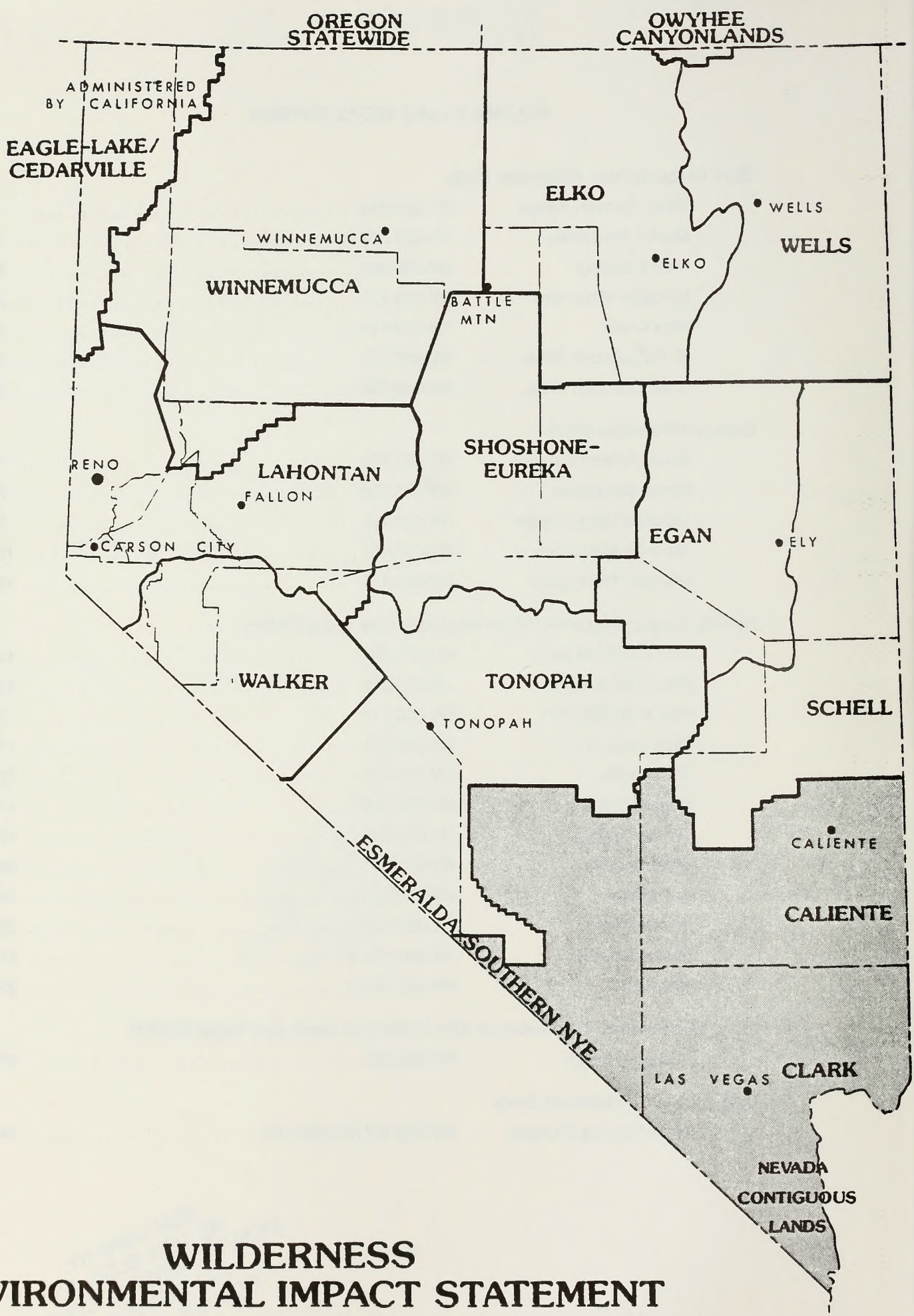


NEVADA BLM STATEWIDE WILDERNESS REPORT

OCTOBER 1991

Volume V
LAS VEGAS DISTRICT

VOLUME V - LAS VEGAS DISTRICT



WILDERNESS ENVIRONMENTAL IMPACT STATEMENT AREAS

LAS VEGAS DISTRICT

GLOSSARY

Bajada	A broad alluvial slope extending from the base of a mountain range out into a basin and formed by a coalescance of separate alluvial fans.
BLM	Bureau of Land Management, U.S. Department of the Interior.
BOM	Bureau of Mines - A Department of the Interior agency required by FLPMA Section 603 to survey the mineral potential of WSAs recommended for designation as wilderness.
Cherrystem	The term used by BLM to describe narrow linear areas, usually roads, which intrude into and are surrounded by Wilderness Study Area lands but which are not a part of the WSA. Most cherrystems are roads which meet the BLM's legal definition of a "road".
EIS	Environmental Impact Statement - a planning document, prepared to satisfy the requirements of the National Environmental Protection Act, which describes a proposed action and alternatives to the proposed action, the environment in which the action will take place, and the consequences to the environment if the proposed or any alternative action is undertaken and which provides a record of public comments on the proposal. DEIS - The draft of an environmental impact statement (EIS) prepared or approved by the agency and released for formal public comment. FEIS - The final EIS issued following conclusion of the public comment period. The proposed action may or may not have been modified from the DEIS.
FLPMA	The Federal Land Policy and Management Act of 1976 which gave the BLM multiple use land management authority and direction. Among the specific directions included was Section 603 which required BLM to inventory and study all of the lands under its jurisdiction (in the lower 48 states) for potential wilderness designation and report the results of the studies to the President by October 21, 1991 and to the Congress by October 21, 1993.
ISA	Instant Study Area - A natural or primitive area existing before November 1, 1975 which FLPMA Section 603 (a) required BLM to study for wilderness potential and report the findings to the President by July 1, 1980.
NWPS	National Wilderness Preservation System - The term first used in the Wilderness Act of 1964 to describe the aggregate of all Congressionally designated wilderness areas managed independently by the federal land managing agencies (Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service and the U.S. Forest Service.
Playa	The flat-floored bottom of an undrained desert basin that becomes at times a shallow lake which on evaporation may leave a deposit of salt or gypsum.
Pre-FLPMA	Term which refers to mining claims and leases and livestock grazing privilages existing before the passage of FLPMA. These limited uses have been granted greater rights of usage and development potential within WSAs than similar uses which came into existence following the passage of FLPMA. Following designation of a WSA as wilderness by Congress, this term is moot as all uses and prior claims would be managed as specified in the Wilderness Act of 1964 or the specific wilderness's enabling legislation.
Road	A travel route which has been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road. This language is quoted from the legislative history of FLPMA, the House of Representatives Report 94-1163, page 17, May 15, 1976. It is the only statement regarding the definition of a road in the law (FLPMA) or legislative history.
USGS	U.S. Geologic Survey - A Department of the Interior agency required by FLPMA Section 603 to survey the mineral potential of WSAs recommended for designation as wilderness.
WSA	Wilderness Study Area - A specific geographic area which was inventoried by BLM in response to FLPMA Section 603, found to contain wilderness characteristics and designated as a WSA by decision of the BLM State Director. Wilderness characteristics, as defined by FLPMA or the Wilderness Act are 1) At least 5,000 contiguous roadless acres of public lands, 2) Natural, the imprint of man's work must be substantially unnoticeable, 3) Possessing either an outstanding opportunity for solitude or for a primitive and unconfined type of recreation and 4) May also contain ecological, geological, or other features of scientific, educational, scenic or historical value.

ARROW CANYON RANGE WILDERNESS STUDY AREA

1. THE STUDY AREA - 32,853 acres

Arrow Canyon Range Wilderness Study Area (WSA) is the northern extremity of the narrow, north-south trending Arrow Canyon Range. The mountain range is typical of arid ranges common to the Basin and Range Province. The 32,853 acre WSA is 35 miles north of Las Vegas, Nevada. Roughly triangular in shape, the western side is approximately 12 miles long and 6 miles across, at it's widest point. The west boundary of the study area extends along the base of the mountain on a series of contours. The north boundary is generally the centerline of the Pahranagat Wash and Arrow Canyon drainages. Battleship was is the east boundary, where upon near the southern terminus of Battleship Wash, the boundary turns west across a series of low hills to the Side Canyon drainage. At this point the boundary turns south and generally extends along the base of the mountains and through a pass to tie into the west boundary.

There are three distinct land forms in the WSA, a steep rugged limestone range on the west side, a large sloping bajada region in the north central portion and a north-south trending line of ridges cut by deep washes, including vertical-sided Arrow Canyon, on the east side. The entire WSA is vegetated with desert plants of the creosote bush community. The altitude ranges from 2,000 to 5,200 feet.

Arrow Canyon, a portion of the WSA (3,400 acres) has been named on a list of Federal lands in Nevada proposed by the State of Nevada in 1981 for transfer to State ownership. These lands were identified for the proposed Arrow Canyon State Park, and the State has submitted an application for the lands.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Clark County Wilderness Recommendations Final Environmental Impact Statement released in March, 1987. There were three alternatives analyzed in the EIS: an all wilderness alternative, a partial wilderness alternative where 26,950 acres would be designated as wilderness and 5,903 acres would be released for uses other than wilderness, and a no wilderness alternative, the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
32,853 acres recommended for nonwilderness

The recommendation for this WSA is to not designate it wilderness but to release all 32,853 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation is not to recommend any portion of the study area for wilderness designation, the no wilderness recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The Arrow Canyon Range is recommended for uses other than wilderness because of a lack of quality wilderness values throughout a large portion of the WSA, the key consideration in the recommendation. While the WSA contained the wilderness values necessary for study, they are not considered to be of a quality and continuity throughout the WSA to merit the area's inclusion in the National Wilderness Preservation System (NWPS). The WSA generally appears natural but the aggregate affects of gradual incursion of human activity around the perimeter of the study area and the demand for unconfined recreation combine to impact naturalness of large portions of the Arrow Canyon WSA. Solitude opportunities available in the WSA are limited to the short, narrow canyons and ridges of the central core of the WSA. High recreation use in the main features of the WSA, Arrow Canyon and Pahranagat Wash, significantly limit the quality of solitude and primitive recreational experiences in the northern portion of the study area.

Opportunities for solitude are extremely limited on the west side of the WSA due to the severe slope of the Arrow Canyon Range and visibility to the highway.

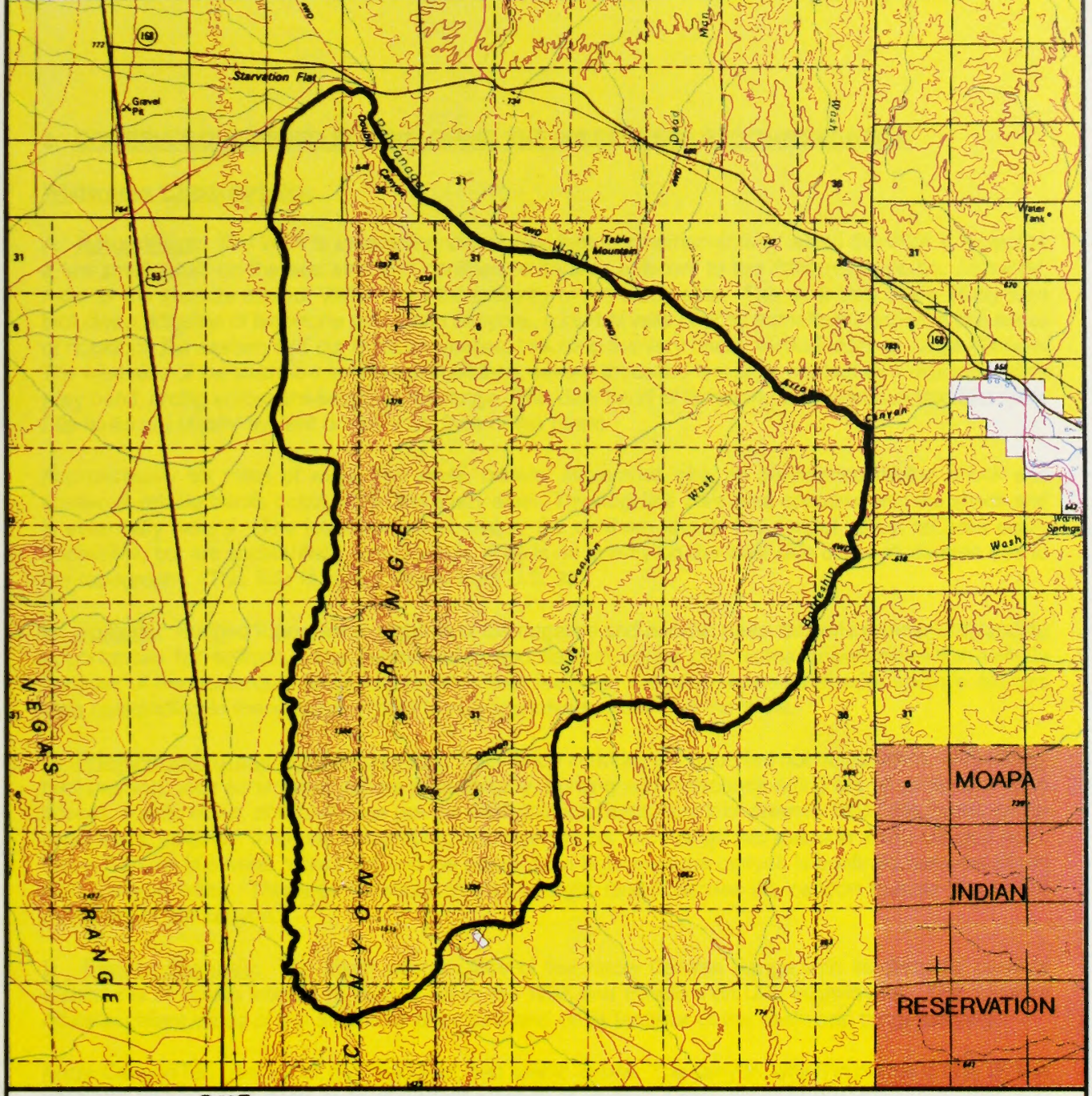
The no wilderness recommendation for the WSA would emphasize maintaining access for motorized recreational activities such as off-road and cross country driving. Several off-highway trails and ways are available to the off-highway enthusiast in the east half of the WSA. Terrain in this area is conducive to this form or recreational activity. Large, broad washes and low, rolling hills provide limited impediments to off-road use. Arrow Canyon and Pahranagat Wash are easily accessible for off-highway recreation uses and several ways and cherrystemmed roads extend into the canyons on the east side of the study area. The WSA provides excellent opportunities for these types of recreational activities as the area's character and terrain is best suited for these types of uses. Management of off-road vehicles in the eastern portion of the WSA would be extremely difficult due to a distinct lack of natural barriers or clearly definable boundaries.

Mineral development and exploration in the southwest, east and northeast portions of the study area have affected naturalness. Expansion of mineral operations contiguous to the WSA would significantly degrade wilderness qualities of the Arrow Canyon Range.

Unconfined recreation would be limited to the long, narrow central core of the Arrow Canyon WSA along the ridgeline and a few short canyons on the slopes of the mountains. Use of this area would be concentrated to a very small portion of the northern end of the WSA. BLM has determined that the highest and best use of the area would be for motorized recreation, mineral development, and intensive development of recreation opportunities in Arrow Canyon. Over the long-term, naturalness values and opportunities for solitude within the WSA would be diminished by an increase in motorized recreational activity. Desert tortoise (Gopherus agassizii), a special feature identified in the area, would not receive the added protection afforded from wilderness designation. Development of alternative recreation opportunities would be enhanced.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	32,853
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	32,853
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	32,853
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	32,853
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	32,853
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	32,853
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS.

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

Arrow Canyon Range Proposal

NV-050-215
March 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is essentially natural. Evidence of human activity within the WSA is limited to a few small areas on the east side and confined to an area adjacent to the Pahranagat Wash. However, most of the impacts are not visible from the majority of the study area. The west side of the study area includes a ridgeline of limestone peaks and canyons, a central valley cut by numerous washes, and a series of ridges on the eastern end cut by deep washes, including the very nearly vertical sides of Arrow Canyon. The west side of the study is a spectacular cliff face, several thousand feet high, marked by a distinctive dark grey band, arcing across the length of the range. This dark band of limestone is several hundred feet thick. Slip faults are clearly evident on the west face of the range.

Approximately six miles of ways, two small, mineral exploration pits, an abandoned mining shack and scattered vehicle tracks occur within the study area. The ridgeline core area contains only the shack and is essentially natural. The intrusions affect mainly the northern end of the central valley, an area easily accessible, but are substantially unnoticeable. The is no activity on the west side of the study area due to the topography. This side is clearly visible from U.S. 93.

B. Solitude: Rugged topographic features of the ridgeline and narrow, deep canyons provide outstanding opportunities for solitude. The central valley and eastern ridges offer some opportunities for solitude because of the numerous, deep washes and other features. However, opportunities for solitude are less than outstanding in these areas. There is no vegetative screening in the WSA.

C. Primitive and Unconfined Recreation: Recreation activities are good but not outstanding. Day-hiking, backpacking, rock scrambling, nature photography, hunting and horseback riding are all available. Easy access, scenic views, and challenge are the best characteristics. Lack of diversity limits the quality of the experience, however, there are outstanding opportunities for unconfined recreation in Arrow Canyon itself. Arrow Canyon is several miles long and the broad open bottom of the canyon is confined between sheer, high, canyon walls. This area is unique in that sunlight rarely reaches the canyon bottom due to the deepness of the canyon.

D. Special Features: The sheer western face of the Arrow Canyon Range with its dramatic band of quartzite is of scenic interest to visitors within the WSA and travelers on U.S. Highway 93. The ridgeline offers excellent vistas of the area in all directions and other features of the basin and range country.

Arrow Canyon has geological, archeological, and scenic values. The canyon, which in places is only 20 feet wide and 300-400 feet deep, is an important location of fossils. Coral, brachiopods, fossil mollusks, and numerous other specimens have been found. Extensive, petroglyph panels are found on the canyon walls and upper reaches of the Pahranagat Wash. Other archeological resources include; agave roasting pits, shelter caves, lithic and ceramic scatters, and rock alignments.

Bighorn sheep inhabit the mountainous portions of the WSA in all but the driest months.

Desert tortoise (Gopherus agassizii) listed by the Fish and Wildlife Service as a threatened species on April 2, 1990 has been identified within the WSA. Nearly half of the WSA, the lower elevations on the northwest and the eastern half, have been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently then listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Arrow canyon Range WSA would add to the diversity of ecosystems represented In the National Wilderness Preservation System. Arrow Canyon Range WSA Is within the American Desert Province, and Creosote Bush is the predominant ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
NATION WIDE				
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
NEVADA				
American Desert Province				
Creosote Bush	0	0	20	549,834

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

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	28	2,919,234	135	4,958,751

C. Balancing the geographic distribution of wilderness areas: Designation of the Arrow Canyon Range WSA would contribute to the geographic distribution of areas within the National Wilderness Preservation System (NWPS) in Nevada. Jarbidge Wilderness Area (113,177 acres) in northeast Nevada was the only designated wilderness in Nevada until designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of the Arrow Canyon Range WSA, located in southeast Nevada, would provide the public a wilderness opportunity in another part of the state near the largest population base In the State.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The study area is capable of being managed as wilderness but there will be significant manageability concerns. Boundaries of the study area can easily be identified on the north side of the study area, however, boundaries for the rest of the study area would be difficult to identify and would not be clearly recognized by recreation users of the area. Unauthorized access to the west side of the study area is not anticipated due to the lack of destinations, limited points of ingress, and the sheer cliffs on the west face of the mountains. Off-road vehicle access to the east and north sides of the study area are unchecked by physical barriers or a clearly defined boundary. These areas have been historically used by off-road vehicle users and changing that pattern of use would be difficult.

Interest in mineral exploration has been concentrated in the nor and south east portions of the study area. access to pre-FLPMA mining claims In the north portion of the area and post-FLPMA claims in the southern portion of the study area would open more area to OHV activity and create a management burden upon existing staff and require hiring of additional personnel to manage access in the area.

The entire WSA has been leased for oil and gas. Although access could be managed, the impact created and other management concerns are the same as for mining.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following Information: (1) miscellaneous field studies of the WSA, (2) literature search, (3) evaluation of the mineral setting, (4) field verification by BLM, (5) past and/or present mining activities.

There are 300 acres of pre-FLPMA and 500 acres of post-FLPMA mining claims in the WSA, as of March, 1990, none of which are patented. The entire WSA is covered by 27 post-FLPMA oil and gas leases.

There are no known metallic mineral deposits in the WSA. Nonmetallic mineral production has included silica sand at the Tiffany Quarry (a patented claim) on the southeastern boundary of the WSA. Large reserves are believed available. Murphy (1954) reports Intermittent production with less than 2,000 tons of quartzite mined annually. Small quantities of bentonite have reportedly been mined from a deposit near the northeastern boundary of the WSA. A quarry is presently in operation along the southwest side of the WSA, mining quartzite and crushing it.

The Arrow Canyon Range shows no evidence indicating metalllc mineral favorability. It has a moderate to high favorability for nonmetallics including silica, montmorillonite, gypsum, diatomite, limestone, dolomite, and alluvium. The favorability for oil and gas resources is moderate because this area is part of the Overthrust Belt. The eastern portion of the WSA has been identified by the U.S. Geologlcal Survey (1979) as moderately favorable for potential geothermal resources.

The entire WSA is classified as being moderately favorable for oil and gas. Although no wells have been drilled in the study area, several that have been drilled to the south have been unsuccessful. Development of energy resources is not expected because of a history of nonproduction.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for all alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Alternative A
Wilderness Values	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be lost.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be retained or improved within the WSA.	The most natural features and outstanding opportunities for solitude and primitive recreation would be retained or improved on the 26,950 acres recommended as wilderness. There would be a reduction in naturalness and opportunities for solitude and primitive recreation on the 5,903 acres not recommended for wilderness.
Recreation Resources.	Motorized recreational use within the WSA would reach 300 visits annually. Non-motorized recreational use within the WSA would reach 300 visits annually.	Motorized recreational use of approximately 200 visits would be foregone on 32,853 acres annually. Non-motorized use within the WSA would reach 700 visits annually.	On the 5,903 acres of the WSA not designated wilderness, motorized recreational use would continue to increase but would not exceed 400 visits annually. Non-motorized recreational use within the WSA would reach 400 visits annually.
Mineral Resources.	The development of 2 mines for silica deposits and the exploration for oil and gas could occur within the WSA.	The development of 2 mines for silica deposits and the exploration for oil and gas within the WSA would be foregone.	The development of 1 mine and exploration for oil and gas would be foregone within the area designated as wilderness. Exploration for oil and gas and the development of 1 mine could occur within the area not designated.
Cultural Resources.	The Arrow Canyon Rock Art site would be transferred to the State of Nevada as part of a proposed State park.	The Arrow Canyon Rock Art site would receive additional protection by precluding surface-disturbing activities.	The Arrow Canyon Rock Art site would receive additional protection by precluding surface-disturbing activities.
Potential State Park Lands.	Development of the proposed Arrow Canyon State Park would be realized.	Development of the proposed Arrow Canyon State Park would not be realized.	Development of the proposed Arrow Canyon State Park would not be realized.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant Issues for analysis.

Summary of WSA Specific Comments

Public involvement occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearing were held in association with the study phase and the preparation of the draft environmental impact statement for the WSAs located within Clark County. The meetings were a combination Open House/Scoping Meeting and were held In Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 40 comments specifically addressing this WSA were received. Of those, 39 were written comments and one an oral statement, received at the public hearing on the draft EIS. In general, 21 commentors, including the Governor, supported wilderness designation for all or part of the WSA. Five commentors supported no wilderness for the Arrow Canyon Range WSA, mostly citing potential mineral resources. Eleven commentors wanted no wilderness at all and five recommended designated recommending the entire area, along with all WSAs wilderness.

Most comments supporting wilderness designation and specifically mentioning the WSA noted outstanding scenic values, manageability, limited resource conflicts, high wilderness values (outstanding opportunities for solitude and primitive recreation), unspoiled biological and cultural resource values, and wildlife habitat potential. Comments opposing wilderness focused on the potential impacts to mineral resource values, Impacts to energy and mineral exploration and development, and limitation on wildlife management options.

County: Clark County Department of Comprehensive Planning in general supported nondesignation of the study area.

State: The Governor's consensus, dated August 30, 1983, recommended wilderness designation for a portion of the study area, with a strong recommendation to exclude the southwest part of the WSA "in order to allow continued access to mineral resources." The State's consensus review cited significant recreational and cultural resources in this WSA which outweigh other resource values". Follow up discussions between the state and BLM arrived at a consensus that the area should not be recommended for wilderness. Comment letters received from the State of Nevada Department of Conservation and Natural Resources, Division of State Lands, State Division of Minerals, and Department of Wildlife supported the Bureau's Preferred Alternative, no wilderness.

Federal: The Environmental Protection Agency (EPA) stated that the Final EIS should address potential air quality impacts for each alternative from mining, energy and off-road vehicle activities and the potentlal impacts from these activities on sensitive soils and watershed areas. EPA also recommended that the Final EIS should identify ground water resources. The U.S. Air Force stated they support alternatives that do not restrict military overflights. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments. The U.S. Geological Survey stated that geologic conditions were adequately considered in the Draft EIS and that mineral resource potential of those areas recommended suitable for wilderness would be addressed in their joint report with the Bureau of Mines.

There was one written comment received on the Final EIS from the EPA which supported the proposed action. This agency recommended that the final recommendation include a statement that water and air quality would be best protected under wilderness designation.

MUDDY MOUNTAINS WILDERNESS STUDY AREA

1. THE STUDY AREA - 96,170 acres

Muddy Mountains Wilderness Study Area (WSA) (NV-050-229) is located in Clark County, approximately 20 miles northeast of Las Vegas, Nevada. The study area includes 96,170 acres of public land (Table 1).

It is irregular in shape, approximately fourteen miles across in a north-south direction, at its widest point, and approximately eighteen miles from east to west. Beginning north of Color Rock Quarry in the northern extremity of the WSA and extending approximately sixteen miles southeast to Bitter Spring, the northeast boundary of the WSA is the American Borax Road. A combination of four miles of jeep trails, approximately six miles of common boundary with the Lake Mead National Recreation Area and Bureau of Reclamation administered Land, private lands, and nearly eleven miles of road from Lovell Wash east to patented mining claims, is the southern boundary. The northwest boundary is the old Arrowhead Trail, a well used dirt road.

Muddy Peak,the highest point within the study area at 5,790 feet, Bitter Spring Valley, Bitter Ridge, Gale Hills, and Hidden Valley are dominant landform features within the WSA. The Muddy Mountains form the core area of rugged limestone peaks and canyons, including two interior valleys which contain brilliant orange, red and cream colored outcroppings of aztec sandstone. The northern bajada consists of gently rolling lands sloping northward from the Muddy Mountains to California Wash. The Gale Hills on the south side of the WSA are low colorful hills of deposited sediments characterized by rugged erosional features and three major basins. There is a bajada sloping from the base of the Muddy Mountains to the east into Bitter Spring Valley and White Basin. Bitter Spring Valley and White Basin are separated the dramatic upthrust, broad, sweeping arc of the 800 foot, rugged escarpment of Bitter Ridge. Lovell Wash and Anniversary Narrows, a highly scenic narrow convoluted canyon cutting deeply through the mountains, are on the south end of the WSA. Bowl of Fire, most of which is administered by the National Park Service, a brilliantly colorful area of red and rust colored sandstone, abuts the southeast edge of the WSA. Vegetation throughout the WSA is typical Mohave low-desert shrubs and grasses with scattered riparian vegetation, desert willow, in the washes and narrow canyons. Elevations range from 2,000 to 5,790 feet.

Muddy Mountain WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Clark County Final Wilderness Recommendations Environmental Impact Statement, released in April, 1987. Four alternatives were analyzed in the EIS: All Wilderness; Partial Wilderness, where 36,850 acres would be designated wilderness and 59,320 acres would be released for uses other than wilderness, the recommendation in this report; a second Partial Wilderness alternative where 44,260 acres would be designated wilderness and 51,910 acres would be released for uses other than wilderness; and No Wilderness.

2. RECOMMENDATION AND RATIONALE - 36,850 acres recommended for wilderness
59,320 acres recommended for nonwilderness

The recommendation for this WSA is to designate approximately 36,850 acres of public land as wilderness and release approximately 59,320 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The partial wilderness alternative, the recommendation of this report, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

Outstanding wilderness values, high scenic quality, a pristine landscape, supplemental values of cultural and wildlife, easily identified boundaries and manageability were key considerations in recommending the Muddy

Mountains for wilderness designation. Including this area in the National Wilderness Preservation System (NWPS) will significantly enhance the diversity of ecosystems and areas included within the NWPS.

Intrusions from casual ORV use and mineral exploration are limited to the extreme southwest portion of the WSA, in the vicinity of the Gale Hills, and the extreme northeast area, south of Buffington Pockets. Some off-road activity is occurring in the washes in the southeast portion of the WSA however, the impact from this activity is insignificant. Extremely rugged topography in most of the WSA limits accessibility.

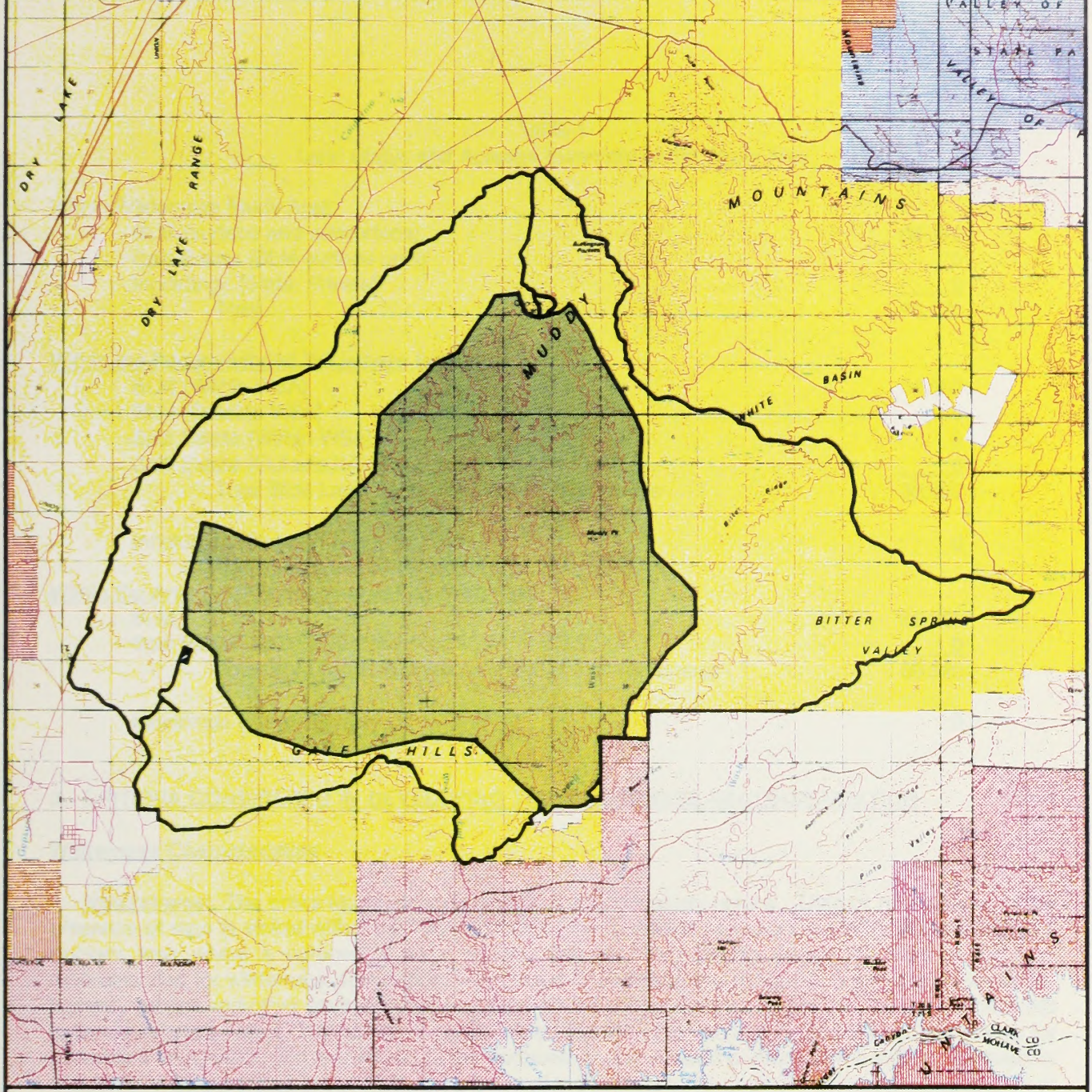
Opportunities for solitude and primitive recreation are outstanding in all areas of the Muddy Mountain WSA due to a diverse pattern and variety of topography, numerous narrow canyons and deep washes, a jumbled pattern of massive boulders, and the sheer size of the WSA. A variety of landscapes and landform features offer many interesting and scenic primitive recreation destinations. Primitive recreation opportunities range from a few hours to overnight hiking opportunities lasting several days. Inasmuch as there are no perennial water sources within the WSA, water is the limiting factor for recreational pursuits in the WSA.

Significant cultural resource values are present within Hidden Valley and Buffington Pockets and significantly add to the educational and scientific values of Muddy Mountain WSA. Muddy Mountain WSA, contains a unique geologic fenster, which along with other geologic features within the WSA, add significantly to interpretation, educational and scientific values. The long graceful sweeping arc and the rugged, vertical escarpment of Bitter Ridge is a classic example of block faulting. Isolated, sandstone buttes stand as lonely sentinels in the middle of Bitter Spring Valley. Anniversary narrows is an outstanding, graphic example of the erosional forces of wind and water. Hidden Valley, in the center of the WSA, a geologic "fenster" or window, is an opening down through overthrust rock exposing underlying rock, an extremely rare and unusual feature.

Exploration and development of mineral resources within the WSA are expected to occur in the extreme southwest and east adjacent to or in close proximity to existing mining operations. Exploration and development of silica deposits in the area of West End Wash is anticipated. Logical progression and development of claims external to the WSA would ultimately proceed into the southwest portion of the WSA. Development of claims that straddle the WSA would significantly affect wilderness values in that area. Development of claims adjacent to the PABCO gypsum patented mining operations would affect wilderness suitability and values present in the immediate area. Although there are potential conflicts with mineral development in the WSA, wilderness values present and scientific and educational values of the area far outweigh the resources at risk.

There are no conflicts with grazing and no significant conflicts with proposed wildlife developments. Much of the WSA is critical bighorn sheep habitat and wilderness designation would ensure that habitat is maintained in it's present condition and eliminate potential impacts to bighorn sheep.

Areas recommended to be released for uses other than wilderness, the broad sweeping bajadas and Bitter Spring Valley, could be potentially difficult to manage due to possible mineral development along the southwest boundary and accessibility to off-road vehicles. At present, there is little risk to the existing character and naturalness in these areas and nondesignation will not significantly alter or affect values present, except in the southwest area should mineral values be developed. Mineral development in Bitter Spring Valley is not likely to occur.



RECOMMENDED FOR WILDERNESS –

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE –

N

1 0 1 2 3 4 5

MILES

Muddy Mtns. Proposal

NV-050-229
February 1990

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	96,170
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	96,170
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	36,850
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	36,850
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	59,320
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	59,320
Inholdings (State, Private)	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The entire Muddy Mountain WSA is predominately natural. Little or no evidence of the presence of man is visible within the WSA, except in the northeast portion of the WSA in the Buffington Pockets area where a number of ways occur. The way into Hidden valley, the core of the area recommended for wilderness designation, was closed in 1985 with the cooperation and assistance of off-highway groups and other environmental groups. Natural succession has begun and the area is returning to its natural state. Most OHV activity is concentrated outside of the portion of the WSA recommended for wilderness designation and is confined to the northeast and southwest portions of the WSA. The majority of activity is concentrated in the northeast portion of the WSA and the southern perimeter. The imprint of this activity is not substantially noticeable within the WSA and does not detract from the area's natural character.

Muddy Peak, Anniversary Narrow, West End Wash, and the rugged limestone and sandstone hills and valleys, which comprise the area recommended for designation, create a complex pattern of narrow, confined valleys, ridges and mountain peaks. This area is nearly pristine due to limited access and the rugged character of the area.

The 59,320 acres of WSA recommended for uses other than wilderness are primarily in a natural condition. However, the potential influence of external mining activities in the Gale Hills area may decrease the quality of the wilderness experience in the southwest corner of the WSA. There is a recent increase in interest in development of silica sand and gypsum resources in the West End Wash and Gale Hills area.

B. Solitude: Excellent topographic screening provides outstanding opportunities for solitude in almost all areas of the WSA, in spite of the lack of vegetative screening. Cliffs, peaks, numerous narrow canyons in the sandstone cliffs and boulders in the northwest portion of the WSA, and deeply cut canyons, such as Anniversary Narrows and Lovell Wash on the south and the deep canyon on the north end of the area recommended for wilderness designation, provide numerous opportunities for seclusion and a variety of scenic vistas and wilderness experiences for visitors in the Muddy Mountain core and most of the Gale Hills. The northern bajada, Bitter Spring Valley, White Basin, and two of the basins in the Gale Hills are broad open landscapes of offer a lesser degree of screening for solitude. Although most of the WSA is screened from outside sights and sounds, commercial and light military air traffic passes several thousand feet overhead.

C. Primitive and Unconfined Recreation: Day-hiking, backpacking, nature study, photography, technical rock climbing and scrambling are outstanding in this WSA. The extremely varied topography offers numerous destinations, trip lengths, challenge levels,and a nearly limitless variety of wilderness experiences. A temperate climate and the Bureau's Bitter Spring Back Country Byway provide easy access year round.

D. Special Features: Geological, archeological, and scenic resources and bighorn sheep are the outstanding features of the WSA. Red and buff colored sandstone, sculpted through time by the forces of wind and weather, creating unusual formations within Hidden and Wild Sheep Valleys were exposed by erosion creating a "window" or fenster through the overthrust limestone of the Muddy Mountain mass. Limestone cliffs form a scenic background and, from the top, offer outstanding views of basin and range physiography and Lake Mead. The conglomerate of the Gale Hills formation readily forms cliffs, the most impressive of which are the 600-foot West End Wash cliffs. Desert bighorn are found throughout the WSA except during periods of drought. Several guzzler projects in the WSA and throughout the Muddy Mountains have been developed to expand the yearlong habitat of bighorn sheep. Wild horses and burros inhabit the southern and eastern portion of the WSA in the broad open valleys of Bitter Spring Valley and White Basin yearlong.

Numerous archeological resources present. Site types include agave roasting pits, numerous pictograph and petroglyph panels, open camp sites, rock shelters, quarry sites, and lithic and ceramic scatters. Test excavations in Hidden Valley have revealed occupation spanning over 4,000 years in portions of the study area. Hidden Valley has been identified as being eligible for the National Register of Historic Places.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Muddy Mountain WSA would add 96,170 acres of the Creosote Bush ecosystem to the National Wilderness Preservation System(NWPS). Presently, this ecosystem is nationally represented by only one area, and is not represented in Nevada. This WSA offers a unique opportunity to significantly enhance the diversity of the ecosystems represented in Nevada and the nation by including an outstanding example of the Creosote Bush ecosystem. Diversifying and expanding the representation of this ecosystem is desirable and will significantly enhance the viability of this ecosystem in the long-term. Table 2 summarizes ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province/ Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote Bush	0	0	20	549,834

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: Muddy Mountain WSA is within a five hour drive of three major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	28	2,919,234	135	4,958,751
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: Muddy Mountains WSA would contribute to the geographic distribution and diversity of areas within the National Wilderness Preservation System in Nevada. Jarbidge Wilderness Area (113,177 acres) in northeast Nevada was the only designated wilderness in Nevada until 1989 when designation of Forest Service wilderness created a wide distribution of wilderness areas within the state. Designation of the Muddy Mountains WSA, located in southeast Nevada, would significantly contribute to the geographic distribution and diversity of areas within the National Wilderness Preservation System.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire Muddy Mountains WSA can reasonably be managed as wilderness to preserve wilderness values now present. The area is a solid block of public land with no private inholdings, State lands or rights-of-way encumbering the study area. The perimeter is easily identifiable with roads and trails defining the entire perimeter. Off-road vehicle activity in the east portion of the WSA and mineral development in the southwest area of the WSA would be management concerns. Off-road travel in the east end of the WSA is limited to travel up a single dry wash. Mining activity and post claims are limited to the southwest portion of the WSA near West End Wash. There are no valid existing rights associated with claims in the WSA.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following information: (1) review of existing documentation and mine production records, (2) reconnaissance sampling and analysis of selected areas within the WSA, (3) and the geologic setting of the area. U.S. Geological Survey and U.S. Bureau of Mines cooperated in preparing a MINERAL RESOURCE POTENTIAL OF THE MUDDY MOUNTAINS WILDERNESS STUDY AREA, CLARK COUNTY, NEVADA (1982). The report identified the Muddy Mountains WSA, has a high potential for mineral deposits of calcium borates and lithium. Known and potential mineral deposits are concentrated in the east-central and south-central parts of the study area. Zeolites (in particular clinoptilolite) are present in some tuff beds throughout much of the study area with the majority of the deposits external to the WSA in the northeast, this inferred resource potential is probably moderate to high. Steam-sediment sampling suggests that the Muddy Mountains area has little potential for mineral deposits of metals other (than lithium). Clay minerals are mined at one locality outside the WSA. Building stone and silica sand have moderate to low potential in some places.

Oil and gas potential within the study area is low. Five exploratory oil and gas test holes have been drilled in the vicinity of the WSA, one within the cherry-stem in the Buffington Pockets area in the north end of the WSA, but none encountered producible amounts of petroleum. The local Tertiary stratigraphic section within the WSA is not considered to have good potential for oil exploration (U.S.G.S. 1982). These rocks are not part of the overthrust belt and were deposited in closed, evaporitic basins, and contain little or no organic matter. The high degree of structural complexity of the study area suggests there are probably no buried overthrust-related traps that are undisturbed by Tertiary structures. U.S.G.S. determined that the petroleum potential for the study area is regarded as poor, chiefly because of the lack of known potential source rocks.

As a result of this information, areas of moderate or high mineral potential or inferred mineral potential were not recommended for wilderness designation. Additionally, the majority of high borate and lithium mineral potential are external to the WSA in White Basin. Areas of low potential for silica sand and building stone were not recommended for wilderness designation. Every effort was made to eliminate areas with speculative or inferred mineral resources from the area recommended for wilderness designation.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA Specific Comments

In a letter to the Las Vegas District dated August 30, 1983, the Governor of the State of Nevada supported the Management Enhancement alternative, the recommendation of this report.

Public involvement occurred throughout the wilderness review process. Comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearings were held in association with the study phase and the preparation of the draft environmental impact statement for WSAs located within Clark County. Meetings were a combination Open House/Scoping Meeting and were held in Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 42 comments specifically addressing this WSA were received. Of those, 39 were written comments and three were oral statements, all received at the public hearing on the draft EIS. In general, 33 commentors supported wilderness designation for all or part of the WSA, including nine who supported more area in the area recommended for wilderness designation. Three commentors supported less acreage recommended for wilderness designation. Seven individuals who commented recommended no wilderness for the Muddy Mountain WSA.

Most comments which supported wilderness designation and specifically mentioned the WSA noted outstanding wilderness values (outstanding opportunities for solitude and primitive recreation), unspoiled biological and cultural resource values, outstanding and unusual scenic amenities of the study area, and wildlife habitat potential. Comments opposing wilderness focused on potential mineral resource and impacts to energy and mineral exploration and development. Development of mineral resource potential, in the southwest and northeast portion of the WSA, and the area of concern for those who opposed wilderness designation or a reduced acreage for wilderness designation is not recommended for wilderness designation.

County: Clark County Department of Comprehensive Planning, in general, supported the wilderness designation of the Muddy Mountains, the recommendation of this report. However, Clark County was unclear on what land management policies would apply to those portions of WSAs not recommended for wilderness designation.

State: The Governor's consensus, dated January, 1984, supported the Bureau's Preferred Alternative, with a strong recommendation for excluding part of the southwest portion of the WSA "in order to allow continued access to mineral resources." The recommendation of this report is to exclude those areas from wilderness designation. Comment letters received from the State of Nevada Department of Conservation and Natural Resources, Division of State Lands also supported the Bureau's Preferred Alternative. The State Divisions of Minerals, Department of Wildlife and Agriculture did not support the Preferred Alternative.

Federal: U.S. National Park Service (NPS) concurred with recommending a portion of the Muddy Mountains study area for wilderness designation, the recommendation of this report, citing wilderness designation of contiguous public lands would enhance NPS management of the Bowl of Fire, an area they have identified for management as an outstanding natural area, and protection of the scenic qualities of Anniversary Narrows. The U.S. Forest Service did not comment on the Muddy Mountain WSA. The Environmental Protection Agency (EPA) stated that the Final EIS should address potential air quality impacts for each alternative from mining, energy and off-road vehicle activities and the potential impacts from these activities on sensitive soils and watershed areas. EPA also recommended the Final EIS identify ground water resources. The U.S. Air Force stated they support alternatives that do not restrict military overflights. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments. The U.S. Geological Survey stated that geologic conditions were adequately considered in the Draft EIS and that mineral resource potential of those areas recommended suitable for wilderness would be addressed in a joint report with the Bureau of Mines. However the Muddy Mountain WSA will not be covered under a joint report.

There was one written comment received on the Final EIS from the EPA which supported the proposed action. This agency recommended that the final recommendation include a statement that water and air quality would be best protected under wilderness designation.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (Partial Wilderness)	All Wilderness Alternative	No Wilderness Alternative	Partial Wilderness Alternative
Wilderness Values	Wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be retained or improved on 36,850 acres designated as wilderness. There would be a reduction in naturalness and opportunities for solitude and primitive recreation on the 59,320 acres not designated.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be retained or improved within the majority of the WSA.	The majority of the WSA's wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be lost.	The most natural features and outstanding opportunities for solitude and primitive recreation would be retained or improved on the 44,260 acres designated as wilderness. There would be a reduction in naturalness and opportunities for solitude and primitive recreation on the 51,910 acres not designated.
Recreation Resources	On the 59,320 acres of the WSA not designated wilderness, motorized recreational use would reach 2,500 visits annually. Nonmotorized recreational use in the WSA would reach 600 visits annually.	Motorized recreational use of approximately 700 visits would be foregone on 96,170 acres annually. Nonmotorized use within the WSA would reach 800 visits annually.	Motorized recreational use within the WSA would reach 2,700 visits annually. Nonmotorized recreational use within the WSA would reach 400 visits annually.	On the 51,910 acres not designated as wilderness, motorized recreational use would reach 1,700 visits annually. Nonmotorized recreational use in the WSA would reach 600 visits annually.
Mineral Resources	Development of 1 mine and exploration for non-metallic minerals and energy resources would be foregone in the area designated as wilderness. Exploration for non-metallic minerals and energy resources and the development of 2 mines could occur in the area not designated.	Development of 2 mines and the exploration of mineral and energy resources within the WSA would be foregone. One open pit mine would be developed on valid silica sand claims which currently exist and would be within the designated wilderness.	Exploration drilling for mineral and energy resources and development of 3 mines for metallic minerals would occur within the WSA.	The development of 2 mines and exploration for non-metallic minerals and energy resources would be foregone within the designated wilderness. One open pit mine would be developed for valid silica sand claims in the wilderness on claims existing at the time of designation. Exploration for energy resources would occur in the area not designated as wilderness.
Cultural Resources	Hidden Valley and part of Colorock Quarry would receive additional protection by precluding surface-disturbing activities. Buffington Pockets archaeological site would not receive any additional protection.	Hidden Valley, Colorock Quarry and Buffington Pockets areas would receive additional protection by precluding surface-disturbing activities.	Hidden Valley, Colorock Quarry and Buffington Pockets would not receive additional protection from surface-disturbing activities.	Hidden Valley and part of Colorock Quarry area would receive additional protection by precluding surface-disturbing activities. Buffington Pockets archaeological site would not receive any additional protection.

MT. STIRLING WILDERNESS STUDY AREA

1. THE STUDY AREA - 69,650 acres

Mt. Stirling WSA (NV-050-401) is located 45 miles west of Las Vegas, Nevada, in Clark and Nye Counties. Encompassing the northern most portion of the Spring Mountain Range, the WSA contains 69,650 acres of Forest Service and BLM lands with no split estate or private inholdings (Table 1).

The northwest corner of the WSA adjoins six 40 to 80 acre parcels of private land. From this point going south the boundary follows the base of the range where at the southwest corner the boundary adjoins one parcel of private land. The south-southeast boundary runs along the Wheeler Wash Road and over Wheeler Pass. From Wheeler Wash Road the eastern boundary heads north following major topographic features and contour lines. The northern boundary runs through the bajada to the base of the mountain range. One major cherrystem road extends two and one-half miles into the WSA from the southern border, in the vicinity of Wheeler Well.

The WSA consists of a northwest-southeast trending ridge, steep on the southwest-facing slopes. The ridgeline is rocky and heavily dissected into numerous peaks and canyons. A central valley separates the main ridge from a second peak complex centered around Wheeler Peak in the northeast corner of the WSA. The north-central lobe of the WSA consists of a bajada. Elevations range from 4,800 feet on the bajada to the 9,138-foot Wheeler Peak. The WSA is made-up of limestone and dolomite with a broad band of quartzite running the length of the southwest face of the ridge. Most of the WSA is heavily vegetated with juniper and pinyon. Ponderosa pine and white fir are found at higher elevations, primarily on the east face of the ridge.

The Mount Stirling WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA), and was included in the Clark County Wilderness Recommendations/Environmental Impact Statement (EIS) filed in April, 1987. Six alternatives were analyzed in the EIS: a Partial Wilderness Alternative, which is the recommendation of this report, an All Wilderness Alternative, a No Wilderness Alternative and three additional partial wilderness alternatives A, B and C with wilderness/nonwilderness acreage splits of 42,707/26,943, 44,431/24,219 and 30,190/39,460 acres respectively.

The National Forest and Public Lands of Nevada Enhancement Act (Public Law 100-790) adjusted the administrative boundaries for the Toiyabe National Forest, placing approximately 91 percent of the Mount Stirling WSA within the new Forest boundary.

2. RECOMMENDATION AND RATIONALE - 50,682 acres recommended for wilderness[1]
19,050 acres recommended for nonwilderness

The recommendation of this report is to designate 50,682 acres as wilderness allowing for the construction of two miles of access route across the northeastern portion of the WSA. A total of 19,050 acres would be released for uses other than wilderness (Map 1). All wilderness is the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The recommendation of this report would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

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[1]Includes 82 acres exterior to the WSA boundary for management purposes.

The 50,682 acre area is recommended for wilderness designation because it is natural and provides outstanding opportunities for both solitude and primitive and unconfined recreation. The rugged complex of canyons and ridges and heavy forest cover provides excellent screening and secluded areas. Isolated locations and rugged features of Wood Canyon and the southeast face of Mt. Stirling, provides exceptional secluded locales as these areas are untouched by man. There are numerous special features and interesting locales which would be challenging to any backpacker, hiker, camper, or rock scrambler. Numerous peaks in the area, especially Wheeler Peak and Mt. Stirling, offer challenging climbs and scenic views of the Spring Mountain Range and other surrounding vistas. Numerous canyons and peaks offer a variety of loop routes for hiking and backpacking. Rugged rock outcrops line canyons and ridges and a blanket of forested cover provide secluded locales for a variety of campsites. Those developed springs located along the periphery of the recommended area would allow visitors to replenish water supplies. The area provides one of the most complete sections of marine paleozoic fossiliferous formations in Nevada. At the higher elevations visitors would be able to locate ponderosa pine and white fir. Visitors would also have opportunities to view elk as the area constitutes part of the habitat of the only elk herd in Clark County. Two large petroglyph sites located on Mt. Stirling and the remnants of a pine nut milling site and encampment provide visitors numerous choices to view and study the activities of the native populations that have historically inhabited the area.

The area is manageable as wilderness, due primarily to the extreme rugged terrain, dense vegetation and its relative inaccessibility to motorized vehicles.

Portions of the recommended area may be difficult to manage where the terrain and vegetation is less restrictive, thus providing some limited access for unauthorized motorized vehicles. Such areas would be limited to the periphery and possibly along portions of the road projected for development through the recommended area's northeast corner.

Conflicts with minerals exists within the northern and western portions of the recommended area. Mining claims are located within these portions of the area. No mineral resources have been identified, but high mineral resource potential for undiscovered deposits of gold were assigned along the area's northern and western boundaries by the U.S. Geological Survey (Bulletin 1730-B).

Grazing use of the area will be allowed to continue in accordance with management plans and allotment management objectives. Removal of pinyon-juniper as a wildlife management tool for developing elk habitat would not take place within the recommended area. Interpretative signing of the Wood Canyon Rock Art area proposed as a management tool for cultural resources would not be implemented within the area recommended for wilderness.

The 19,050 acres recommended for nonwilderness are comprised of five parcels (A,B,C,D & E) located on the periphery of the WSA. These parcels are recommended for nonwilderness in order to reduce some of the resource conflicts presently occurring and projected to occur within the WSA. These areas also offer less than quality wilderness values of solitude and primitive recreational opportunities.

Adjustments to the WSA's north-northwest borders established a boundary that is more definable and easily locatable for visitors utilizing the area. The northern portion of the WSA not recommended for wilderness would remain available for mineral exploration in an area that has a high mineral resource potential for gold. Conflicts with mineral resources within the northern portion of the WSA would be reduced by the recommendation of nonwilderness for this area. Conflicts between motorized recreational use and wilderness would be reduced as the area would remain open to motorized vehicles. Where terrain and vegetation does not restrict access, visitors are able to pursue motorized types of recreational pursuits such as hunting and trapping access and vehicle camping.

The northeastern lobe extends into a bajada that is easily accessible to off- road and cross-country motorized vehicles. This portion of the WSA would remain available to visitors for motorized types of recreational pursuits such as hunting and trapping access, off-road driving, vehicle camping and sightseeing.

The southern area, encompassing Wheeler Well and the charcoal kilns, is heavily used by motorized recreationists for camping, hunting and general sightseeing. Nondesignation of this portion of the WSA would allow for the continued use of motorized types of recreational activities. In addition, projected development of a semi-primitive campground (picnic table, fire rings, portable toilets) could be constructed within this area. Development of recreational facilities within this area would help to meet the needs and demand placed on the area's recreational resources by the rapidly increasing population of Clark County.

Exploration of existing mining claims and the development of potential mineral resources is projected to occur within the southern area. Nondesignation of this portion of the WSA would reduce possible conflicts between wilderness and the development of potential mineral resources.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	5,600
Forest Service	64,050
Split Estate (BLM surface only)	0
Inholdings (State, private)	0
Total	69,650
Within the Recommended Wilderness Boundary	
BLM (within WSA)	750
BLM (outside WSA)	0
Forest Service (within WSA)	49,850
Forest Service (outside WSA)	82
Split Estate (within WSA)	0
Split Estate (outside WSA)	0
Total BLM and FS Land Recommended for Wilderness	50,682
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	4,850
Forest Service	14,200
Split Estate	0
Total BLM and FS Land Not Recommended for Wilderness	19,050
Inholdings (State, private)	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The 50,682 acres recommended for wilderness are predominately natural as few man-made features exist within the area. Nine developed springs are primarily located along the area's periphery

and are visible within their immediate vicinities. Two and one-half miles of ways are located within the northern portion of the recommended area. The ways are substantially screened due to the abundant tree cover. Although visible from higher elevations, their presence does not distract from the area's overall natural character. A terraced burned area east of Wheeler Peak is distinctly visible from atop the peak and along the southeastern boundary. Natural processes will eventually rehabilitate the scars as vegetation fills in the terracing. The overall influence of human imprints on the naturalness of the area as perceived by the average visitor is negligible.

The 19,050 acres recommended for nonwilderness contains several range developments and ways. Two corrals and one developed spring are located along the northern boundary road. One way extends from the southern boundary into the area's central drainage. A portion of the terraced burn occupies the southeast section of the area recommended for nonwilderness. Overall influence of human imprints on naturalness of the area, as perceived by the average visitor, is negligible.

Outside influences that directly affect the recommended area's naturalness consists of four cherrystemm roads which cut into the southern boundary. The Wheeler Well cherrystem is 2-1/2 miles long, has old water developments, a half-mile branch road, and a guzzler. Vegetative cover of the area limits the overall influence of the cherrystems. Roads are visually insignificant, however, they do allow minimal vehicle access into the area recommended for nonwilderness.

B. Solitude: Within the area recommended for wilderness outstanding opportunities for solitude exist. The rugged complex of canyons and ridges and the heavy forest cover provides excellent screening and secluded areas. Isolated locations and rugged features of Wood Canyon and the southeast face of Mt. Stirling, provides exceptional secluded locales as these areas are untouched by man. Within the area not recommended for wilderness, numerous opportunities for solitude exist, but not to an outstanding degree.

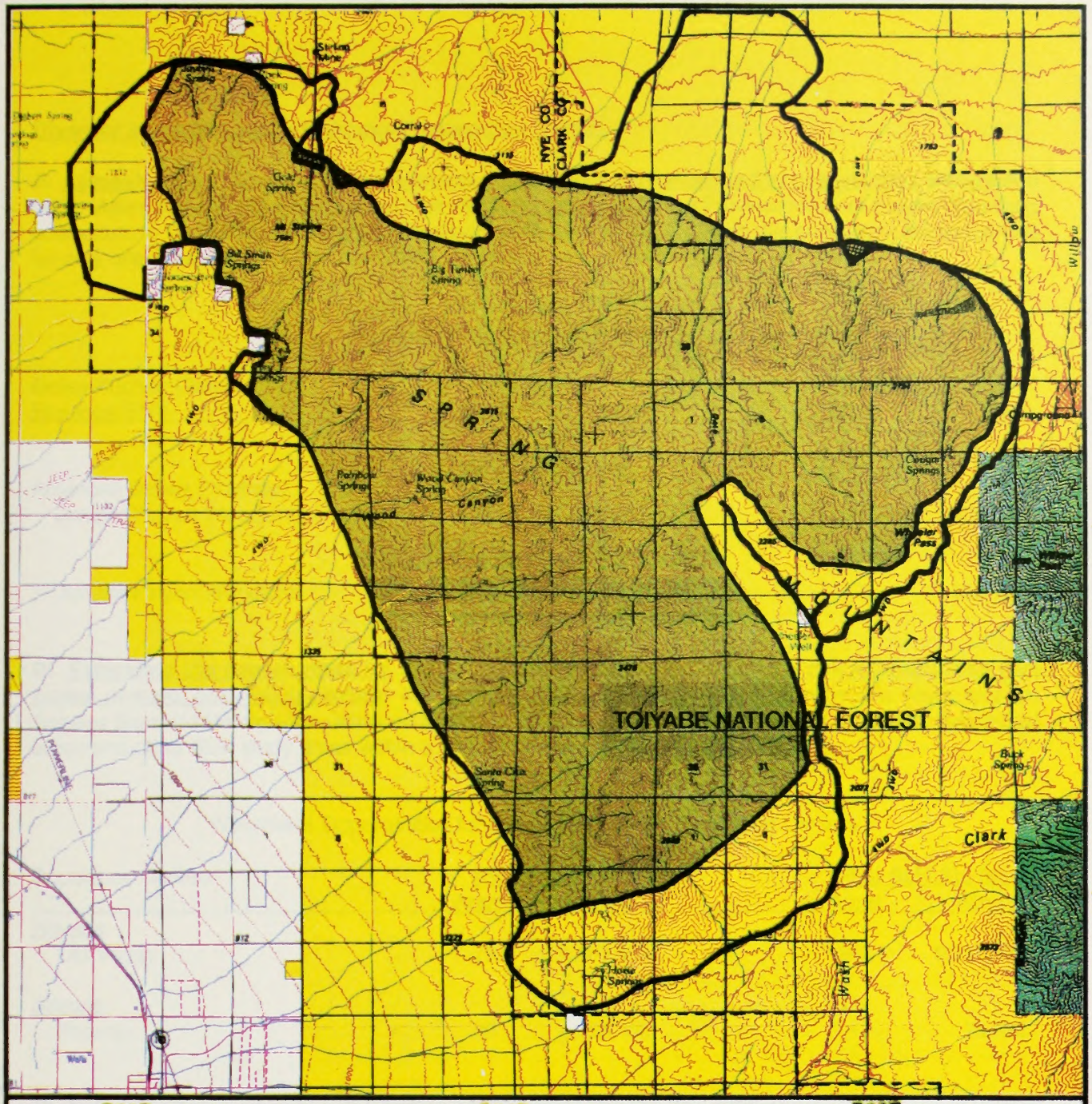
C. Primitive and Unconfined Recreation: The area recommended for wilderness contains outstanding opportunities for primitive and unconfined types of recreational experiences. Most of the area allows freedom of movement due to numerous drainages, hills, rock outcroppings and forest cover. Wheeler Peak and Mt. Stirling provide scenic vistas of the area and surrounding valleys. Rugged landscapes provides challenging routes and destinations for hikers and backpackers. Visitors to the area would have opportunities to view and study diverse wildlife species such as deer, elk, upland game birds, bobcats and possibly mountain lion. Marine paleozoic fossiliferous formations, two large petroglyph sites and remnants of a campsite and pine nut milling site provide visitors a visible look at the area's geologic and cultural history. These features offer focal and destination points for hikers, backpackers, and horseback riders.

Few primitive recreational opportunities exist within the area recommended for nonwilderness. Visitors could utilize a limited portion of the area for hiking and camping which provide few interesting features and challenges.

D. Special Features: Paleontological - One of the most complete sections of marine paleozoic fossiliferous formations in Nevada can be found within the WSA.

Zoological - The WSA constitutes part of the habitat of the only elk herd in Clark County.

Cultural - Two large petroglyph sites are located within the area recommended for wilderness. In addition a cultural site which may have been a pine nut milling site and a site with rock circles which may be the remnants of an encampment are located in the area. Three charcoal kilns, which have been listed on the National Register of Historic Places, are located within the portion of the WSA recommended for nonwilderness.



RECOMMENDED FOR WILDERNESS –

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS –

FOREST SERVICE BOUNDARY

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Mt. Stirling Proposal

NV-050-401
March 1990

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Designation of the Mount Stirling WSA would add an area within the American Desert Province/Juniper-Pinyon Woodland ecosystem to the National Wilderness Preservation System (NWPS). Since this ecosystem is represented by only one area already within the NWPS, additional representation would be desirable.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province/ Juniper-Pinyon Woodland	1	21,485	25	685,080
	NEVADA			
Juniper-Pinyon Woodland	0	0	5	166,160

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: Mt. Stirling WSA is within a five hour drive of the Las Vegas and Los Angeles Standard Metropolitan Statistical Areas. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a one day's drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: The 1989 designation of Forest Service wilderness created a wide distribution of wilderness areas within the state, and the addition of the Mount Stirling WSA would not significantly contribute to the geographic distribution of areas within the NWPS in Nevada. However, the wilderness values inherent in the WSA justify its addition to the NWPS.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

Mt. Stirling WSA can reasonably be managed as wilderness to preserve values present. The area is a solid block of public land with no private inholdings, state lands or rights-of-ways. There are 17 existing mining claims located within the WSA, however valid rights have not been identified.

Existing uses within the WSA could present difficulties in managing for wilderness. Motorized cross-country and off-road travel for hunting, camping and sightseeing occurs primarily along the southern and northern borders where the area's terrain accommodates this type of use. In addition, the wilderness recommendation for the Mt. Stirling WSA allows for the construction of a road crossing the northeast corner of the area. Development of the route will provide some minimal added access portions of the WSA. Dense vegetative cover would continue to restrict total accessibility into the WSA. Under wilderness designation unauthorized cross-country vehicle use would be difficult to manage within those portions of the WSA where the terrain does not restrict access, this would apply primarily to the periphery of the area and along the cherrystemmed roads.

Energy and Mineral Resource Values

U.S. Geological Survey and Bureau of Mines prepared a mineral assessment for the 50,682 acres of the Mt. Stirling WSA recommended for wilderness. The survey was conducted from 1983 through 1985. According to the report, U.S. Geological Survey Bulletin 1730-B, a high resource potential for gold was assigned to the Grapevine fault system, running north-south along the Wilderness Study Area's western border. High resource potential for gold was also assigned along the northern border at Gold Spring. The area south of Big Timber Spring has an unknown mineral resource potential for gold along a poorly exposed normal fault system. No identified resources were found within the recommended area. Seventeen mining claims were located within the Wilderness Study Area as of June, 1988. As of this date, no oil, gas or geothermal leases existed within the WSA.

Impacts on Resources

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for all of the alternatives considered.

Local Social and Economic Considerations

The socioeconomic environment for Clark County was addressed in detail in the BLM "Clark County Draft Wilderness EIS - 1983". Discussed was the social profile of the county migration and growth pattern, public attitudes toward wilderness and economics. Two generalizations were formed within this document: (1) that interest in the Clark County wilderness study is primarily a local issue with some regional, but little national interest and (2) current wilderness usage would need to increase over twenty times as a result of designation, before significant impact to the service and recreation industry would be felt.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness	Alternative A	Alternative B	Alternative C
Wilderness Resources	Wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be retained or improved on 50,682 acres recommended for wilderness. There would be a reduction of naturalness and opportunities for solitude and primitive recreation on 19,050 acres not recommended for wilderness.	The WSA's wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be retained or improved.	The WSA's wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be lost.	Wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be retained or improved on 42,707 acres recommended for wilderness. There would be a loss of naturalness and opportunities for solitude and primitive recreation on 26,943 acres not recommended for wilderness.	Wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be retained or improved on 44,431 acres recommended for wilderness. There would be a loss of naturalness and opportunities for solitude and primitive recreation on 25,219 acres not recommended for wilderness.	Wilderness values of naturalness and opportunities for primitive and unconfined recreation and solitude would be retained or improved on 30,190 acres recommended for wilderness. There would be a loss of naturalness and opportunities for solitude and primitive recreation on 39,460 acres not recommended for wilderness.
Recreation Resources	On the 19,050 acres not recommended for wilderness, motorized recreational use would reach 1,950 visits annually. Nonmotorized recreational use within the WSA would reach 1,000 visits annually.	Motorized recreational use of 150 visits annually would be forgone. Nonmotorized recreational use would reach 1,300 visits annually.	Motorized recreational use of 2,300 visits annually would be forgone. Nonmotorized recreational use would reach 700 visits annually.	On the 26,943 acres not designated as wilderness, motorized recreational use would reach 1,850 visits annually. Nonmotorized recreational use within the WSA would reach 900 visits annually.	On the 25,219 acres not designated as wilderness, motorized recreational use would reach 1,850 visits annually. Nonmotorized recreational use within the WSA would reach 900 visits annually.	On the 39,460 acres not designated as wilderness, motorized recreational use would reach 2,00 visits annually. Nonmotorized recreational use within the WSA would reach 700 visits annually.
Access to Recreational Areas	Recreational access would be improved in the northern portion of the Spring Mountain Range.	There would be no impacts on access in the northern portion of the Spring Mountain Range.	Recreational access would be improved in the northern portion of the Spring Mountain Range.	There would be no impacts on access in the northern portion of the Spring Mountain Range.	There would be no impacts on access in the northern portion of the Spring Mountain Range.	There would be no impacts on access in the northern portion of the Spring mountain Range.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness	Alternative A	Alternative B	Alternative C
Mineral Resources	Exploration for minerals and development of 1 mine would be foregone within the portion recommended for wilderness. Exploration for minerals and development of 1 mine would occur in the area not recommended for wilderness.	Exploration for minerals and development of 2 mines within the WSA would be foregone.	Exploration for minerals and development of 2 mines could occur within the WSA.	Mineral exploration and development of two mines would be foregone within the area recommended for wilderness. Exploration for minerals could occur in the area not recommended for wilderness.	Mineral exploration and development of two mines would be foregone within the area recommended for wilderness. Exploration for minerals could occur in the area not recommended for wilderness.	Mineral exploration would be foregone within the area recommended for wilderness. Exploration for minerals and development of two mines could occur in the area not recommended for wilderness.
Cultural Resources	The Wood Canyon Rock Art area would get additional protection by precluding surface disturbing actions. The Wheeler Pass Charcoal kilns archaeological site would not receive any added protection.	The Wood Canyon Rock Art Area and Wheeler Pass Charcoal Kilns would receive added protection by the preclusion of surface disturbing activities.	The Wood Canyon Rock Art Area and Wheeler Pass Charcoal Kilns would receive added protection by the preclusion of surface disturbing activities.	The Wood Canyon Rock Art Area and Wheeler Pass Charcoal Kilns would receive added protection by the preclusion of surface disturbing activities.	Wood Canyon Rock Art area would receive added protection by the preclusion of surface disturbing activities. Wheeler Pass Charcoal Kilns archaeological site would not receive any added protection.	The Wood Canyon Rock Art Area and Wheeler Pass Charcoal Kilns would receive added protection by the preclusion of surface disturbing activities.
Wildlife Habitat Management	300 acres of vegetation manipulation would be precluded. This would not impact the objective of managing wildlife habitat to obtain reasonable numbers.	Vegetation manipulation would be precluded. Big Game would not reach desired numbers.	There would be no impact on the management of wildlife habitat.	280 acres of vegetation manipulation would be precluded. This would not impact the objective of managing wildlife habitat to obtain reasonable numbers.	300 acres of vegetation manipulation would be precluded. This would not impact the objective of managing wildlife habitat to obtain reasonable numbers.	300 acres of vegetation manipulation would be precluded. This would not impact the objective of managing wildlife habitat to obtain reasonable numbers.
Water Resources	Water quality and quantity stability would increase on nine springs located in the recommended wilderness area.	Water quality and quantity stability would increase on 15 springs located in the recommended wilderness area.	Fifteen springs in the WSA would not be afforded additional protection from surface-disturbing activities.	Water quality and quantity stability would increase on 12 springs located in the recommended wilderness area.	Water quality and quantity stability would increase on 12 springs located in the recommended wilderness area.	Water quality and quantity stability would increase on 7 springs located in the recommended wilderness area.

Summary of WSA-Specific Public Comments

Public involvement occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearing were held in association with the study phase and draft environmental impact statement for the WSAs located within Clark County. Open house and scoping meetings were held in Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 40 comments specifically addressing this WSA were received. Of those, 36 were written and 4 were oral statements received at the public hearing on the draft EIS. In general, 36 commentors supported wilderness designation for all or part of the WSA. Four commentors supported no wilderness for the Mt. Stirling WSA.

Most comments which specifically mentioned the WSA touch on high wilderness values (outstanding opportunities for solitude and primitive recreation), unspoiled biological and cultural resource values, wildlife habitat potential for Elk, and the benefits Mt. Stirling peak provides to the WSA. Comments opposing wilderness centered around potential mineral resource values and potential mineral exploration/development of the WSA.

County: The Clark County Department of Comprehensive Planning generally agreed with the recommended wilderness designations contained within the Preferred Alternative in the Clark Draft EIS. However, Clark County was unclear on what land management policies would apply to those portions of the WSA that were not being recommended for wilderness designation.

State: The Governor of Nevada, in his consistency letter, dated August 30, 1983, supported the Bureaus's Preferred Alternative. Previous comment letters received from the State of Nevada Department of Conservation and Natural Resources, Division of State Lands also supported the Bureaus's Preferred Alternative. The State Divisions of Minerals, Department of Wildlife and Agriculture did not support the Bureau's Preferred Alternative.

Federal: The U.S. Forest Service proposed boundary changes to the Mt. Stirling Preferred Alternative in the Final EIS. The change would allow for the construction of a road through the area recommended for wilderness designation, the deletion of Wheeler Peak and the inclusion of Mt. Stirling peak. The Environmental Protection Agency (EPA) stated that the Final EIS should address potential air quality impacts for each alternative from mining, energy and off-road vehicle activities. In addition, the potential impacts from these activities on sensitive soils and watershed areas should be addressed. The Final EIS should also identify ground water resources. The U.S. Air Force stated they support alternatives that do not restrict military overflights. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments. The U.S. Geological Survey stated that geologic conditions were adequately considered in the Draft EIS and that mineral resource potential of those areas recommended for wilderness would be addressed in their joint report with the Bureau of Mines.

There was one written comment received on the Final EIS from the EPA which supported the proposed action and recommended that the final recommendation include a statement that water and air quality will be best protected under wilderness designation.

La MADRE MOUNTAIN WILDERNESS STUDY AREA

1. THE STUDY AREA - 61,630 acres[2]

The La Madre Mountain Wilderness Study Area (WSA) (NV-050-412) encompasses approximately 61,630 acres of public land on the east side of the Spring Mountains, Clark County, Nevada, approximately 12 miles west of Las Vegas (Table 1). The terrain is rugged with elevations ranging from about 3,600 feet in Brownstone Basin to 9,600 feet at La Madre mountain. Spectacular cliffs and steep canyons are present along the southern and eastern portions of the WSA. The climate is arid to semiarid and vegetation includes yucca, barrel cactus, agave, cholla, and desert willow at the lower elevations and pinon pine, juniper, scrub oak,and pockets of white fir and ponderosa pine at the higher elevations above 5,500 feet. There are several permanent spring within the WSA, but no permanent streams.

The WSA is generally rectangular in shape, ranging from 2-8 miles north-south to approximately 17 miles in the east-west dimension. The Pine Creek WSA (NV-050-414) is immediately adjacent to the southern border of the WSA, separated only by the Red Rock Summit road, an improved dirt road in the bottom of the canyon between the two WSAs. A large portion of the south central portion of the WSA is contained within the Red Rock Canyon National Conservation Area.

All portions of the WSA are easily accessible from dirt roads and ways around the perimeter. The northern boundary of the WSA is identified by a dirt road and the Toiyabe National Forest boundary as it existed prior to 1990. The eastern boundary extends generally along section lines for approximately six and one-half miles to where it intersects private lands and then borders private lands adjacent to Brownstone Basin. The southern boundary is generally recognized as the red Rock scenic loop drive, Willow Spring road and Red Rock Summit road between the Pine Creek and La Madre WSAs. The southwest boundary is generally identified by the Lovell Canyon road and utility line extending to private property in Lovell Canyon, the private property boundary around the Sky Mountain Preserve, and the Lovell summit road between Lovell Canyon and Trout Canyon. The west boundary is the quarter section line in sections 15, 22, and 27, T. 20 S., R. 58 E., slightly east of the private property in Trout Canyon.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA), and was included in the Clark County Wilderness Recommendations/Environmental Impact Statement (EIS). The Final Wilderness EIS was filed in April, 1987. Four alternatives were analyzed in the EIS: an all wilderness alternative; a partial wilderness alternative, which is the recommendation of this report; a no wilderness alternative; and a second partial wilderness alternative where approximately 33,207 acres would be designated as wilderness and 28,423 acres released for uses other and wilderness.

Recent legislation, the National Forest and Public Lands of Nevada Enhancement Act of 1988, has adjusted administrative boundaries for the Toiyabe National Forest, placing approximately 20,324 acres, 33 percent, of the WSA within the new Forest boundary. Approximately 18,979 acres of the area recommended for wilderness designation, 45 percent, will be under Forest Service administration, the remainder of the area is recommended for uses other than wilderness.

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[2]Errors were discovered when WSA acres were recalculated due to enactment of the Nevada Public Lands and National Forests Enhancement Act of 1989. Total acreage of WSA increased from 56,967 to 61,630. Boundary of WSA did not change.

2. RECOMMENDATION AND RATIONALE - 42,005 acres recommended for wilderness
19,625 acres recommended for nonwilderness

The recommendation for this WSA is to designate approximately 42,005 acres as wilderness and release approximately 19,625 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The partial wilderness alternative, the recommendation of this report, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

Wilderness designation is recommended for 42,005 acres of public land within the La Madre WSA because of its high quality wilderness values, its outstanding opportunities for both solitude and primitive and unconfined recreation, the lack of conflicts with actual or potential uses of the area, and the overwhelming public support for designation of this area.

The recommendation differs from the proposed action in the Final Clark County Wilderness EIS due to changed land status along the western end of the WSA. The western end of the WSA (west of Lovell Canyon) is now contiguous with designated wilderness (Mt. Charleston). This was not the case when the EIS was written. Incorporating this new information resulted in the finding that the western end of the WSA, not proposed for wilderness originally, was a natural link between the existing wilderness and the area in La Madre WSA proposed for wilderness. Alternative A (with revised acreage figures) was then selected to replace the original proposed action and now is the recommendation presented in this report.

The rugged complex of canyons and ridges and heavy forest cover provides excellent visual screening and opportunities to find secluded areas. A southwest-northeast trending ridge, steeper on the southeast face and heavily dissected into peaks and canyons, extends the entire length of the WSA. The angular peaks of the La Madre ridge have nearly vertical southeast faces and gradually sloping backsides. The rugged cliffs of the southeast face are highly scenic and offer excellent views of classic basin and range county south through Red Rock Canyon. The area is sufficiently large enough to offer a variety of loop routes and destinations including La Madre Mountain, Turtlehead Mountain, and the Callco Hills. The topographic and vegetative diversity, coupled with the severity of the landform within the recommended wilderness portion of the WSA, ensure outstanding solitude opportunities of the highest quality.

Day-hiking, backpacking, rock climbing and scrambling, photography and nature study are outstanding in the portion of the WSA recommended for wilderness designation. Designation would preserve an undisturbed area for several solitude dependant species that occur in the La Madre WSA. Mountain lion, raptors and bighorn sheep would benefit from the special protection afforded the habitat under wilderness designation.

The area is manageable as wilderness, due primarily to the extreme rugged terrain, dense vegetation and relative inaccessibility to motorized vehicles. Much of the area recommended for wilderness designation is in the Red Rock Canyon National Conservation Area and off-road vehicle use is limited to existing roads and trails.

The "La Madre Mountains/Pine Creek G-E-M Resource Area (GRA No. NV-32) Technical Report" classified the WSA moderately favorable for oil and gas, because the area is part of the Overthrust Belt, low favorability for geothermal, and low to unfavorable for metallic minerals. The entire WSA is moderately favorable for sand and gravel resources. About 60% of the recommended wilderness area is within the Red Rock Canyon Recreation Land and closed to mineral entry.

U.S. Geological Survey Bulletin 1730-A assessment of the mineral potential for that portion of the La Madre Mountain WSA recommended for wilderness (prior to the change made as a result of Forest Service wilderness designation) found that geochemical sampling of stream sediments within the WSA delineated

a zone of slight silver, lead and zinc anomalies. However, the report judged the entire area recommended for wilderness designation to have low mineral resource potential for silver, lead, and zinc. No known deposits of nonmetallic minerals, gypsum, occur within the recommended wilderness area, and discovery of significant near-surface deposits is unlikely. Sand and gravel and limestone suitable for construction materials are abundant within the area recommended for wilderness designation, but, because similar materials are available closer to major markets, occurrences in the recommended wilderness area were not classified as resources. The potential for petroleum resources is rated as low.

Conflicts with other resources in the area recommended for wilderness are essentially nonexistent. Grazing use will continue and be managed as detailed in land use plans and allotment management plans.

Portions of the WSA not recommended for wilderness designation, approximately 19,625 acres, Includes the northern portion of the WSA, area A, where conflicts with mining claim development, Increased pressures from urban development in the area, and increased OHV activity on an existing way effectively separate the two areas. The western portion of the WSA, area B, not recommended for wilderness designation surrounds private lands within Lovell Canyon (Sky Mountain Ranch), where management of the area as wilderness would be difficult due to the sights and sounds of resort activity which would affect wilderness values.

The recommendation for the La Madre Mountain WSA emphasizes: maintaining access to the northern portion of the WSA, area A, for mineral exploration and development, sand and gravel and nonmetallic mineral resources; maintaining access to area B for recreation development in association with the private recreation development in Lovell Canyon and other compatible resource uses (all of this area will be managed by the U.S. Forest Service as a result of the boundary adjustments under the Nevada Forest Enhancement Act); and designation of the core area as wilderness for the maintenance and preservation of spectacular scenic resources, biological and geological features, complex and varied ecosystems, and outstanding wilderness.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	41,306
Forest Service	20,324
Split Estate (BLM surface only)	0
Inholdings (State, private)	0
Total	61,630
Within the Recommended Wilderness Boundary	
BLM (within WSA)	23,050
Forest Service (within WSA)	18,979
Split Estate (within WSA)	0
Total BLM and FS Land Recommended for Wilderness	42,005
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	18,256
Forest Service	1,369
Split Estate	0
Total BLM and FS Land Not Recommended for Wilderness	19,625
Inholdings	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The entire WSA is predominately natural. There is little or now evidence of the presence of man through out the WSA except in a few isolated areas where roads and ways occur in narrow washes and drainages. Most OHV activity is concentrated outside of the portion of the WSA recommended for wilderness on the northern and southeastern portion of the WSA. The majority of the activity is concentrated just outside the WSA in the Little Red Rock area. The imprints of this activity is not substantially noticeable except within the immediate vicinity and do not detract from the area's natural character.

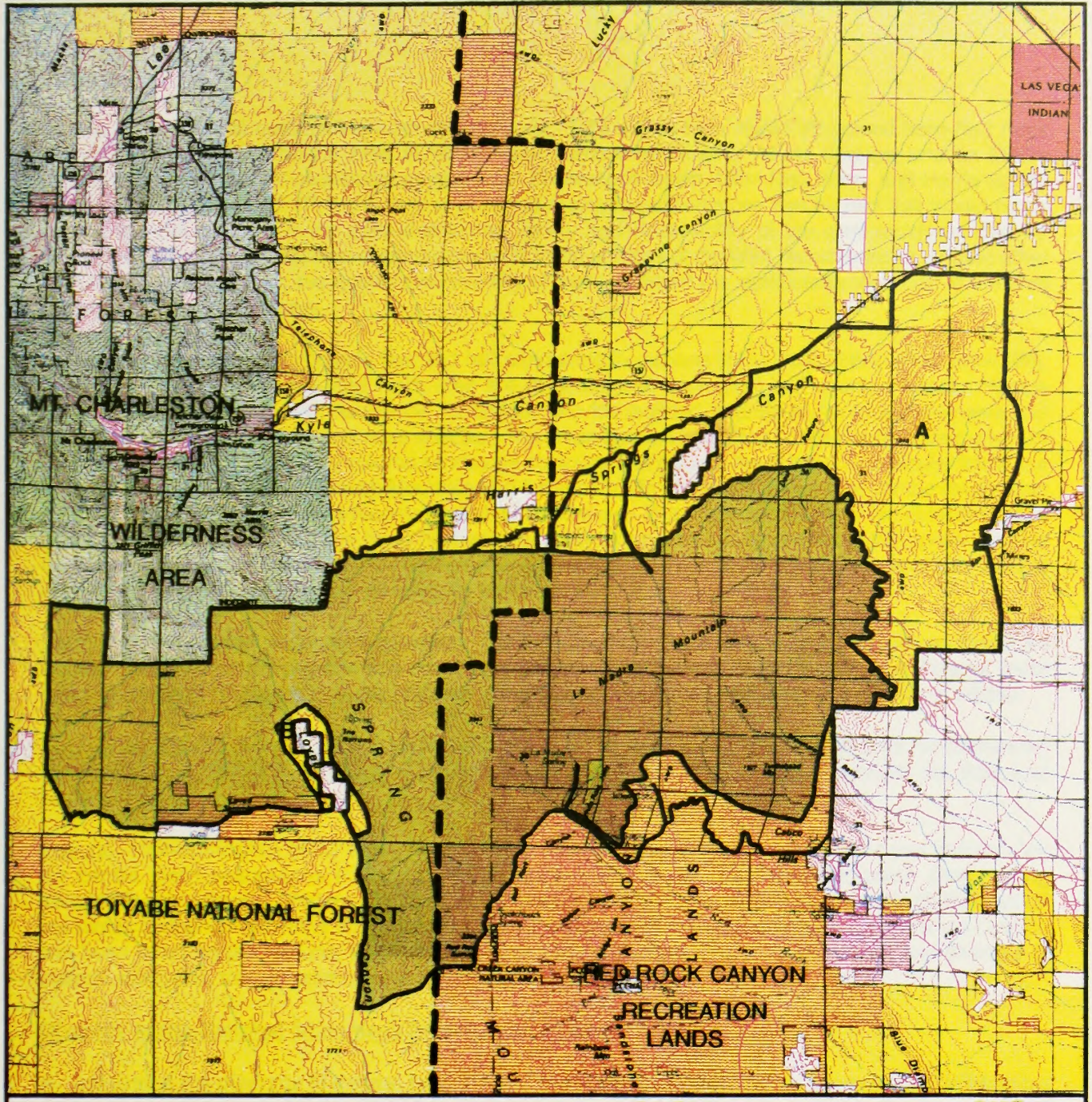
La Madre Mountain and the other mountains, hills and valleys which comprise the area recommended for designation, create a complex pattern of valleys and ridges and mountain peaks untouched by man. La Madre Mountain dominates the area with it's spectacular near vertical cliffs on the southeast side and the pinon-juniper forest covered northwest flank. Bright red and buff colored, rounded sandstone outcrops in Brownstone Basin and White Rock Hills contrast dramatically with the dark grey, coarse textured, limestone cliffs of La Madre Mountain in the background. This pristine landscape is visible from most areas in the Las Vegas valley to the east. Isolated pockets of ponderosa pine and white fir are found in the narrow drainages in the southwest portion of the area recommended for designation.

The 19,625 acres of WSA recommended for uses other than wilderness are primarily in a natural condition, however, the influence of external activities decreases the quality of the experience in the northwest and west areas of the WSA. Mining claims for sand and gravel in the Harris Spring Canyon on the northern perimeter of the WSA, expansion of mining activity on the east side of the WSA in Box Canyon, recent patenting of mining claims in the same general area, a significant increase in OHV activity in the Little Red Rock area, increased use of an existing way across the WSA effectively separating the northern portion of the WSA from the remainder of the WSA, and future proposed development of private lands around the northeast portion of the WSA, combine to reduce the natural qualities of the area. Development of the Sky Mountain Preserve and increased activity in the Lovell Canyon area will continue to decrease the natural qualities of the area.

B. Solitude: Within the area recommended for wilderness designation outstanding opportunities for solitude exist. The rugged complex of deep canyons, draws, summits, and ridges and the pinyon-juniper cover provides excellent screening and secluded areas. Dense pinyon-juniper cover screens visitors on most of the west side of the area recommended for designation. Sparse cover on the slopes at the base of La Madre Mountain offer little screening south and west facing limestone slopes and the outwash plain in the southwest corner offer minimal screening.

Opportunities for solitude exist throughout the WSA. However, in the portions recommended for uses other than wilderness the influence of urban development, mineral activity, and the whining, grinding, churning sounds of off highway vehicle activity significantly diminish the quality of solitude.

C. Primitive and Unconfined Recreation: Primitive and unconfined recreation opportunities are outstanding in the area recommended for wilderness because of the variety, quality, and accessibility of the activities. Day-hiking, backpacking, rock climbing and scrambling, nature study and photography are all outstanding due to the unique special features of the area and the variety of destinations and levels of challenge. The sense of isolation and separation from the helter-skelter environment of Las Vegas are enhanced when viewed from the top of one of the lonely, wind-swept peaks of La Madre Mountain.



RECOMMENDED FOR WILDERNESS –

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

1889 FOREST SERVICE ADDITION

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE –

N

0 1 2 3 4 5

MILES

LaMadre Mtns.
Proposal

NV-050-412
March 1990

Access to the area is outstanding from all directions. Primarily access would be gained from Red Rock Canyon National Conservation Area at White Rock, Sandstone Quarry, Willow Springs, and La Madre Springs recreation areas. Additional access from Brownstone Basin, Little Red Rock, and Harris Spring Canyon can be expected. Primitive and unconfined recreation experiences can be had that would range from a few hours up to many days due to the variety and accessibility of the area recommended for wilderness. Primitive recreational opportunities exist in the portions of the WSA recommended for uses other than wilderness, however, the quality and diversity of that opportunity is significantly less than in the area recommended for wilderness.

D. Special Features: Geological - Red and buff sandstone formations in the Calico Hills, White Rock Hills, Brownstone Basin, and Little Red Rock area are of geological, ecological and scenic interest. Narrow crevices and cracks between sandstone formations provide isolated, protected micro-environments and habitat for a variety of wildlife and plant species. The cross-bedded sandstone demonstrates their origin as former sand dunes. The brightly colored sandstone contrasts sharply with the rugged, spectacular limestone cliffs that backdrop them. La Madre Mountain and it's sheer cliffs on the southeast side are the single most dominant feature within the area recommended for wilderness. The Keystone Thrust of the older limestone of the La Madre Range that have been pushed over the younger sandstone is dramatically evident above Brownstone Basin. This particular site is internationally regarded as the single finest example of a thrust fault and is of significant geologic and of scientific interest.

Ecological - The large variation in elevation (6,000 feet) allows for a variety of plant communities from Southern Mohave desert shrub to sub-alpine environments of white fir and ponderosa pine. Natural water impoundments in the sandstone provide near perennial water sources that support a variety of wildlife.

Zoological - Crucial summer habitat for a sizeable herd of bighorn sheep is within the area recommended for wilderness. A small herd of elk, remnants of an earlier stocking effort, move between the WSA and National Forest.

Cultural - Prehistoric sites occur throughout the area recommended for wilderness. Site types include rock art panels, both pictographs and petroglyphs, agave roasting pits, rock shelters, camp sites, milling sites,lithic and ceramic scatters; these cultural manifestations attest to the importance of the natural resources contained within the WSA in the subsistence patterns of prehistoric groups. Brownstone Canyon has been listed on the National Register of Historic Places because of the concentration and diversity of cultural site types, the occurrence of rare polychrome pictographs.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the La Madre Mountain WSA would add 30,272 acres of the American Desert Province/Creosote Bush and 31,358 acres of the American Desert Province/Juniper-Pinyon Woodland ecosystems to the National Wilderness Preservation System (NWPS). As indicated in Table 2, these two ecosystems are currently contained in only one designated wilderness area (Joshua Tree National Monument) and are not included in any designated wilderness area in Nevada. Additional representation of these ecosystems in the NWPS is desirable.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province/				
Creosote Bush	1	343,753	121	4,405,403
Juniper-Pinyon Woodland	1	21,485	25	685,080
	NEVADA			
Creosote Bush	0	0	20	549,834
Juniper-Pinyon Woodland	0	0	5	166,160

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: La Madre WSA is within a five hour drive of the Las Vegas and Los Angeles Standard Metropolitan Statistical Areas. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a one day's drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	28	2,919,234	135	4,958,751

C. Balancing the geographic distribution of wilderness areas: The 1989 designation of Forest Service wilderness created a wide distribution of wilderness areas within the state, and the addition of the La Madre WSA would not significantly contribute to the geographic distribution of areas within the NWPS. However, the wilderness values inherent in the WSA and its location adjacent to the existing Mt. Charleston Wilderness do justify its addition to the NWPS.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire WSA cannot be effectively managed to preserve wilderness values. A lack of natural, physical impediments to off-road vehicular access and known sand and gravel and nonmetallic mineral resources in the area not recommended for wilderness make this area unsuitable for wilderness management.

The 42,005 acres recommended for wilderness can reasonably be managed as wilderness to preserve values now present in the area. The area is a solid block of public land with no private inholdings, state lands, split estate lands or rights-of-ways. No valid rights currently exist within the portion of the WSA recommended for wilderness. Most of the area in the Red Rock Canyon National Conservation Area, approximately 75 percent of the area recommended, is closed to mineral entry. Mineral resource potential in the WSA has been identified as low and development of minerals in the recommended area, if not designated, is not projected.

Energy and Mineral Resource Values

U.S Geological Survey and Bureau of Mines prepared a mineral assessment of 34,010 acres of the La Madre Mountain WSA recommended for wilderness. The survey was conducted from 1983 through 1985. (A supplement will be requested to cover the additional 7,995 acres now being recommended for wilderness.) According to the report "no mineral or energy resources were identified within the study area".

U.S. Geological Survey Bulletin 1730-A assessment of the mineral potential for that portion of the La Madre Mountain WSA recommended for wilderness found that while geochemical sampling of stream sediments within the WSA delineated a zone of slight silver, lead and zinc anomalies. However, the report judged the entire area recommended for wilderness designation to have low mineral resource potential for silver, lead, and zinc. No known deposits of nonmetallic minerals occur within the recommended wilderness area, and discovery of significant near-surface deposits is unlikely. Sand and gravel and limestone suitable for construction materials are abundant within the area recommended for wilderness designation, but, because similar materials are available closer to major markets, occurrences in the area recommended for wilderness were not classified as resources. The potential for petroleum resources is rated as low.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered, including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Revised Alternative A	All Wilderness	No Wilderness	Original Partial Wilderness Alt.
Wilderness Resources	Naturalness and opportunities for solitude and primitive recreation would be retained or improved on the 42,005 acres recommended for wilderness. Most wilderness values would be lost on the 19,625 acres not recommended for wilderness.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be retained or improved within the majority of the WSA.	The majority of the WSA's wilderness values and outstanding opportunities for solitude and primitive recreation would be lost.	Natural features and outstanding opportunities for solitude and primitive recreation would be retained or improved on the 33,207 acres recommended for wilderness. Most wilderness values would be lost on the 28,423 acres not recommended.
Recreation Visitation	On the 19,625 acres not designated wilderness, motorized recreational use would reach 500 visits annually. Non-motorized recreational use within the WSA would reach 3,700 visits annually.	Motorized recreational use of approximately 200 visits would be foregone on 61,630 acres annually. Non-motorized recreational use within the WSA would reach 3,700 visits annually.	Motorized recreational use within the WSA would reach 700 visits annually. Non-motorized recreational use within the WSA would reach 3,500 visits annually.	On the 28,423 acres not designated wilderness, motorized recreational use would reach 700 visits annually. Non-motorized recreational use within the WSA would reach 3,500 visits annually.
Energy and Mineral Resources	Mineral exploration and 3 exploratory wells for oil and gas would be foregone within the area recommended for wilderness. 2 mines and 1 exploratory oil and gas well could be developed within the non-wilderness portion of the WSA.	Development of 1 mine and exploratory drilling of 4 wells for oil and gas would be foregone. One mine would be developed for valid gypsum claims.	Development of 2 mines for mineral resources and 4 exploratory wells for oil and gas could occur within the WSA.	Geophysical exploration and drilling of 1 well for oil and gas would be foregone in the area recommended for wilderness. 2 mines and exploratory drilling of 3 wells for oil and gas could occur within the non-wilderness portion of the WSA.
Cultural Resources	The Lost Creek, Willow Creek, La Madre Spr., Switchback Spring and Brownstone Canyon cultural resource sites would receive additional protection by precluding surface-disturbing activities. White Rock Spring and Sandstone Quarry would not receive additional protection.	Significant cultural resource sites of Lost Creek, Willow Creek, Brownstone Canyon, White Rock Spring, La Madre Spring and Sandstone Quarry would receive additional protection by precluding surface-disturbing activities.	The Lost Creek, Willow Creek, Brownstone Canyon, White Rock Springs, La Madre Spring and Sandstone Quarry cultural sites would receive no additional protection from surface disturbing activities.	The Lost Creek, Willow Creek, La Madre Spr., Switchback Spring and Brownstone Canyon cultural resource sites would receive additional protection by precluding surface-disturbing activities. White Rock Spring and Sandstone Quarry would not receive additional protection.
Water Resources	An increase in water quality and quantity stability would result on 29 springs located within the recommended wilderness area.	An increase in water quality and quantity stability would result on springs within the WSA.	Thirty-six springs in the WSA would not be afforded protection from surface disturbing activities.	An increase in water quality and quantity stability would result on 24 springs located within the recommended wilderness.

Summary of WSA - Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearing were held in association with the study phase and draft environmental impact statement for the WSAs located within Clark County. The meetings were a combination open house and scoping meeting and were held in Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 35 comments specifically addressing this WSA were received. Of those, 34 were written and 1 were oral statements received at the public hearing on the draft EIS. In general, 33 commentors supported wilderness designation for all or part of the WSA, including two who wanted more area in the recommended wilderness area, and two that wanted less. Two commentors supported no wilderness for the La Madre Mountain WSA.

Most comments which specifically mentioned the WSA and supported wilderness designation, touched on high wilderness values (outstanding opportunities for solitude and primitive recreation), unspoiled biological and cultural resource values, and wildlife habitat. Comments opposing wilderness noted speculative mineral resource potential and potential impacts to energy and mineral exploration and development.

County: Clark County Department of Comprehensive Planning supported the emphasis on recreation management for the Spring Mountains and agreed that designating portions of the Spring Mountains would enhance the range of recreation opportunities for the citizens of Clark county. However, Clark County was unclear on what land management policies would apply to those portions of the WSA that were not being recommended for wilderness designation.

State: The Governor of Nevada, in his consistency letter, dated August 30, 1983, supported the Bureaus's Preferred Alternative recommending only that a small portion of the WSA be dropped for minerals development. The Governor's comments stated "this WSA will provide an excellent compliment to the recreational opportunities of the Red Rock and Mount Charleston areas, offering outstanding solitude and wilderness experience within a short distance of the Las Vegas metropolitan area". Previous comment letters received from the State of Nevada Department of Conservation and Natural Resources, Division of State Lands also supported the Bureaus's Preferred Alternative. The State Divisions of Minerals, Department of Wildlife and Agriculture did not support the Bureau's Preferred Alternative. (The Governor has not yet had an opportunity to comment on the revised recommendation.)

Federal: The U.S. Forest Service supported the preferred alternative, recommending only a minor boundary adjustment to better define the boundary in the Lovell Canyon area. The Environmental Protection Agency (EPA) stated that the Final EIS should address potential air quality impacts for each alternative from mining, energy and off-road vehicle activities. In addition, the potential impacts from these activities on sensitive soils and watershed areas should be addressed. EPA recommended the Final EIS should also identify ground water resources. The U.S. Air Force stated they support alternatives that do not restrict military overflights. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments. The U.S. Geological Survey stated that geologic conditions were adequately considered in the Draft EIS and that mineral resource potential of those areas recommended suitable for wilderness would be addressed in their joint report with the Bureau of Mines.

There was one written comment received on the Final EIS from the EPA which supported the proposed action and recommended that the final recommendation include a statement that water and air quality will be best protected under wilderness designation.

PINE CREEK WILDERNESS STUDY AREA

1. THE STUDY AREA - 24,618 acres[3]

The Pine Creek Wilderness Study Area (WSA), NV-050-414, is located in Clark County, Nevada, approximately 15 miles west of Las Vegas. The WSA contains 24,618 acres of public lands, with no split estate or private inholdings (Table 1). The majority of the Pine Creek WSA is contained within the Red Rock Canyon National Conservation Area, in the southern portion of the Spring Mountain Range. The west boundary of the WSA is identified by a utility line right-of-way and the Lovell Canyon road. Private land in the Mountain Springs area and a utility line right-of-way mark the southern boundary. The Red Rock Summit road, a rugged 4-wheel drive road, marks the northern boundary of the WSA. The east boundary of the WSA follows the base of the Red Rock escarpment, skirting around two small parcels of State owned lands.

Two distinct landforms, a steep escarpment and deep canyons, comprise the Pine Creek WSA. Vertical red and buff sandstone cliffs, capped by limestone in some areas, extend length of the WSA and are deeply incised by numerous narrow, twisting, and heavily vegetated canyons. Elevations range from 4,400 feet at lowest elevation to 7,000 feet at the top of the escarpment. In 1965, a 150 acre parcel of Pine Creek canyon was designated as the Pine Creek Research Natural Area, due to the occurrence of rare and endemic plant species, including penstemons, milkvetch, and ferns. Ponderosa pine grows at its lowest elevations in the Spring Mountain Range within this WSA. Waterfalls, ephemeral streams, and runoff impoundments persist in the canyons after brief summer storms, supplementing the natural springs and a perennial stream that provide water to bighorn sheep, deer, raptors and the many other wildlife species that inhabit the WSA. At the top of the Red Rock escarpment, slickrock formations and natural arches are interspersed with virgin stands of ponderosa pine, pinyon pine and juniper.

Pine Creek WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA), and was included in the Clark County Wilderness Recommendations/Environmental Impact Statement (EIS). The Final Wilderness EIS was filed in April, 1987. Three alternatives were analyzed in the EIS: a Partial Wilderness Alternative, which is the recommendation of this report, an All Wilderness Alternative and a No Wilderness Alternative.

The National Forest and Public Lands of Nevada Enhancement Act (Public Law 100-790) adjusted the administrative boundaries for the Toiyabe National Forest, placing approximately 15 percent of the Pine Creek WSA in the new Forest boundary. With the exception of 300 acres of private land near Mountain Springs, all of the area placed under Forest Service administration is recommended for wilderness.

2. RECOMMENDATION AND RATIONALE - 22,966 acres recommended for wilderness
2,357 acres recommended for nonwilderness

The recommendation for this WSA is to designate 22,966 acres of public land, including 705 acres outside the WSA, as wilderness and release approximately 2,357 acres for uses other than wilderness (Map 1). All Wilderness is the environmentally preferable alternative as its implementation would result in the least change from the natural environment over the long-term. The recommendation, while not the environmentally preferred, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts. The majority of the Pine Creek WSA is recommended as wilderness. Surface

[3]All acreage figures were recalculated after passage of the Nevada Public Lands Enhancement Act which transferred lands within the WSA from BLM to Forest Service jurisdiction. The total increased by 618 acres.

disturbing activities projected for the 2,357 acres not recommended for wilderness would be limited to the trails and ways anticipated to be created by off-road vehicle use of the western portion of the area.

Wilderness designation is recommended for 22,966 acres of public land within and adjacent to the Pine Creek WSA because of its high quality wilderness values and special features, its easy accessibility for primitive and unconfined recreational uses, the lack of conflicts with other actual or potential uses, and the overwhelming public support for wilderness designation of this area.

Designating the Pine Creek WSA wilderness would add an area of pristine and extremely diverse natural and cultural values, located within 15 miles of the major urban area of Las Vegas. The red and buff sandstone escarpment rises nearly 3,000 feet on the eastern side of the Pine Creek WSA, revealing the cross-bedding of ancient sand dunes. At the top of the escarpment, these cliffs weather into natural arches and bridges, developing pockets and slickrock catchments that trap seasonal runoff. Limestone caps portions of the escarpment, forming a rugged ridge above and west of the sandstone. The sheer sandstone cliffs plunge into narrow, twisting and well-watered canyons that support a high diversity of plants and animals. Relic stands of ponderosa pine occur at unusually low elevations in these cool, wet canyons. Rare and endemic plants, including several species of milkvetch, penstemon, and angelica, flourish in the micro-climates of the canyon bottoms. The largest stands of endemic chain ferns in the Spring Mountain Range are found in the canyons of the Pine Creek WSA, with some ferns reaching 6 feet in height.

Wilderness designation would preserve an undisturbed area for several solitude-dependent species that inhabit the Pine Creek WSA. Deer, antelope, kit fox, bobcat, mountain lion, and a variety of bird species, including raptors, are found in the canyons and along the ridges. The WSA provides crucial summer habitat for a sizeable herd of bighorn sheep. All of these species would benefit from the special habitat protection afforded by wilderness designation.

Numerous prehistoric and historic archeological sites in the WSA attest to the importance of its unique biological resources during earlier periods of human history. Dramatic rock art panels, including petroglyphs and regionally rare pictographs, occur in association with camp sites, rock shelters, and agave roasting pits. Milling sites, lithic and ceramic scatters indicate that the floral and faunal resources of the Pine Creek WSA played an important role in the subsistence systems of prehistoric groups in southern Nevada. The historic Spanish trail passes through the extreme southern end of the WSA; the special protection of wilderness designation would help preserve these unique reminders of Nevada's past for observation, study, and enjoyment.

Outstanding opportunities for solitude and primitive and unconfined recreation are available within the Pine Creek WSA. The numerous deep, twisting canyons and thick stands of ponderosa pine, pinyon, and juniper isolate visitors from one another and provide geological, ecological and scenic interest for hikers and backpackers. The sheer sandstone cliffs of the 3,000 foot escarpment challenge rock climbers and scramblers and serve as dramatic backdrops for photographers. Perennial springs, seasonally flowing streams, and waterfalls permit backpack camping yearlong in the WSA. Wildlife viewing and nature study are particularly enjoyable in the cool, moist canyons which support a variety of small and large animal species and many rare and endemic plant types.

Designation of the 22,966 acres of the Pine Creek WSA recommended for wilderness would preserve an area of geological, ecological, and cultural values that offers residents of a booming metropolitan area outstanding opportunities for a quality wilderness experience within 15 miles of the urban sprawl.

Within the area recommended wilderness, extremely rugged terrain and dense vegetation have acted as a natural barrier, precluding motorized access. This inaccessibility enhances the manageability of the Pine Creek WSA as wilderness. Red Rock Canyon National Conservation Area encompasses most of the WSA; within these recreational lands off-road vehicle use is limited to existing roads and trails.

Conflicts with other resource uses of the lands recommended for designation are limited. Grazing management would continue in the same manner and degree; no proposed range developments would be foregone. Seventy-five percent of the recommended area is in the Red Rocks Canyon National Conservation Area and closed to mineral entry; the remaining western portion of the WSA is open to mining location.

Public comments overwhelmingly supported designation of the Pine Creek WSA. Of a total of 33 comments, both oral and written, 30 commentors supported wilderness designation for all or part of the WSA, including three who wanted more area recommended for wilderness designation. Comments focused on the scenic qualities of the area, the recreational opportunities available within the WSA, and the proximity of the area to metropolitan Las Vegas. Only three commentors advocated no wilderness in the Pine Creek WSA.

Approximately 2,083 acres of BLM administered land and 274 acres of Forest Service administered land recommended as nonwilderness are located along the eastern and western borders of the WSA. Adjustments to the eastern boundary delineated a more easily identifiable boundary along the base of the escarpment. This action would enhance the management of the WSA by providing a recognizable boundary for that portion of the Pine Creek WSA.

The remaining acreage recommended as nonwilderness is located in a strip on the western boundary of the WSA and include areas where off-road vehicle use is ongoing and not impeded by natural physical barriers. Management of this area for ORV use is considered to be more appropriate than for wilderness values.

Table 1
Land Status and Acreage Summary of the Study Area[4]

Within Wilderness Study Area	
BLM (surface and subsurface)	19,722
Forest Service (surface and subsurface)	4,896
Split Estate (BLM surface only)	0
Inholdings (State, private)	0
Total	24,618
Within the Recommended Wilderness Boundary	
BLM (within WSA)	17,639
BLM (outside WSA)	705
Forest Service (within WSA)	4,622
Forest Service (outside WSA)	0
Split Estate (within WSA)	0
Split Estate (outside WSA)	0
Total BLM and FS Land Recommended for Wilderness	22,966
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	2,083
Forest Service	274
Split Estate	0
Total BLM land Not Recommended for Wilderness	2,357
Inholdings (state, private)	0

[4]Recalculated acreage figures and split with Forest Service now included.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The 22,966 acres recommended for wilderness are predominately natural. The vertical sandstone cliffs of the escarpment, the deep, narrow canyons of Pine Creek, and the thick stands of ponderosa pine, pinyon and juniper have formed natural barriers to the intrusion of man. Rare and endemic plant species still flourish adjacent to the perennial stream and springs and along ephemeral water courses; solitude-dependent bighorn sheep, mountain lion, and bobcat still find quality habitat within the WSA.

The majority of the area is free of man's imprints. A single 2 mile long cherry-stemmed way runs on the west side of the study area; this is a localized imprint visible only from the immediate vicinity.

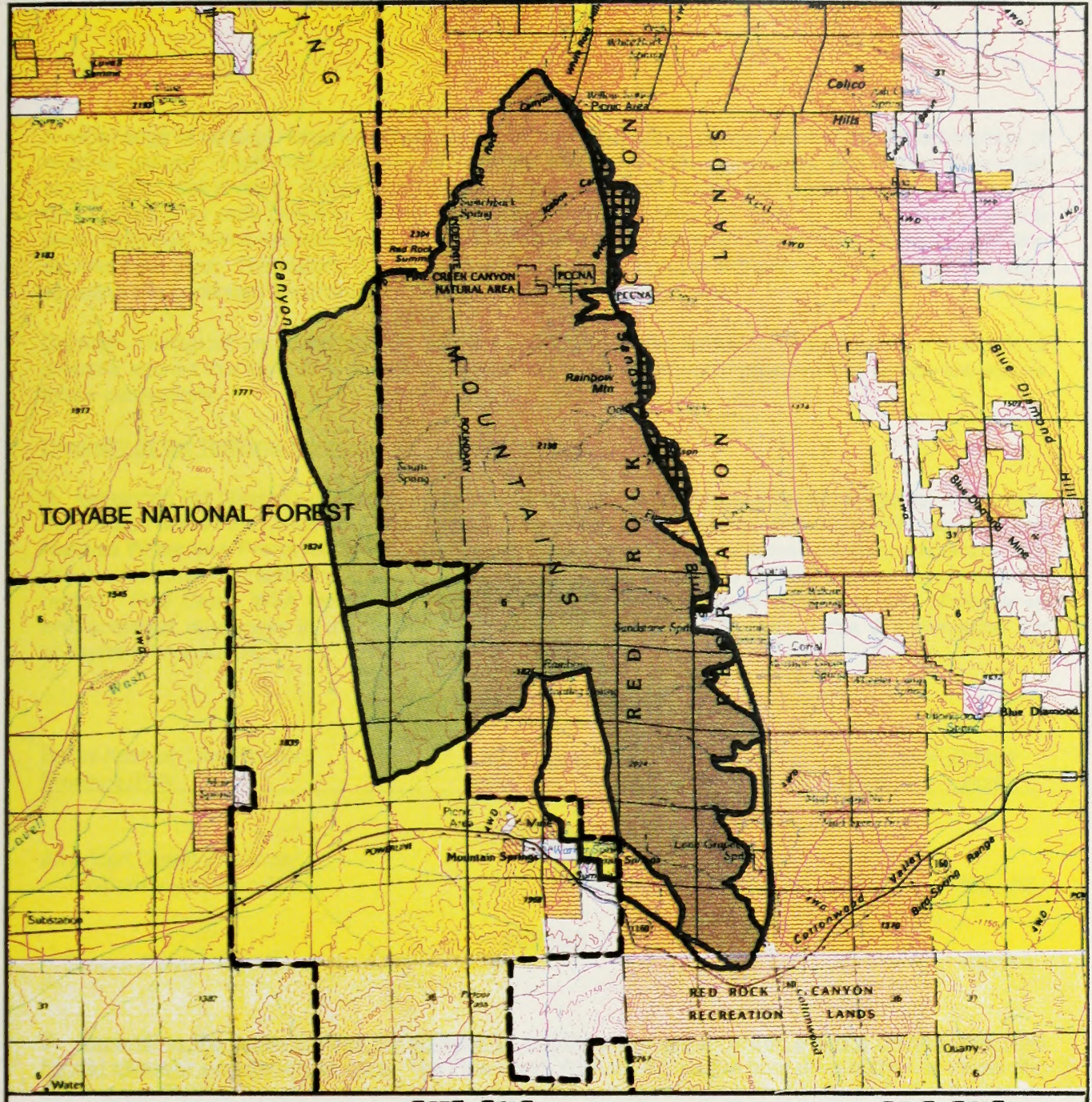
B. Solitude: Within the area recommended for wilderness designation exist outstanding opportunities for solitude. The rugged complex of deep, twisting canyons and steep ridges provides excellent topographic screening. The sandstone cliffs have differentially weathered into natural arches, bridges and pockets that create numerous secluded pockets. These geologic features are heavily interlaced with dense stands of pinyon-juniper and ponderosa pine, forming isolated glades in which the visitor is remote from even relatively nearby groups. Willow, ash, and hackberry form a secondary vegetative cover along the canyon bottoms. These distinctive features combine to create an area where not only can outstanding solitude be found, but where its enjoyment is greatly complemented by natural and scenic wonder.

C. Primitive and Unconfined Recreation: Opportunities for primitive and unconfined recreation are outstanding in the area recommended for wilderness designation because of the variety, quality, and accessibility of the activities. Day-hiking, backpacking, rock climbing and scrambling, nature study and photography are all enhanced by the unique geology, scenic beauty, rare and endemic biota, and rich cultural manifestations of the Pine Creek WSA. Perennial spring and seasonal catchments provide year-round water sources for backpack camping. All of these outstanding values occur within 15 miles of a major metropolitan area and are available to visitors throughout the year.

D. Special Features: Several special features supplement the wilderness values of the 22,966 acres recommended for wilderness designation. The massive red and buff sheer sandstone cliffs are the dominant landform feature of the Pine Creek WSA. The cross-bedding of ancient sand dunes and the Keystone Overthrust of limestone are of geologic and paleontological interest. Weathering of the sandstone layers has created natural bridges, arches, and sloughs through which seasonal runoff cascades as waterfalls to the canyons below.

Deep, twisting, bifurcated canyons below the escarpment create micro-climates that sustain botanical resources dramatically different from those of the surrounding Mohave desert. These cool, moist oases support species of milkvetch, penstemon, worts, and numerous ferns that are endemic to Red Rock Canyon and the Spring Mountains. Stands of endemic chain ferns reach heights of 6 feet along the banks of the perennial stream. Relic stands of ponderosa pine occur at unusually low elevations in the Pine Creek WSA.

Unique plant communities and reliable water sources of the Pine Creek WSA sustain a variety of solitude-dependent animals. A sizeable herd of bighorn sheep find crucial summer habitat within the area recommended for wilderness. The presence of kit fox, bobcat, mountain lion, and a variety of raptors also offers excellent opportunities for scientific observation and nature study in this WSA.



RECOMMENDED FOR WILDERNESS –

RECOMMENDED FOR NONWILDERNESS–

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS –

1889 FOREST SERVICE ADDITION

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Pine Creek Proposal

NV-050-414
March 1990

A wide range of cultural resources contained within the WSA are of special value in the reconstruction of regional history. High concentrations of rock art sites, with both petroglyphs and the more unusual pictographs, rock shelters, and campsites suggest that the unique biomes within the Pine Creek WSA were very important to early peoples. Milling stations and agave roasting pits point to the processing of local plant resources; numerous lithic and ceramic scatters help archaeologists to identify the cultural groups who exploited the area. The historic Spanish trail also passes through the extreme southern end of the WSA, signaling the continued importance of the Pine Creek area through time.

Geologic, biological, and cultural values of the area recommended for wilderness designation would be of scientific interest to a number of disciplines; wilderness designation would preserve their unique features for future generations.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Pine Creek WSA would significantly add to the diversity of ecosystems represented in the National Wilderness Preservation System. The complex pattern of ecosystems and unique ecotones and micro-environments created in the shadows of the narrow deep canyons is not represented anywhere in the region. Pine Creek WSA would provide a unique opportunity to study wilderness and stimulate an environmental awareness in the nearby urban environments of Las Vegas. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
	NATION WIDE			
American Desert Province/ Juniper-Pinyon Woodland	1	21,485	25	685,080
	NEVADA			
Juniper-Pinyon Woodland	0	0	5	166,160

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The Pine Creek WSA is within a five hour drive of the Las Vegas and Los Angeles SMSAs. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	28	2,919,234	135	4,958,751

C. **Balancing the geographic distribution of wilderness areas:** Pine Creek WSA would contribute to the geographic distribution of areas within the National Wilderness Preservation System in Nevada. Designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of Pine Creek WSA would contribute to the geographic distribution of areas within the national Wilderness Preservation System in Nevada. Designation of the Pine Creek WSA, which is located in southeast Nevada, would provide the public a wilderness opportunity in another part of the state.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire WSA and the additional acreage recommended for wilderness designation could reasonably be managed as wilderness to preserve values now present in the area. The area is a solid block of public land with no private inholdings, state lands or rights-of-way. Off-road vehicle use is confined to exiting ways within the WSA, and designated roads in the Red Rock Recreation Lands.

Energy and Mineral Resource Values

U.S. Geological Survey and Bureau of Mines mineral assessment for the Pine Creek WSA will not been completed for this study area.

The "La Madre Mountains/Pine Creek G-E-M Resource Area (GRA No. NV-32) Technical Report" classified the WSA moderately favorable for oil and gas, because the area is part of the Overthrust Belt, with low favorability for geothermal, and low to unfavorable for metallic minerals. The entire WSA is moderately favorable for sand and gravel resources.

Sixty-five percent (15,600 acres) of the WSA is contained in the Red Rock Canyon Recreation Lands, and thus segregated from mining laws by Multiple Use Classification N-257 (Nov. 10,1966), preventing mineral entry. An additional 150 acre area, Pine Creek Research Natural Area, was withdrawn from mineral entry in 1965. The geology of the area is primarily Paleozoic and Mesozoic carbonate units, which are known regionally to be hosts for replacement lead-zinc-copper deposits. Nevada Mining Association concurs that the overall the mineral potential is low.

As of the date of this report, there are twelve oil and gas leases covering 22,800 acres of the WSA. Approximately 35 post-FLPMA mining claims are located in the southwest portion of the WSA. This area is not recommended for wilderness.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

The socioeconomic environment for Clark County was addressed in detail in the BLM Clark County Draft Wilderness EIS (1983). The social profile of the county migration and growth patterns, public attitudes toward wilderness and economics were discussed in this document. Two generalizations were formed within this document: (1)interest in the Clark County wilderness study is primarily a local issue, with some regional but little national interest, (2)current wilderness usage would need to increase twentyfold as a result of designation before significant impact to the service and recreation industry would be felt.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness
Wilderness Values	Wilderness values of naturalness and opportunities for solitude and primitive recreation would be retained or improved on the 22,966 acres recommended for wilderness. Wilderness values on a portion of the 2,357 acres not recommended for wilderness would be lost.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be retained or improved within the WSA.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be lost within a large portion of the WSA.
Recreation Visitation	On the 2,357 acres not designated wilderness, motorized recreational use would reach 100 visits annually. Non-motorized recreational use within the WSA would reach 4,500 visits annually.	Motorized recreational use of 100 visits would be foregone on 24,000 acres annually. Non-motorized use within the WSA would reach 4,500 visits annually.	Motorized recreational use within the WSA would reach 300 visits annually. Non-motorized recreational use within the WSA would reach 4,300 visits annually.
Energy and Mineral Resources	Exploratory drilling of 2 wells for oil and gas would be foregone within the area recommended for wilderness. Within the area not recommended, any potential exploration and development of mineral and energy resources could occur.	Exploratory drilling of 2 wells for oil and gas within the WSA would be foregone.	Exploratory drilling of 2 wells for oil and gas would occur within WSA.
Cultural Resources	The northern tip of the Bootleg/Rainbow Springs archaeological complex would receive additional protection from surface-disturbing activities. The southern portion of the complex and the Lone Grapevine Spring/Scrub Oak Canyon site would not receive any additional protection.	Bootleg/Rainbow Springs archaeological complex and Lone Grapevine Spring/Scrub Oak Canyon site would receive additional protection by precluding surface-disturbing activities.	Bootleg/Rainbow Springs complex and Lone Grapevine Spring/Scrub Oak Canyon site would not receive additional protection by precluding surface-disturbing activities.
Water Resources	An increase in water quality and quantity stability would result on three springs located within the recommended wilderness portion of the WSA.	An increase in water quality and quantity stability would result on springs within the WSA.	Four springs located within the WSA would not receive additional protection from surface-disturbing activities.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearing were held in association with the study phase and the preparation of the draft environmental impact statement for the WSAs located within Clark County. The meetings were a combination Open House/Scoping Meeting and were held in Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 33 comments specifically addressing this WSA were received. Of those, 32 were written comments and one was an oral statement, all received at the public hearing on the draft EIS. In general, 30 commentors supported wilderness designation for all or part of the WSA, including three who wanted more area in the recommended wilderness area. Three commentors supported no wilderness for the Pine Creek WSA.

Most comments which supported wilderness designation and specifically mentioned the WSA noted the high wilderness values (outstanding opportunities for solitude and primitive recreation), the unspoiled biological and cultural resource values, and the wildlife habitat potential. Comments opposing wilderness focused on the potential mineral resource and impacts to energy and mineral exploration and development.

County: Clark County Department of Comprehensive Planning supported the emphasis on recreation management for the Spring Mountains and agreed that designating portions of the Spring Mountains would enhance the range of recreation opportunities for the citizens of Clark County. However, Clark County was unclear on what land management policies would apply to those portions of the WSA that were not being recommended for wilderness designation.

State: The Governor's consensus, dated January, 1984, supported the Bureau's Preferred Alternative, with a strong recommendation for excluding part of the southwest portion of the WSA "in order to allow continued access to mineral resources." Comment letters received from the State of Nevada Department of Conservation and Natural Resources, Division of State Lands also supported the Bureau's Preferred Alternative. The State Divisions of Minerals, Department of Wildlife and Agriculture did not support the Preferred Alternative.

Federal: The U.S. Forest Service supported the Preferred Alternative. The Environmental Protection Agency (EPA) stated that the Final EIS should address potential air quality impacts for each alternative from mining, energy and off-road vehicle activities and the potential impacts from these activities on sensitive soils and watershed areas. EPA also recommended that the Final EIS should identify ground water resources. The U.S. Air Force stated they support alternatives that do not restrict military overflights. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments. The U.S. Geological Survey stated that geologic conditions were adequately considered in the Draft EIS and that mineral resource potential of those areas recommended for wilderness would be addressed in their joint report with the Bureau of Mines.

There was one written comment received on the Final EIS from the EPA which supported the proposed action. This agency recommended that the final recommendation include a statement that water and air quality would be best protected under wilderness designation.

NORTH MCCULLOUGH WILDERNESS STUDY AREA

1. THE STUDY AREA - 47,166 acres

North McCullough Wilderness Study Area (WSA) (NV-050-425) is located in the south central portion of Clark county, Nevada, less than fifteen miles south of Las Vegas. The entire WSA is comprised of public land with no private inholdings (Table 1).

The WSA is roughly rectangular in shape, 9-10 miles on the north-south axis and 7-8 miles on the east-west axis. The eastern boundary located at the base of the escarpment, is slightly west of a large utility corridor. The southeastern boundary is the legal subdivision of lands identified for State selection in the Eldorado Valley Lands Act. A drainage immediately to the north of the McCullough Pass utility corridor identifies the southern boundary. Dirt roads, of varying quality, parallel the western boundary in Hidden Valley. The northern boundary is slightly south of the Black Mountain communication site. A large percentage of the northwestern portion of the WSA is clearly visible from the urbanized portions of the Las vegas Valley.

This WSA occupies the north half of the McCullough Mountain Range. Elevations range from 2,000 to 5,092 feet. Massive, rounded, flat topped volcanic peaks form an east facing escarpment with a gradual west slope. Blocky, black, basalt flows cover the WSA except for the escarpment where reddish-brown andesite breccia is exposed. A broad, two mile wide, central valley separates the main ridgeline from the rugged Sutor Hills to the west of the WSA. Vegetation within the WSA is dominated by creosote bush community, including barrel cactus, scattered joshua trees and several species of cholla and prickly pear.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA), and was included in the Clark County Wilderness Recommendations/Environmental Impact Statement (EIS). The Final Wilderness EIS was filed in April, 1987. Three alternatives were analyzed in the EIS: an all wilderness alternative; a partial wilderness alternative, where 40,950 acres would be recommend suitable; and a no wilderness alternative, which is the environmentally preferred alternative.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
47,166 acres recommended for nonwilderness

The recommendation for the North McCullough WSA is to release all 47,166 acres of the WSA for uses other than wilderness (Map 1). The all wilderness alternative is the environmentally preferred alternative as it would result in the least change from the natural environment over the long term. The recommendation, while not the environmentally preferred, will be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

While resource development activities in the WSA are not projected, there is a possibility for sand and gravel extraction. The WSA is recommended for nonwilderness because of resource and manageability concerns.

The quality of the wilderness values was a key consideration in the recommendation. These values are not considered to be of a high enough quality in comparison to similar WSA's in the Las Vegas area, to merit the area's inclusion in the National Wilderness Preservation system. This area's potential value is for dispersed recreation use adjacent to a rapidly expanding urban area.

The WSA generally appears natural but there are several signs of man, primarily vehicle trails due to off road vehicle travel. The majority of the WSA is easily accessible to vehicles from Hidden Valley on the west central side and the Las Vegas valley on the northwest side. Five and one-half miles of unimproved vehicle

ways occur In the WSA. Scattered vehicle tracks occur In the western end near Hidden Valley and In many of the drainages and low hills into the WSA. One exploratory drill pad is within the WSA. Access to the central portion of the WSA by vehicle, 4 wheel-drive or ATV, Is almost unrestricted, by natural features.

Solitude opportunities available In the WSA are similar to those afforded by thousands of other acres of BLM administered land In Clark County. These opportunities are due to topography, remoteness and lack of human of activity In the area and are not due to any intrinsic values unique to the area. A Communication site, utility corridors, active sand and gravel operations, air traffic from McCarran International and resort and subdivisions proposals on private land nearby currently affect lands around the WSA.

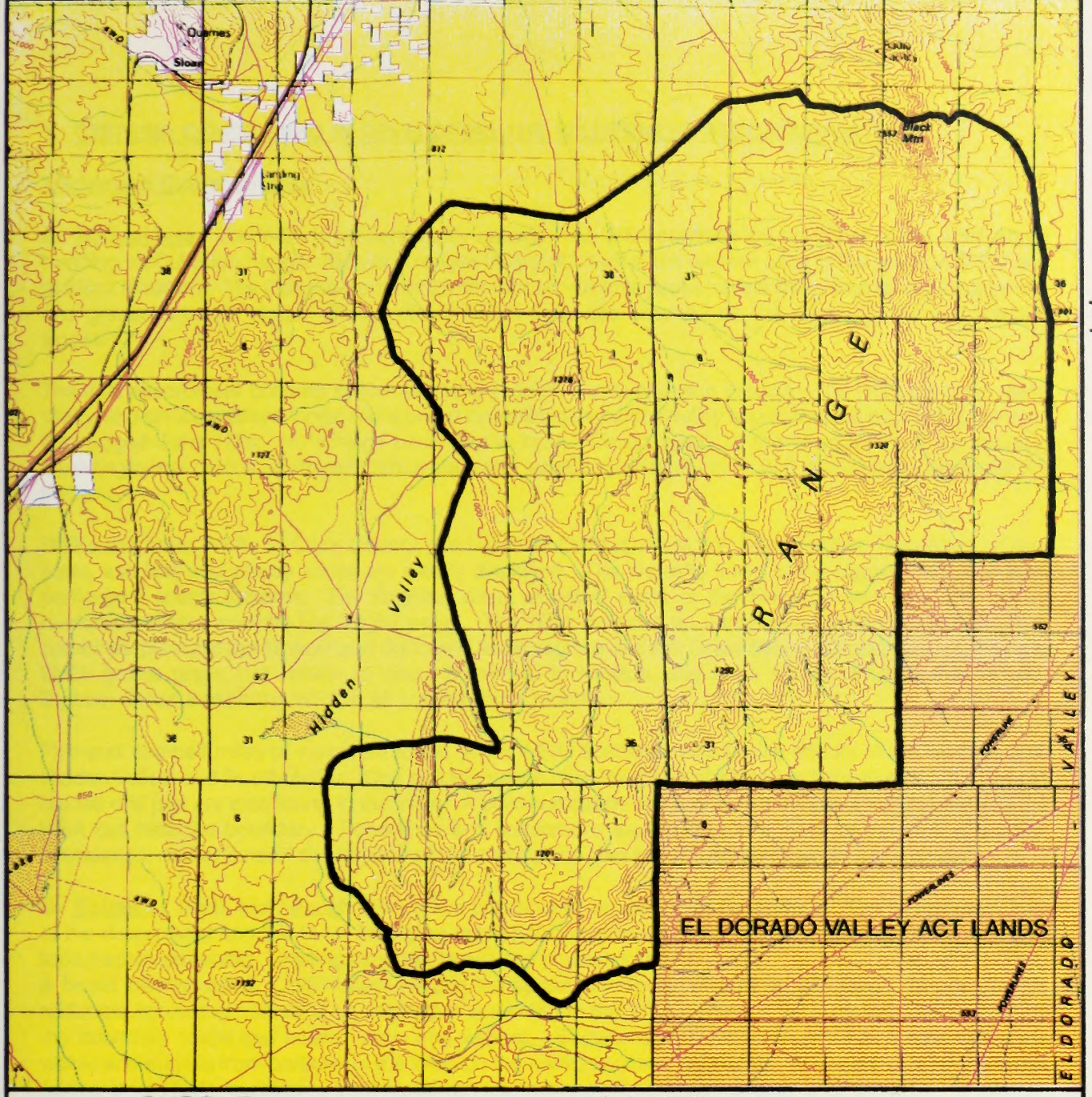
There are no significant wildlife species or habitats, or scientific and educational values in the area that would benefit from wilderness designation. The WSA does support an undisturbed desert plant community, with particular interest are black grama grass and a Cholla forest. There are several cultural features Including the Sloan Petroglyphs which is listed on the National Register of Historical Places. These features will receive special protection under existing BLM laws and regulations from any surface disturbing activity.

The WSA has minimal potential for mineral development. However, the edges of the WSA have high favorability for quantities of sand and gravel. One sand and gravel operation has been developed In Hidden Valley and continues to provide high quality silica sand. The natural progression of this operation Is to expand Into the WSA. A desire and need has been expressed to expand the operation. Both Hidden Valley and Lava Valley have excellent potential for additional sand and gravel operations. High quality roads would access these operations. Urban expansion demands from the Las Vegas valley will encourage development.

At the present time, there is little threat to the existing naturalness of the area. There are no known or projected activities, and no valid rights of others in the WSA. The eastern ridgeline Is protected due to topography and other physical constraints. Therefore, even without wilderness designation, the quality and level of values now found in the WSA are not expected to significantly change.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	47,166
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	47,166
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	47,166
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	47,166
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

North McCullough Mtns.
Proposal

NV-050-425
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is predominantly natural. The WSA contains the north half of the north-south trending McCullough Range. Elevation ranges from 2,000 feet at the eastern base of the range to 5,092 feet at Black Mountain. The massive, rounded to flat-topped volcanic peaks have a steep east-facing escarpment and gradual western slope. Blocky, black basalt flows are exposed on the ridges, peaks and western slopes.

The east escarpment consists of formations of reddish-brown andesite breccia. The WSA contains some valley land on the western fringe and a broad two-mile-wide central valley separating the main ridgeline from the rugged Sutor Hills. No springs occur in the WSA. Desert plants of the creosote bush community, including barrel cactus, scattered joshua trees and several species of cholla and prickly pear, dominate the WSA.

Unlike the other WSAs in Clark County, the North McCulloughs are volcanic in origin. Examples of lava flows, ash falls and glassy zones are clearly displayed. The andesite flows of the rugged east face form particularly scenic features. The ridgeline offers excellent views of the Eldorado and Jean Dry Lakes, numerous ranges and the Las Vegas valley. The WSA supports an undisturbed plant community which combines plants of the Mojave and Sonoran Desert regions and the Great Basin. Of particular interest are black grama grass, not known to occur elsewhere in Nevada, and large stands of teddy bear cholla. Bighorn sheep inhabit the WSA in all but the driest months.

Five and one-half miles of way were found in the WSA. Scattered vehicle use occurs in the western end, Hidden Valley, and its tributaries. One abandon mine consisting of a shaft and collapsed shack and an old bladed drill pad are also found in the WSA. A communication site and active mine are located outside the WSA but near the boundary. Powerlines and substations are within a few miles of the east and south boundaries, and suburban development from Henderson and Las Vegas continue to grow closer.

B. Solitude: North McCullough WSA offers outstanding opportunities for solitude. The rugged east face of the escarpment and the Sutor Hills offer outstanding opportunities for solitude because of the excellent topographic screening. Twisting canyons, peaks and pinnacles screen visitors. Rounded peaks of the ridge, a broad central valley, Lava Valley, Hidden Valley and the lower end of its tributaries do not provide adequate screening. There is no vegetative screening in the WSA. There is light, periodic travel both on the boundary roads and interior ways and washes. Boulder City, Henderson and Las Vegas valley are visible and audible from portions of the WSA on the north, west and east sides. Although, outside the traffic control area (TCA), overflights from McCarran International Airport pass directly over the WSA. McCarran is one of the ten of busiest airports in the US. However, overflights are infrequent and tend to be localized to the west edge of the WSA and at altitude more than 4,000 feet above the WSA.

C. Primitive and Unconfined Recreation: Recreation opportunities similar to the other mountain ranges in the region are present in the North McCullough WSA. Primitive recreation opportunities abound because of the diversity of possible activities; backpacking, rock scrambling, nature study, photography, hunting and horseback riding, and high quality day-hiking. Canyons on the east face and high points of the range provide numerous destinations and challenge levels. The area is easily accessible yearlong to the residents of the Southern Nevada. Summer temperatures are generally too hot for use of this area.

D. Special Features: Unlike the other WSA in Clark County, the North McCulloughs are volcanic in origin. Examples of lave flows, ash falls and glassy zones are clearly displayed. Andesite flows of the rugged east face form particularly scenic features. Ridges offers excellent views of the Eldorado and Jean Dry Lakes,

numerous ranges and the Las Vegas valley. North McCullough WSA supports an undisturbed plant community which combines plants of the Mojave and Sonoran Desert regions and the Great Basin. Of particular interest are black grama grass, not known to occur elsewhere in Nevada, and large stands of teddy bear cholla. Bighorn sheep inhabit the WSA in all but the driest months.

Desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA in the bajada areas. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as a threatened species on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the North McCullough WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS). The North McCullough WSA is within the American Desert Province, and Creosote Bush is the predominant ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification	NWPS Areas		Other BLM Studies	
Province/PNV	Areas	Acres	Areas	Acres
	NATION WIDE			
American Desert Province/				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote Bush	0	0	20	793,174

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: North McCullough WSA is within a five hour drive of three major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	27	2,876,234	135	4,958,751
Arizona				
Phoenix	90	4,156,455	13	79,322

C. **Balancing the geographic distribution of wilderness areas:** The 1989 designation of Forest Service wilderness created a wide distribution of wilderness areas within the state, and the addition of the North McCullough WSA would not significantly contribute to the geographic distribution of areas within the NWPS.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The study area is capable of being managed as wilderness but there will be some manageability concerns. There are 150 acres of pre-FLPMA and 500 acres of post-FLPMA mining claims in the WSA. There are no pre-FLPMA oil and gas leases within the WSA. Approximately 83 percent (39,148) of the WSA is leased by 29 leases, issued during 1981 and 1982 for a ten-year period each.

ORV use in Hidden Valley would be impossible to eliminate because of the easy access to Hidden Valley and the flat terrain. Access into Sutor Hills is a concern due to a accessible wash into the area. Five and one-half miles of unimproved vehicle ways occur in the WSA.

The WSA is bordered on the southeast by the Eldorado Valley Act lands. Future development of these lands is of concern.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following pieces of information: (1) a literature search, (2) the 1982 Barringer Report (a federally contracted mineral survey of the WSAs to identify mineral resources and incorporating extensive sampling) (3) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling.), (4) evaluation of the geologic setting and consultation with energy and mining companies as well as local prospector, (5) minor field verification by BLM geologists and (6) past and present mining activities.

As a result of this information, the following conclusions were reached: The WSA has minimal potential for mineral development. However, the edges of the WSA has moderate to high potential for nonmetallic minerals (sand and gravel).

There is low potential for energy resources.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Partial Wilderness Alternative
Wilderness Resources	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be lost throughout most of the WSA.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive recreation would be retained or improved within the WSA.	Wilderness values of naturalness and opportunities for solitude and primitive recreation would be retained or improved on the 40,950 acres recommended for wilderness. Wilderness values would be lost on 6,215 acres not recommended for wilderness.
Recreation Resources	Motorized recreational use within the WSA would reach 600 visits annually. Non-motorized recreational use within the WSA would reach 100 visits annually.	Motorized recreational use of 300 visits would be foregone on 47,166 acres annually. Non-motorized use within the WSA would reach 150 visits annually.	On the 6,213 acres not designated wilderness, motorized recreational use would reach 450 visits annually. Non-motorized recreational use within the WSA would reach 150 visits annually.
Mineral Resources	Potential mineral and energy exploration and development could occur within the WSA; however, none is anticipated.	Any potential mineral and energy exploration and development within the WSA would be foregone.	Potential exploration and development of mineral and energy resources within the suitable portion of the WSA would be foregone. Potential mineral and energy resources would be available for exploration and development within the non-suitable portion of the WSA.
Cultural Resources	Sloan Petroglyph site would not receive additional protection from surface-disturbing activities.	Sloan Petroglyph site would receive additional protection from surface-disturbing activities.	Sloan Petroglyph site would receive additional protection from surface-disturbing activities.
Water Resources	One spring located within the WSA would not receive additional protection from surface-disturbing activities.	An increase in water quality and quantity stability would result for the one spring within the WSA.	An increase in water quality and quantity stability would result for the one spring within the WSA.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA Specific Comments

Public involvement has occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearing were held in association with the study phase and draft environmental impact statement for the WSAs located within Clark County. The meetings were a combination open house and scoping meeting and were held in Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 27 written comments specifically addressing this WSA were received. In general, 17 commentors supported wilderness designation for all or part of the WSA. Ten commentors and one oral testimony supported no wilderness for the North McCullough Mountains WSA.

Most comments which specifically mentioned the North McCullough WSA and supported wilderness designation, touched on high wilderness values, unspoiled biological and cultural resource values, and wildlife habitat potential. Comments opposing wilderness centered around making the area available for wildlife enhancement projects, lack of significant wilderness characteristics and recreation opportunities, speculative mineral resource potential and potential impacts to energy and mineral exploration and development.

County: Clark County Department of Comprehensive Planning supported the no wilderness recommendation although it did not directly comment on the North McCullough WSA.

State: The Governor of Nevada, in his consistency letter, dated August 30, 1983, supported the Bureaus's Preferred Alternative, no wilderness. Comment from the State of Nevada Department of Conservation and Natural Resources, Division of State Lands, State Divisions of Minerals, Department of Wildlife and Agriculture supported the no wilderness recommendation.

Federal: The Environmental Protection Agency (EPA) recommended the Final EIS should also identify ground water resources. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments.

There was one written comment received on the Final EIS from the EPA which supported the proposed action and recommended that the final recommendation include a statement that water and air quality will be best protected under wilderness designation.

SOUTH McCULLOUGH MOUNTAINS WILDERNESS STUDY AREA

I. THE STUDY AREA - 56,623 acres

The South McCullough Mountains Wilderness Study Area (WSA), NV-050-435, is located approximately 35 miles south of Las Vegas, just north of the California-Nevada border, and 13 miles west of Searchlight in Clark County, Nevada. Encompassing the southern portion of the McCullough Mountain Range, the WSA is approximately 15 miles long and six to nine miles wide, roughly rectangular in shape, and contains approximately 56,623 acres of BLM land, with no split estate or private inholdings (Table 1). A forty acre private parcel near McCullough Spring, in the east-central portion of the WSA, is cherrystemmed out of the WSA.

The northeast corner of the WSA begins approximately 2,000 feet west of powerline R/W Nev 066156 on the township line, which is the southern boundary of the Eldorado Valley Act Lands, runs west approximately two and one-half miles along the township line and then runs north on the common line between R.61E. and R.62 E. for approximately one and one-half miles. The north boundary then extends west up a wash and across a low saddle before dropping into a wash on the west side of the mountain. Two dry washes on the west side of the main portion of the mountain clearly identify the northwest WSA boundary. At the southern end of the northwest boundary, the boundary turns northwest along the shoulder of a jeep trail for approximately two miles to the north section line of T.26S., R.60E., Sections 25 and 26. A jeep trail and dry wash are the west boundary. From this point the access road into Railroad Spring is cherry-stemmed, twenty-five feet on both sides of the road centerline, for approximately three miles to range improvements near the spring source. The southern boundary is identified by washes and point to point topographic features. The southeast boundary is a series of point to point features, section lines and the shoulder of the road from Pine Spring to where the road intersects a line parallel to powerline right-of-way Nev 066156 and 2,000 feet west of the powerline centerline. The eastern boundary is a line parallel to R/W Nev 066156, 2,000 feet west of the centerline, from the Pine Spring road north to the south boundary of the Eldorado Valley Act lands. Approximately mid way on the eastern boundary a forty acre private parcel and the access road is cherry-stemmed with a series of peak to peak lines.

The WSA consists of a roughly symmetrical north-south trending mountain range that drops off gradually to numerous valleys, foothills, and sloping bajadas on the east and west flanks of the WSA. Elevations range from 2,500 feet in the northwest to 7,026 feet at the peak of McCullough Mountain in the center of the WSA. Most of the WSA is composed of metamorphosed Precambrian rock, gneiss, granite, and schist, although basalt and andesite flows are found in the northern portion of the area. Pinyon and juniper stands cover north and east-facing slopes above 5,000 feet. Desert plants, including joshua trees, yuccas and cacti, are interspersed with pinyon-juniper below 5,000 feet and become dominant at lower elevations.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA) and was included in the Clark County Wilderness Recommendations/Environmental Impact Statement (EIS). The Final Wilderness EIS was filed in April, 1987. Three alternatives were analyzed in the EIS; a Partial Wilderness Alternative, which is the recommendation of this report, an All Wilderness Alternative, and a No Wilderness Alternative.

2. RECOMMENDATION AND RATIONALE - 19,798 acres recommended for wilderness
37,065 acres recommended for nonwilderness

The recommendation for this WSA to designate 19,798 acres as wilderness and release 37,065 acres for uses other that wilderness (Map 1). All Wilderness is considered the environmentally preferable alternative as its implementation would result in the least change from the natural environment over the long-term. The

recommendation, while not the environmentally preferred, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The recommendation for the South McCullough WSA emphasizes outstanding opportunities for solitude, easy access for primitive and unconfined recreation, and limited conflicts with other actual or potential uses of the area while maintaining access to portions of the WSA with moderate mineralization potential.

The recommendation would add an area of diverse natural and cultural values, located within 35 miles of burgeoning metropolitan Las Vegas. The central ridge of the South McCullough Mountains is divided into many separate summits, interspersed by numerous draws and drainages. From these peaks, the landforms drop gradually away to valleys and foothills, creating expansive vistas. Dense pinyon and juniper stands blanket the higher slopes, providing excellent screening and cover. Below 5,000 feet, joshua trees, yuccas, cacti and other desert shrubs mix with the pinyon-juniper woodland, becoming dominant at lower elevations. Numerous seasonal and permanent water sources, including 10 intermittent springs, 4 perennial springs, 1 well, and several ephemeral streams support a variety of flora and fauna within the WSA.

Wilderness designation would preserve an undisturbed area for several solitude-dependent species that inhabit the WSA. Bighorn sheep, mule deer, chukar, and Gambel's quail find crucial summer habitat in the South McCullough Mountains, sustained by the area's four perennial springs. All of these species would benefit from the special protection afford by wilderness designation.

Numerous prehistoric sites within the WSA attest to the importance of the area's water sources and biological resources during earlier periods of human history. Identified site types have included rock shelter habitation sites, open temporary campsites, pine nut cache features, rock art panels depicting bighorn sheep and other motifs, and short-term activity sites. These cultural manifestations suggest that the floral and faunal resources of the South McCullough's were critical components of the subsistence regimes of several cultural groups through time. Wilderness designation would afford special protection to preserve these values for future generations.

Outstanding opportunities for solitude are available within the WSA. In the mountainous core area, excellent screening is created by the dense pinyon-juniper forest and the numerous draws and drainages that dissect the central ridge. Within this area, the visitor is isolated from the intrusive sights and sounds of man and his activities. Impressive stands of joshua trees create additional vegetative cover on the lower slopes.

Year-round access to the South McCullough Mountains is available for a high diversity of primitive and unconfined recreational opportunities. The myriad peaks and draws provide numerous destinations for climbers, rockscramblers, day-hikers and backpackers; excellent views of the surrounding valleys and foothills can be obtained from the summits. Availability of water at the numerous seasonal and permanent water sources in the area enhances backpack camping and horseback riding in the WSA. The variety of vegetation types and the presence of bighorn, deer and quail afford opportunities for nature study and photography. Deer hunting is also available in the WSA.

Conflicts with other resource uses of the lands recommended for designation are limited. Within the recommended area, extremely rugged topographic features, steep slopes, and narrow canyons, combine with dense vegetation to restrict most motorized access. Grazing management would continue in the same manner and degree as was occurring prior to the enactment of FLPMA in 1976. No planned range improvements would be foregone. Proposed removal of pinyon-juniper as a wildlife habitat management tool for big game would not take place within the recommended area.

The recommendation for the South McCullough WSA emphasizes maintaining access to most portions of the WSA where mineral surveys indicate a moderate potential for minerals occurrence, exploration and extraction. The WSA has no identified mineral resources and has no areas of high mineral resource

potential. The entire WSA has no resource potential for oil and gas and coal as well as a low resource potential for these nonmetallic commodities: dimension stone;sand and gravel;pegmatite minerals such as feldspar and mica; and for geothermal resources.

The 37,065 acres recommended for nonwilderness comprise three parcels, encompassing the eastern (A) and western (B) bajadas and the southern mountainous portion (C) of the WSA. The recommendation emphasizes maintaining access to the portion of the WSA not recommended for designation for mineral exploration and extraction, off-road vehicle use, and other uses other than wilderness.

Numerous mining claims are located within the southern mountainous portion of the WSA (area C) not recommended for wilderness. It is projected that if the area were not designated, mineral development would eventually occur. The projected development would consist of three mines and would involve construction of an estimated 3 miles of road and the disturbance of approximately 25 acres associated with tailings piles, adits, buildings and loading areas.

Topography, soil types and vegetative cover make the eastern (A) and western (B) bajadas suitable for motorized recreation use; the area is currently utilized by off-road vehicle enthusiasts for trail bike riding, sightseeing and vehicle camping. Few natural barriers exist within this portion of the WSA to restrict access for these types of motorized activity. Management of these areas for existing and potential ORV use is considered more appropriate than for their wilderness values.

Large bajadas form most of the area recommended for nonwilderness and is characterized by a lack of topographic relief and low growing desert shrubs. Wilderness values in this portion of the WSA are diminished by the uniformity of the landscape and vegetation. Few secluded or isolated locales are available in which a visitor could be screened from external and internal activities and influences; opportunities for primitive and unconfined recreation are less diverse in this area of the WSA.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	56,623
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	56,623
Within the Recommended Wilderness Boundary	
BLM (within WSA)	19,798
BLM (outside WSA)	0
Split Estate (within WSA)	0
Split Estate (outside WSA)	0
Total BLM Land Recommended for Wilderness	19,798
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	37,065
Split Estate	0
Total BLM land Not Recommended for Wilderness	37,065
Inholdings (State, Private)	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

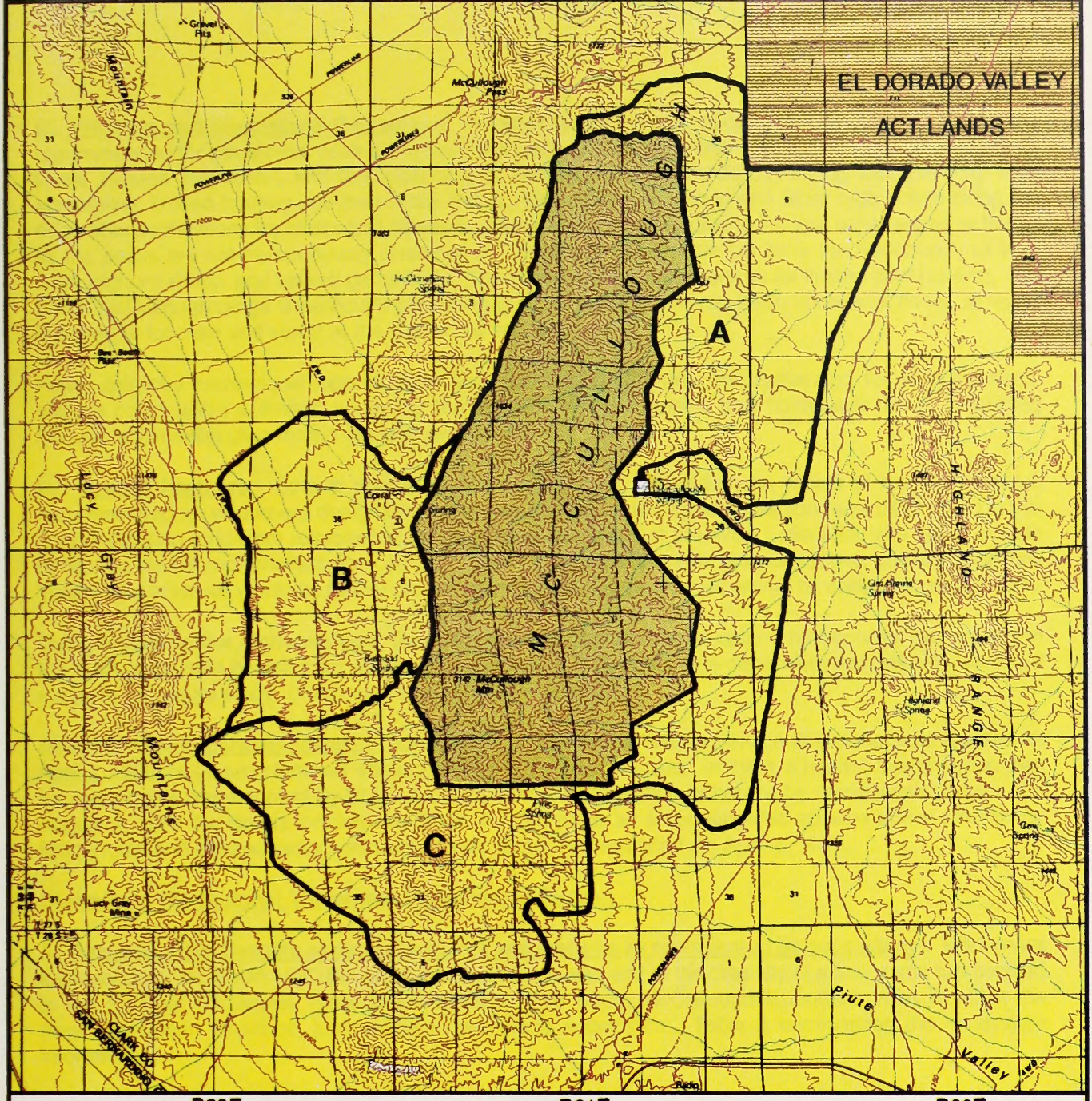
A. Naturalness: The South McCullough Mountains WSA is virtually free of obvious human impacts. The mountain range consists of an undulating crest flanked with rocky outcrops and occasional cliffs. The central ridge is divided by numerous draws and drainages into many separate summits. A pinyon-juniper forest occupies the steep canyons and gullies of the west slope and the upper reaches of the long canyons penetrating the range from the east. The southern portion of the WSA is blanketed with taller shrubs and joshua trees. The unobtrusive landscape projects a sense of remoteness with little influence of outside human activities. Internal man-made features are limited to two old mine tunnels and four developed springs. These imprints are substantially unnoticeable except within their immediate vicinity and do not detract from the area's natural character.

The sloping bajadas that comprise the northeast and southwest portions of the area are wide open expanses consisting of low desert shrubs and joshua trees. The southern mountainous area is a jumble of rounded peaks and shallow ridges that slope into wide drainages. The area is covered with pinyon and juniper trees and low growing desert shrubs. The open landscape provides wide open vistas, occasionally interrupted by the few man-made features that exist within the area. The features include developed springs, a corral, and a 2.5 mile way that enters the WSA from the western boundary. Two motorcycle race courses and scattered vehicle tracks also cross the bajadas. These imprints are substantially unnoticeable except in their immediate vicinity and on the western bajada.

Several outside influences directly affect the natural quality of the area not recommended for wilderness designation. A 2.5 mile road entering the area from the western boundary and a tin shack and water troughs were cherrystemmed from the WSA. The boundary skirts the Corral Springs area, cherrystemming water troughs and a corral. The corral, water troughs, and pipeline located at Pine Spring were also cherrystemmed from the WSA. McCullough Spring is cherrystemmed 2 miles into the WSA and has water troughs and a 40 acre undeveloped private parcel of land. A mining area located just outside the southwest corner of the WSA consists of numerous bladed areas and mine shafts. A communication site sits atop a peak a half mile from the southeast corner of the WSA. Powerlines run the length of the eastern boundary, one-quarter of a mile away from the boundary line. Despite these unnatural features, the view from the high ridges is remains unspoiled. The eye is drawn to the endless series of ranges and dry lakes; the powerline and other intrusions are overlooked. The primitive nature of the spring access roads and the screening for the springs limit their influence.

B. Solitude: Within the area recommended for wilderness outstanding opportunities for solitude exist. The numerous summits, draws and ridges that divide the central ridge provide excellent screening. The side canyons and slopes are heavily forested with pinyon-juniper trees which give additional cover. Those portions of the area containing rocky peaks, drainages and outcrops offer secluded locales in which to retreat. Although roads and the powerline are seen from within portions of the recommended area, a sense of remoteness from human activities is maintained.

Opportunities for solitude exist, but are limited, within the area recommended for nonwilderness. The sloping bajadas of the northeast and southwest provide minimal topographic or vegetative screening or cover. The washes on the southeastern bajada offer more opportunities for solitude, with the joshua trees and taller shrubs providing better screening and cover. The southern portion of the area recommended for nonwilderness provides the best opportunities for solitude in this portion of the WSA, as the deep, gently rolling terrain densely forested with pinyon and juniper trees, offers good cover and a number of isolated pockets and locales.



RECOMMENDED FOR WILDERNESS -

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

South McCullough Mtns.
Proposal

NV-050-435
March 1990

C. Primitive and Unconfined Recreation: Primitive recreation opportunities are outstanding in the area recommended for wilderness because of the variety of activities available. Year-round easy access, scenic views, diverse vegetation, and the availability of nearby water enhances day-hiking, backpacking, rock scrambling, limited hunting and horseback riding. McCullough Mountain and other high points along the ridge offer destinations for hikers and climbers. These areas would appeal to the less experienced or hardy, as the peaks are not tremendously challenging. Visitors to the area would have the opportunity to view deer, bighorn sheep, and upland game birds. The WSA provides opportunities for limited deer hunting. The South McCullough range is especially appealing to those interested in mountain horseback riding, as water is available for man and steed at the numerous springs.

Fewer primitive recreational opportunities are found within the area recommended for nonwilderness. Visitors could utilize a limited portion of the area for hiking, camping and horseback riding; interesting features and challenging terrain are less available here.

D. Special Features: Several special features supplement the wilderness values of the 19,798 acres recommended for wilderness designation. Numerous signs of aboriginal habitation have been found in this area, indicating long-term exploitation of the upland resources of the WSA. Identified site types include habitation sites at rock shelters, rock art panel, campsites, a wickiup site, pinenut caches, and lithic scatters. These cultural values would be further protected from the impacts of development by wilderness designation.

Living resources like bighorn sheep, Gambel's quail, chukar and other upland bird species are present in the WSA and would benefit from wilderness designation. These solitude-dependent species offer excellent subjects for nature study, photography, and wildlife viewing.

Desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA in the bajada areas. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the South McCullough Mountains WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System. The South McCullough Mountains WSA is within the American Desert Province, juniper-pinyon woodland ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province/ Juniper-Pinyon Woodland	1	21,485	25	685,080
	NEVADA			
Juniper-Pinyon Woodland	0	0	5	166,160

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: South McCullough Mountains WSA is within a five hour drive of the Las Vegas Standard Metropolitan Statistical Area (SMSA), the Phoenix SMSA, and the Los Angeles/Long Beach SMSA. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within one day's drive of population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	27	2,876,234	135	4,958,751
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: The 1989 designation of Forest Service wilderness created a wide distribution of wilderness areas within the state, although not specifically within southeastern Nevada, and the addition of this WSA would not significantly contribute to the geographical distribution of wilderness within the NWPS in Nevada. However, the wilderness values inherent in this WSA, which represents a type of environment not included within the Forest Service areas, justify its addition to the NWPS.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire WSA can reasonably be managed as wilderness to preserve values now present in the area. The area is a solid block of public land with no private inholdings, State lands or rights-of-way. An estimated 124 post FLPMA mining load claims, one pre-FLPMA load claim, and 60 post-FLPMA placer claims are located within the WSA. Only the one pre-FLPMA claim has valid existing rights. One oil and gas lease encumbers approximately 320 acres in the northeast portion of the WSA in a portion not recommended for wilderness.

Wilderness designation of the areas recommended for uses other than wilderness would pose a critical manageability problem: off-road vehicle use. Motorized cross-country and off-road travel for hunting, camping, and sightseeing currently occurs along the bajadas, cherrystemmed portions of the area and the way. No natural barriers to these uses are present in the portions recommended for non-wilderness; such motorized recreational activities are projected to continue and increase within the areas lacking strong topographic relief and dense vegetation cover.

Energy and Mineral Resource Values

U.S. Geological Survey and Bureau of Mines conducted field studies on 19,798 acres of the South McCullough Mountains Wilderness Study Area in 1985 and 1986 to assess mineral potential. A report on the mineral resource potential of the WSA was published in U.S. Geological Survey Bulletin 1730-C in 1989.

As a result of the report, the following conclusions were reached. The South McCullough Mountains

Wilderness Study Area contains no identified mineral resources and has no areas of high mineral resource potential. Five areas that make up 20 percent of the study area have a moderate potential either for undiscovered silver, gold, lead, copper, and zinc resources in small vein deposits, for lanthanum and other rare-earth elements, uranium, thorium,and niobium In medium-size carbonatite bodies and dikes, for tungsten and copper in small to medium-size vein deposits, or for silver and gold in small vein or breccia-pipe deposits. Six areas that make up 24 percent of the study area have an unknown resource potential either for gold, silver, lead, and copper In small vein deposits, for gold, silver, lead, zinc, copper, and arsenic In small vein deposits or small to medium-size breccia-pipe deposits, for lanthanum and other rare-earth elements, uranium, thorium, and niobium in medium-size carbonatite bodies and dikes, or for tungsten and copper in small vein deposits. The designation of unknown resource potential for these areas Is used because available geochemical data are not adequate to assign low, moderate, or high levels of resource potential. Four areas that make up 7 percent of the study area have a low resource potential either for tin, for tungsten and copper, or for copper, gold, silver, and arsenic in small vein deposits. The remaining 30 percent of the study area has a low resource potential for zinc, copper, silver, and gold in medium-size to small stratabound deposits, or for nioblum, tantalum, uranium, rare-earth elements,and thorium In small pegmatite bodies, and an unknown potential for gold and silver in small to medium-slze breccia pipes. The entire study area has no resource potential for oil and gas and coal, as well as a low resource potential for these nonmetallic commodities: dimension stone; sand and gravel; pegmatite minerals such as feldspar and mica; and geothermal resources.

As of July, 1989, an estimated 124 post FLPMA mining load claims, one pre-FLPMA load claim, and 60 post-FLPMA placer claims are located within the WSA. Only the one pre-FLPMA claim has valid existing rights. One oil and gas lease encumbers approximately 320 acres in the northeast portion of the WSA in a portlon not recommended for wilderness.

Non-energy mineral resource development or energy resource development is not projected to occur within the area recommended for wilderness designation.

Mineral development for metallic minerals is projected to eventually occur within the southern portion of the area not recommended for wilderness. The projected development of three mines would entail the construction of roads and support facilities and the extraction of minerals.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for all of the alternatives considered including designation or nondesignation of the entire WSA as wilderness.

Local Social and Economic Considerations

The socioeconomic environment for Clark County was addressed in detail in the BLM Clark County Draft Wilderness Environmental Impact Statement(1983). The social profile of the County migration and growth pattern and public attitudes toward wilderness and economics were discussed in this document. Two generalizations were formed within this document: (1) that interest in the Clark County wilderness study seemingly is primarily a local Issue with some regional, but little national interest. (2) current wilderness usage would need to increase over twenty times as a result of designation, before significant impact to the service and recreation industry would be felt.

Table 4
Cumulative Summary of the Impacts by Alternative

Issue Topics	Proposed Action	All Wilderness	No Wilderness	Alternative A	Alternative B
Wilderness Resources	Wilderness values of naturalness and opportunities for solitude and primitive and unconfined recreation would be retained or improved on the 19,798 acres recommended for wilderness. There would be a reduction in naturalness and opportunities for solitude and primitive recreation on the 37,065 acres not recommended for wilderness.	The WSA's wilderness values of naturalness and opportunities for solitude and primitive and unconfined recreation would be retained or improved.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation would be lost within the major portion of the WSA.	Wilderness values of naturalness and opportunities for solitude and unconfined end primitive recreation would be retained or improved on the 23,090 acres recommended for wilderness. There would be a loss of neturalness and of opportunities for solitude end primitive recreation on the 33,683 acres not recommended for wilderness.	Wilderness values of naturalness and opportunities for solitude and unconfined and primitive recreation would be retained or improved on the 32,795 acres recommended for wilderness. There would be a loss of naturalness end of opportunities for solitude end primitive recreation on the 23,978 acres not recommended for wilderness.
Recreation Resources	On the 37,065 acres not designated as wilderness, motorized recreation would reach 1,500 visits annually.	Motorized recreation use of 670 visits annually would be foregone. Non-motorized recreational use within the WSA would reach 1,750 visits annually.	Motorized recreational use would reach 1,760 visits annually. Non-motorized recreational use within the WSA would reach 1,500 visits annually.	On the 33,683 acres not designated wilderness, motorized recreational use would reach 1,500 visits annually. Non-motorized recreational use within the WSA would reach 1,660 visits ennually.	On the 23,978 ecres of the WSA not designated es wilderness, motorized recreational use would reach 1,300 visits annuelly. Non-motorized recreational use within the WSA would reach 1,750 visits annually.
Mineral Resources	Potential for exploration and development of mineral and energy resources within the suitable portion of the WSA would be foregone. Three mines would be developed within the non-suitable portion of the WSA.	Development of 3 mines for mineral resources within the WSA would be foregone.	Development of 3 mines for metellic minerals would occur within the WSA.	Development of 1 mine for metallic minerals within the suitable portion of the WSA would be foregone. Two mines would be developed within the non-suitable portion of the WSA.	Development of 3 mines for metellic minerals within the suitable portion of the WSA would be foregone. Any potential for exploration end development of mineral and energy resources within the non-suitable portion of the WSA could occur.
Cultural Resources	Railroad Springs cultural site would not receive additional protection from surface-disturbing activities.	Railroad Springs cultural site would receive additional protection from surface-disturbing activities.	Railroad Springs cultural site would not receive additional protection from surface-disturbing activities.	Railroad Springs cultural site would not receive additionel protection from surfece-disturbing activities.	Railroad Springs cultural site would not receive additionel protection from surface-disturbing activities.
Wildlife Habitat Management	Vegetative manipulation of 4,120 acres would be precluded. Big game would not reach reasonable numbers.	Vegetative manipulations would be precluded. Big game would not reach reasonable numbers.	There would be no impact on management of wildlife habitat.	Vegetative manipulation of 4,800 acres would be precluded. Big game would not reach reasonable numbers.	Vegetetive manipulation of 4,900 acres would be precluded. Big game would not reach reasonable numbers.
Water Resources	An increase in water quality and quantity stability would result on 4 springs located within the recommended suitable portion of the WSA.	An increase in water quality and quantity stability would result on 14 springs located within the recommended suitable portion of the WSA.	Fourteen springs within the WSA would not receive additional protection from surface-disturbing activities.	An increase in water quality and quantity stability would result for 6 springs located within the recommended suitable portion of the WSA.	An increase in water quality and quantity stability would result for 11 springs located within the recommended suitable portion of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

A series of public meetings and a public hearing were held in association with the study phase and draft environmental impact statement for the WSAs located within Clark County. The meetings were a combination open house and scoping meeting and were held in Overton, Las Vegas and Searchlight, Nevada. A formal public hearing was held in Las Vegas, Nevada.

During formal public review of the draft EIS, a total of 29 written comments specifically addressing this WSA were received. In general, 24 commentors supported wilderness designation for all or part of the WSA. Five commentors supported no wilderness for the South McCullough Mountains WSA.

Most comments which specifically mentioned the WSA touch on high wilderness values (outstanding opportunities for solitude and primitive recreation) and the dozens of unique supplementary values such as the area's exceptional ecology and scenic attributes, the dense pinyon/juniper forest, and the wildlife habitat. Comments opposing wilderness centered primarily on the potential abundance of untouched minerals. A utility company wanted to protect and preserve the integrity of their company facilities located near the Wilderness Study Area.

County: The Clark County Department of Comprehensive Planning generally agreed with the recommended wilderness designations contained within the Preferred Alternative in the Clark Draft EIS. However, Clark County was unclear on what land management policies would apply to those portions of the WSA that were not being recommended for wilderness designation.

State: The Governor of Nevada, in his consistency letter, dated August 30, 1983, did not support the Bureau's preliminary Preferred Alternative recommendation, no wilderness, for the South McCullough Mountains WSA. In response to the Governor's comments the Bureau amended the Preferred Alternative recommending 19,798 acres for wilderness designation. The Governor concurred with the final recommendation on January 10, 1984. The State Division of Minerals and Department of Wildlife recommend the no wilderness designation.

Federal: The Environmental Protection Agency (EPA) stated that the Final EIS should address potential air quality impacts from mining, energy and off-road vehicle activities for each alternative. The potential impacts from these activities on sensitive soils and watershed areas should also be addressed. The Final EIS should also identify ground water resources. The U.S. Air Force stated they support alternatives that do not restrict military overflights. The Bureau of Mines and Bureau of Reclamation responded to receiving the Draft EIS and offered no other comments. The U.S. Geological Survey stated that geologic conditions were adequately considered in the Draft EIS and that mineral resource potential of those areas recommended suitable for wilderness would be addressed in their joint report with the Bureau of Mines.

There was one written comment received on the Final EIS from the EPA which supported the proposed action and recommended that the final recommendation include a statement to the effect that water and air quality would best be protected under wilderness designation.

SOUTH PAHROC RANGE WILDERNESS STUDY AREA

1. THE STUDY AREA - 28,600 acres

The South Pahroc Range Wilderness Study Area (WSA), NV-050-132, is located in Lincoln County, approximately 30 miles west of Caliente, and 120 miles north of Las Vegas. The WSA contains 28,600 acres of BLM lands with no split estate or private inholdings (Table 1). A powerline road bounds the northern portion of the WSA, while approximately 1.2 miles of the northeastern boundary skirts existing perlite claims. The eastern and southern boundaries of the study area follow the approximate base of the major escarpment. On the unit's west side, the study area is bounded for a distance of 3 miles by an unpaved road that parallels the base of the mountain.

The WSA encloses a steep, westward-tilted mountain range containing cliffs, deeply cut canyons and large, rounded boulders. Elevations rise from 4,900 feet in the west to 7,950 feet along the precipitous eastern fault escarpment. Vegetation ranges from desert brush and grasses at lower elevations to pinyon-juniper stands and scattered white fir and aspen at the middle and upper elevations.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Caliente Management Framework Plan Amendment/Environmental Impact Statement. The Final Wilderness EIS was filed in May, 1989. Three alternatives were analyzed for the South Pahroc Range WSA in the EIS: a Partial Wilderness Alternative which is the recommendation in this report, an All Wilderness Alternative, and a No Wilderness Alternative.

2. RECOMMENDATION AND RATIONALE - 28,395 acres recommended for wilderness
205 acres recommended for nonwilderness

The recommendation of this report is to designate 28,395 acres as wilderness and release 205 acres for uses other than wilderness (Map 1). The All Wilderness Alternative is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The recommendation of this report, while not the environmentally preferred, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The 28,395 acre area is recommended for wilderness designation because it is natural and provides outstanding opportunities for both solitude and primitive and unconfined recreation. Most of the South Pahroc Range, a solitary volcanic massif composed of varying colored layers of welded tuff that have weathered into unusual pockets, columns and stone faces, is included in this scenic and untouched area. Numerous steep-walled drainages cut across the mountain from east to west; precipitous cliffs create vantage points for hikers that provide an impressive view of huge empty desert valleys, interrupted only by successive intervening chains of even more distant mountains. Overlying this pattern is a jumbled mosaic of small to house-sized rounded tuff boulders, heavily interlaced with pinyon and juniper, occasional white fir and aspen. Backpackers and rockscramblers would enjoy challenging climbs that culminate in scenic overlooks atop these gargantuan geologic features. Within secluded forested pockets, campers and photographers might observe mule deer, mountain lion, recently reintroduced bighorn sheep or a variety of raptors, including golden eagles and prairie falcons.

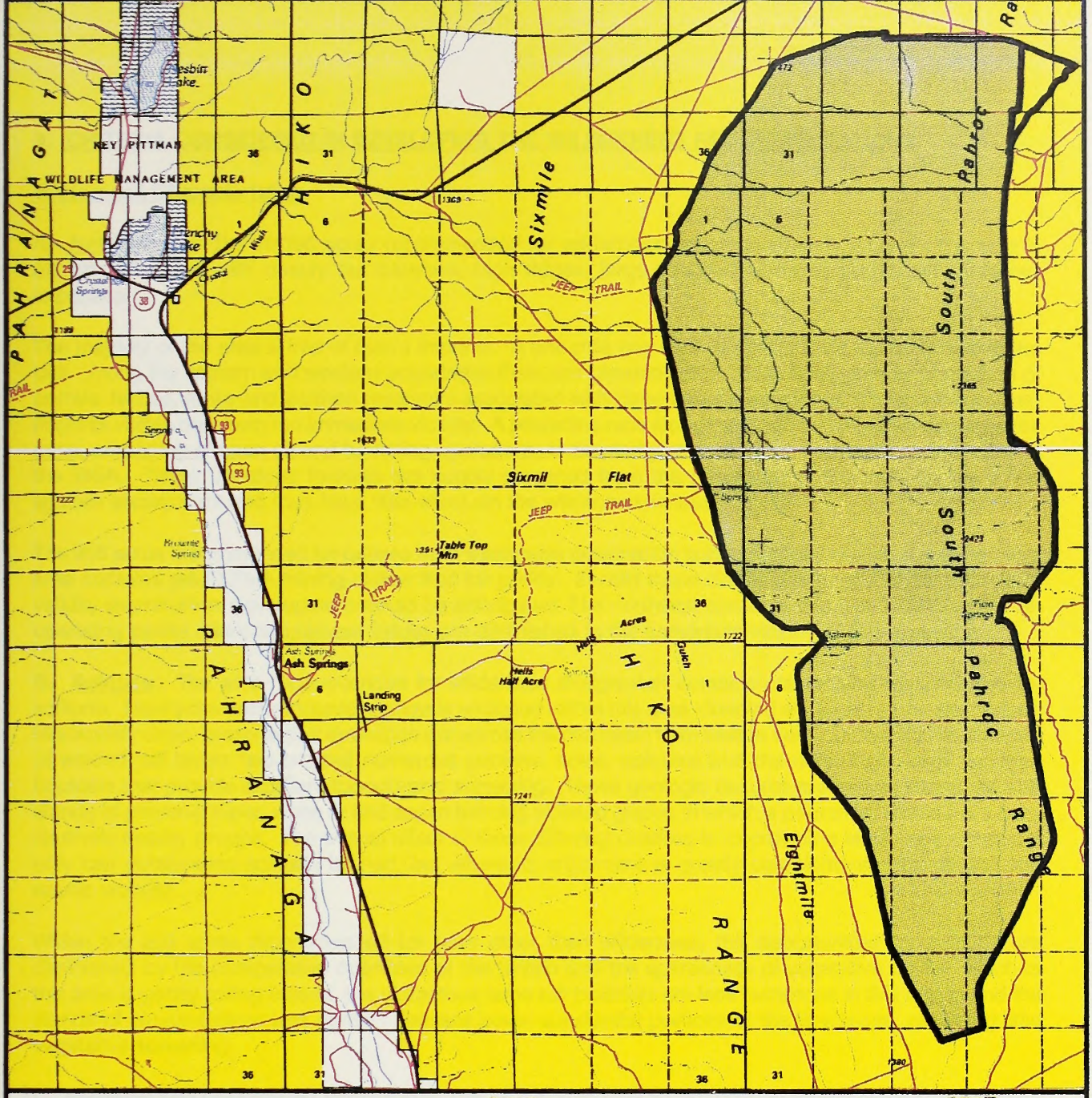
The area is manageable as wilderness due primarily to the extreme ruggedness and relative inaccessibility of much of the area.

Conflicts with other resource uses of the portion recommended for wilderness designation are minimal. Grazing use of the area will be allowed to continue. Within the 28,395 acres recommended suitable for wilderness, there are no mining claims as of the date of this report. Identified mineral values within this area include a subeconomic perlite resource, anomalous concentrations of gold, arsenic and antimony,and moderate resource potential for disseminated gold. Oil and gas leases are located along the western edge of the WSA and extend from the adjacent valley into the study area. Identified resource potential for oil and gas and geothermal energy is low.

The 205 acres recommended for uses other than wilderness lie on the far northeastern corner of the South Pahroc Range WSA and are encumbered by pre-FLPMA mining claims filed for perlite. This area is adjacent to an operating perlite mine and is susceptible to a logical extension of the mining operation. Present mining is primarily by underground methods on the steep escarpment; extension of this operation would be screened from the remainder of the WSA by the steep eastern escarpment.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (Surface and Subsurface)	28,600
Split Estate (BLM surface only)	0
Inholdings (State,Private)	0
Total	28,600
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	28,395
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	28,395
Inholdings (State, Private)	0
Within the Area Not Recommended for Wilderness	
BLM	205
Split Estate	0
Total BLM Land Not Recommended for Wilderness	205
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS –

RECOMMENDED FOR NONWILDERNESS·

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

South Pahroc Range Proposal

NV-050-132
March 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

Wilderness Characteristics

A. Naturalness: The 28,395 acres recommended for wilderness are predominantly natural. The area is extremely rugged with deeply cut canyons, high ridges, large rounded boulders and heavily forested expanses.

The majority of the area is free of man's imprints. A one mile way runs southerly from the north end of the unit. Along the eastern and western boundaries there are pipelines and stock developments consisting of corrals, fences, tanks and earthen reservoirs associated with three developed springs. These are localized imprints visible only from the immediate vicinity. A powerline runs along the northern boundary and a perlite mine, consisting of open pit and tunneling operations, is situated just outside the northeastern boundary of the WSA. These unnatural features are largely screened from the remainder of the WSA by the steep eastern escarpment and thus have little effect on the wilderness values.

The 205 acres recommended for release from wilderness designation is in essentially natural condition. This area contains pre-FLPMA mining claims filed for perlite. Should these claims prove valid under the test of validity examination, development would be anticipated. The northeast corner of this area is adjacent to an operating perlite mine; naturalness values are diminished in the immediate vicinity of this operation.

B. Solitude: The area recommended for wilderness designation contains outstanding opportunities for solitude. Nearly the entire mountain range is enclosed within this area, creating an "island in the sky " effect. Moderately deep, steep-walled drainages cut across the mountain from east to west. Differential weathering of welded tuff layers has created numerous pockets, holes, columns and the ubiquitous, large rounded boulders that provide excellent topographic screening. These geologic features are heavily interlaced with stands of pinyon-juniper, white fir and aspen forming isolated glades in which a person is remote from even relatively nearby groups. The overall effect of these differing qualities is to provide a large area where not only can outstanding solitude be had, but where its enjoyment is greatly complemented by natural and scenic wonder.

Within the 205 acres recommended for uses other than wilderness, the opportunities for solitude are diminished by the comparative openness of the terrain and the sparseness of vegetative cover. Much of this area is gently rolling bajada; the ubiquitous large tuff boulders are less numerous in this region and the stands of pinyon-juniper less dense. Grasses cover substantial portions of the landscape, providing little vegetative screening.

C. Primitive and Unconfined Recreation: The 28,395 acre area recommended for wilderness designation, by virtue of its size, terrain diversity and vegetation, provides outstanding opportunities for primitive and unconfined recreation.The high ridge, steep canyons, and large boulders provide ample day and overnight hiking, camping and climbing or scrambling opportunities. Wildlife viewing includes mule deer, mountain lion, newly reintroduced bighorn sheep, golden eagles and prairie falcons. Hunting is known to occur along the flanks of the WSA, but the level of activity within the interior is unknown.

Unique rounded rocks, columns, stone faces, balancing rocks which look like stacked bagels, and expansive scenery make interesting subjects for study and photography. These features combine to enhance the recreational values contained within the South Pahroc Range WSA.

Within the area not recommended for wilderness designation, the opportunities for primitive and unconfined recreation are limited. The rolling bajada terrain and paucity of large boulders reduces the number of climbing and scrambling locales. Sparse stands of pinyon-juniper and open,grassy knolls provide few

secluded locales for camping. Scenic vistas for sightseeing and nature photography are generally unavailable in this region.

D. Special Features: Several special features supplement the wilderness values of the 28,395 acres recommended for wilderness designation. This "island in the sky" is comprised of west-tilting layers of tuff that have weathered into the area's unique pockets, holes, columns and house-sized rounded tuff boulders. Opalescent feldspar crystals, obsidian "Apache tears", and perlite occur in local deposits and are of interest to specimen collectors.

Living resources include the regionally rare white fir, aspen, prairie falcons, golden eagles, and mountain lions. Their presence in this WSA offers excellent opportunities for scientific observation.

The scenic qualities of the South Pahroc Range are outstanding due, in part, to the interaction of the mountain landforms, the multi-colored rock stratigraphy, the variably-sized rounded boulders, diverse vegetation and vast, open vistas.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: South Pahrocs WSA is within the Intermountain Sagebrush Province and contains pristine examples of juniper-pinyon woodland and Great Basin sagebrush ecosystems. Designation of the WSA would significantly add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS). The complex pattern of ecosystems and unique ecotones and micro-environments created in the clutter of the massive boulders and long narrow canyons is unique in southern Nevada and would compliment the diversity of natural systems currently represented. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
NATION WIDE				
Intermountain Sagebrush Province/				
Juniper-Pinyon Woodland	13	362,556	77	2,250,026
Great Basin Sagebrush	7	103,842	59	1,088,540
NEVADA				
Juniper-Pinyon Woodland	8	268,000	45	1,564,740
Great Basin Sagebrush	7	103,842	38	847,326

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (5 hours) of major population centers: The South Pahroc Range WSA is within a five hour drive of the Las Vegas Standard Metropolitan Statistical Area (SMSA). Table 3 summarizes the number and acreage of designated areas and other BLM study areas within one day's drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: Designation of Forest Service wilderness in 1989 in Nevada, created a wide distribution of designated wilderness areas within the state. Designation the South Pahroc Range WSA would enhance to the geographic distribution of areas within the NWPS In Nevada and nationally, although not significantly. However, wilderness values inherent In the South Pahroc Range, in southeastern portion of Nevada, near rapidly expanding urban area, would provide the public a diverse and varied wilderness opportunity in relative close proximity to Las Vegas, and justifies addition of the WSA to the National Wilderness Preservation System.

Manageability (The area must be capable of being effectively managed to preserve its wilderness character).

The 28,395 acres recommended for wilderness designation can reasonably be managed as wilderness to preserve values now present in the area. The ruggedness of the terrain makes it inaccessible to motorized vehicles. No mining claims exist within this area. Oil and gas leases extend into a small part of the western WSA; a low resource potential for oil and gas has been identified in this region and development of these leases is not anticipated to occur.

The 205 acres in the northeast corner of the WSA not recommended for wilderness designation are judged not to be as easily managed for wilderness. The upland portions of this area are encumbered by pre-FLPMA mining claims which are projected to be developed as an extension of an operating perlite mine. The eastern fringes of this corner of the WSA are bajadas which would permit vehicular access to limited areas.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated using the U.S. Geological Survey and the Bureau of Mines mineral and energy assessment for the South Pahroc Range WSA in completed 1988.(USGS Bulletin-1729A).

The northeast portion of the WSA contains an identified, subeconomic perlite resource of about 6 million tons. Three perlite placer claims lie partly within the study area. A localized area along the southeastern border of the WSA contains anomalous concentrations of gold, arsenic, and antimony and has moderate mineral resource potential for disseminated gold. It is not anticipated that this resource will be developed.

There is a low resource potential for oil and gas and no potential for geothermal energy resources in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness
Wilderness Resources	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 28,395 acres recommended for wilderness designation. These values would be reduced or lost on 30 of 205 acres not designated.	Wilderness values of naturalness and outstanding opportunities for solitude primitive and unconfined recreation would be retained on 28,600 acres recommended for wilderness designation.	Wilderness values of naturalness and outstanding opportunities for solitude primitive and unconfined recreation would be retained on eighty percent (22,880 acres) of the WSA.
Development of Mineral Resources	Perlite mining would continue on deposits north of the existing mine but potential deposits to the south could not be explored or exploited.	Perlite mining would continue on deposits north of the existing mine but potential deposits to the south could not be explored or exploited.	Perlite mining would continue on deposits north of the existing mine but potential deposits to the south could not be explored or exploited.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Certain comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

During formal public review of the draft EIS, a total of 157 comments specifically addressing this WSA were received. Of those, 157 were written and 3 were oral statements received at the two public hearings on the EIS. In general, 54 commentators supported more wilderness than the proposed action, 100 commentators supported the proposed action and three commentators supported less wilderness than the proposed action.

Most comments which specifically mentioned the South Pahroc Range WSA touched on high wilderness values (naturalness, outstanding opportunities for solitude and primitive recreation), high scenic values (rugged rocky terrain, deep canyon topography and dense forest vegetation and the lack of conflicts with other resource uses. Comments opposing wilderness centered around conflicts with mineral potential of the WSA.

County: No comments were received from county agencies or officials.

State: The Governor of Nevada, in his consistency letter dated September 17, 1985, supported the Bureau's Preferred Alternative. The Nevada Department of Wildlife expressed concerns that wilderness designation could hinder the reintroduction of bighorn sheep and the development of water sources. If these problems could be resolved, this agency would support the Preferred Alternative.

Federal: The U.S. Bureau of Mines suggested a boundary change along the east side of the study area to exclude the tuff unit containing perlite potential.

CLOVER MOUNTAINS WILDERNESS STUDY AREA

1. THE STUDY AREA - 84,935 acres

The Clover Mountains WSA (NV-050-139) is located in southern Lincoln County, Nevada, approximately twelve miles south of Caliente, Nevada, in the western Clover Mountains. The WSA contains 84,935 acres of BLM land with no split estate lands or private inholdings (Table 1).

Along the southwest side, from the intersection of Pennsylvania Canyon and Meadow Valley Wash southerly, the boundary is formed by the Union Pacific Railroad tracks or the adjoining access road, whichever is more easterly, except for a tract of private land. At the private land, the boundary is formed by a combination of the private land and the access road. The southern boundary is formed by extending a line easterly from the midline of Section 3, T.8S., R.67E., approximately along a ridgeline, to the approximate center of Section 4, T.8S., R.68E., at map elevation 4,671'. From there the line extends southeasterly, point to point, to the northern slopes of Garden Mountain, thence northerly and easterly across the lower slopes of the Clover Mountains, point to point, to a point about one mile north of Sam's Camp Well. The boundary goes generally northerly and easterly to join the jeep road at East Setting Spring and follows the road up Quaking Aspen Canyon to its junction with the East Pass Road. At this junction, it turns west for some three miles, then forms a broad arc, northwesterly to north, roughly approximating the ridgelines between Sheep and Stokes Flats to the east and the Cottonwood Creek drainage to the west, to a peak mapped as 6,112' adjacent to Stokes Flat. Going point to point from there it extends northerly and westerly through peaks 6,289, 6,192 and 6,445, joining an unnamed jeep trail at its intersection with the range line between R.67 and R.68E and following the trail west to its juncture with the Ella Mountain Road, east-southeast of Ella Mountain Lookout. The ridgeline between Pine Creek and Pennsylvania Canyon is followed south to Peak 6,457' where a canyon bottom is followed, leading to the southwest from the peak, and eventually west to Pennsylvania Canyon. The road in Pennsylvania Canyon is followed, south to the intersection with the access road along the railroad in Meadow Valley Wash. From there south to the point of origin at the north boundary of the private lands, it follows the access road.

The WSA consists of deep, rough canyons and broad ridges hewn from colorful volcanic rocks. Elevations range from 3,000' to 7,790'. The area is a transition zone from the coniferous montane region of the north and east, to the searing Tule Desert on its south. Vegetation ranges from ponderosa and pinyon pines at the upper end of Pine Creek to low desert cactus, yuccas and brush at the lower end of Cottonwood Creek. Pine and Cottonwood Creeks form the only flowing stream system within the Resource Area's WSAs.

The WSA was studied under Section 603 of the Federal Land Policy Management Act of 1976 (FLPMA), and was included in the Caliente Wilderness Recommendations Environmental Impact Statement (EIS) filed June 9, 1989. Five alternatives were analyzed in the EIS: an all wilderness alternative, a no wilderness alternative and three partial wilderness alternatives - 1) wilderness accent where 86,020 acres would be designated as wilderness (includes 1,115 additional acres) and 30 acres released for uses other than wilderness, 2) resource development where 53,090 acres would be designated and 31,845 released for other use and 3) the preferred alternative[5] where 84,875 acres would be designated and 60 acres released for other uses.

2. RECOMMENDATION AND RATIONALE - 84,875 acres recommended for wilderness
60 acres recommended for nonwilderness

The recommendation for this WSA is to designate 84,875 acres as wilderness and to release 60 acres for

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[5]Minor acreage recalculations after the Final EIS to clear up boundary problems.

uses other than wilderness (Map 1). The wilderness accent alternative is considered to be the environmentally preferable alternative as it would result in the least change to the natural environment and would preserve most of the watershed of Cottonwood Creek over the long term. Wilderness designation is recommended for 84,875 acres of public land within the Clover Mountains WSA because the area is natural and provides outstanding opportunities for both solitude and primitive and unconfined recreation.

The recommendation of this report, which differs slightly from the FEIS preferred alternative of 84,135 acres recommended for wilderness, is a partial wilderness alternative and would be implemented in a manner to minimize or avoid adverse environmental effects in the designated area and reduce conflicts with other resource values present. In the preferred alternative analyzed in the FEIS, the bulk of the 770 acres not recommended for wilderness designation were adjacent to the Pennsylvania Mining District and were heavily encumbered by mining claims. Although geochemical analysis did not bear out the claimants optimism, the potential manageability problems attendant in these claims, in concert with the relatively lower wilderness values, were resolved by excluding this area from the wilderness recommendation. Subsequent records checks showed that these claims no longer exist and therefore, an additional 710 acres are now recommended for wilderness.

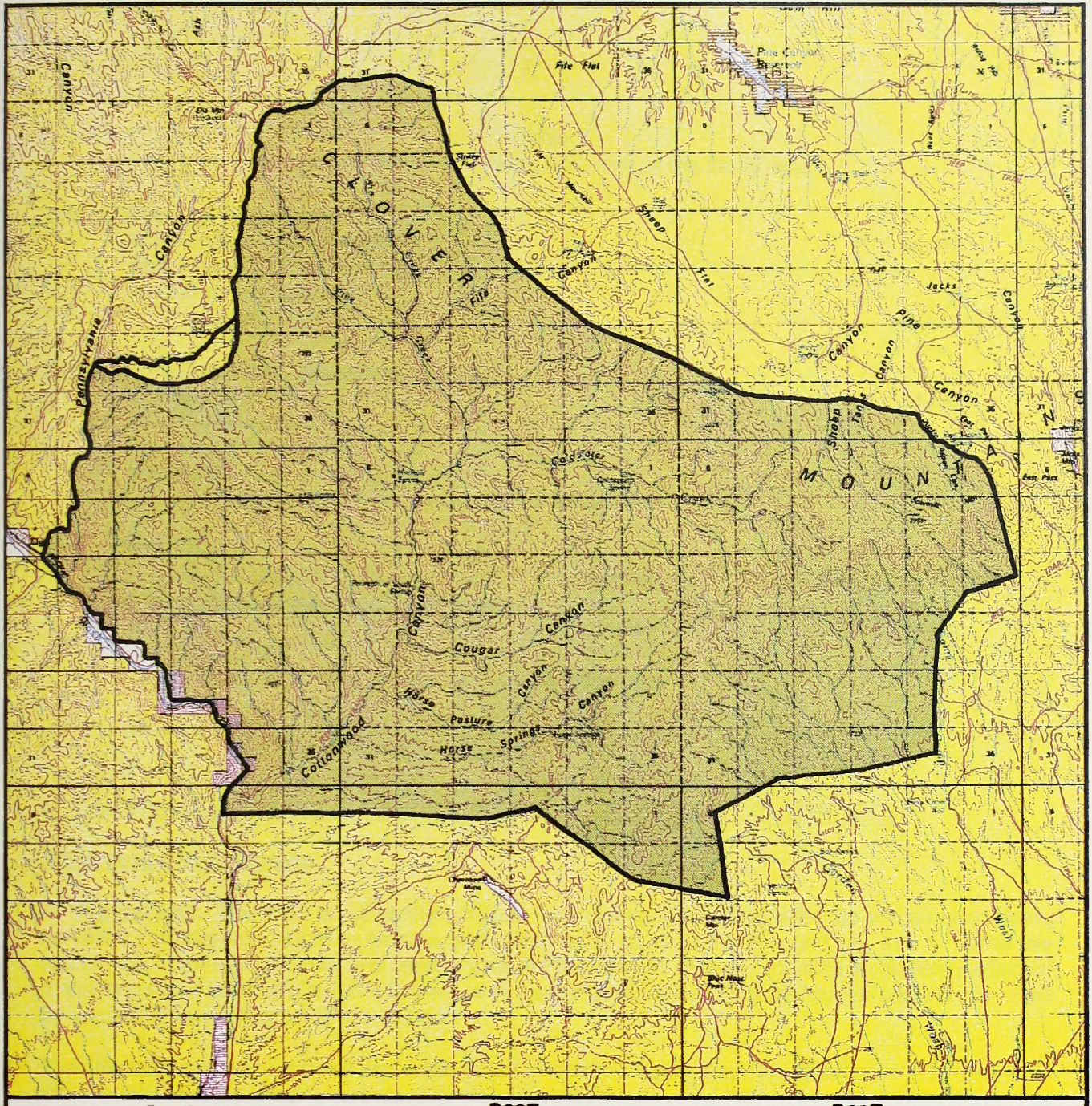
The interior of the unit contains the highest wilderness values. It is a land of rolling hills, ranging into rugged peaks with jagged outcrops, steep cliff faces,rounded massive outcrops of rhyolite, twisting canyons and live perennial waters. Multi-hued rocks pique visual interest. Vegetation ranges from desert shrubs and cacti in the lower elevations, through pinyon-juniper stands to ponderosa pine and quaking aspen in the upper reaches. Outstanding primitive recreation and solitude opportunities abound. Activities include excellent day-hiking, backpacking, climbing and scrambling, nature study, photography, hunting, and horseback riding. On the ground, numerous cultural resource sites provide an attraction while skies host several species of raptors, including the endangered peregrine falcon.

The area is readily manageable over the long term as wilderness due to its steep bordering terrain and limited number of entry points for vehicles. Some ORV use is evident along the old way in Cottonwood Creek but the presence of the railroad physically controls most of this at the canyon mouth and periodic flooding is reclaiming the wash. The area could be expanded, to provide a more logical and easily identified boundary, by extending the boundary on the northeastern side in the Fife Canyon vicinity and on the northwestern side, to coincide with the watershed divide in both instances. This would greatly enhance manageability of the Cottonwood Creek area.

Two mining districts lie outside and near the WSA boundary on the northwest and south. Although both had rather limited production, their presence has sparked speculation that similar deposits may be concealed under the thick volcanic cover of the WSA. Claims exist only in a small area on the WSA's western edge. In addition to the previously discussed abandoned claims on the WSA's northwestern side, a large block of molybdenum claims held by a major company was abandoned in the south-central portion of the unit. Available data indicate no marketable mineral deposits are present. The U.S. Geological Survey Bulletin 1729-D identifies two areas, one in the northern tip and one in the Coldwater Creek drainage as having moderate potential for molybdenum. Much of the southern portion of the area has low potential for gold, silver, zeolite, oil and gas. Scattered sand, stone, and gravel resources exist with the most readily accessible sites along Meadow Valley Wash and in lower Cottonwood Creek. Due to remoteness, they are of local interest only.

Conflicts with other resources in the area recommended for wilderness are virtually nonexistent. Grazing use will be allowed to continue.

The portion of the WSA not recommended for wilderness, approximately 60 acres, is adjacent to mining activity and is the remainder left from the larger original nonwilderness 770 acre area.



RECOMMENDED FOR WILDERNESS -

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

0 1 2 3 4 5

MILES

Clover Mtns. Proposal

NV-050-139
February 1990

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	84,819
Split Estate (BLM surface only)	113
Inholdings (state, private)	0
Total	84,935
Within the Recommended Wilderness Boundary	
BLM (within WSA)	84,759
BLM (outside WSA)	0
Split Estate (within WSA)	113
Split Estate (outside WSA)	0
Total BLM Land Recommended for Wilderness	84,875
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	60
Split Estate	0
Total BLM Land Not Recommended Wilderness	60
Inholdings	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: This WSA is substantially natural with minor and localized evidence of man. An historic homesite in Cottonwood Canyon remains along with traces of the flood damaged way into it. Cattle use has broken down stream banks and created trails in Pine and Ash Creeks. The area immediately adjacent to the Pennsylvania Mining District is influenced by moderate activity in the district but the effect is minimized by vegetative and topographic screening.

The area adjacent to the railroad and access road in Meadow Valley Wash is subjected to influences from these features but the effect is minimized by the steep cliffy terrain of the WSA in Meadow Valley Wash. The remainder of the WSA is unaffected by human imprints.

The large drainages included within the unit are very much isolated from external human influences. On the east, extensive heavy stands of pinyon-juniper and incised terrain provide an extremely natural aspect. The remainder of the WSA, on its northwestern side and not recommended for wilderness, is not impacted by man.

B. Solitude: Opportunities for solitude are outstanding within this WSA. Its large size, lack of narrow protrusions, topographic relief and vegetation all contribute to its solitude. The sharp relief from Meadow Valley Wash eastward into the unit isolates it from the Wash and activities there. In the interior, narrow twisting canyons, cliffs, rock outcrops, peaks, ridges and saddles provide excellent separation within the unit. On the lower region, topographic expression is less but still provides about fifty percent topographic screening.

Vegetation is moderate to heavy over much of the unit except in the lower south facing slopes. Screening due to vegetation is strong nearly everywhere except in the lower areas.

Secluded spots are easily located almost anywhere in the unit and solitude is rated as outstanding.

C. **Primitive and Unconfined Recreation:** Primitive and unconfined recreation opportunities are outstanding due both to the quality and variety of the activities. Day-hiking, backpacking, climbing and scrambling, nature study, photography and horseback riding are all outstanding. Hunting for mule deer is good. The varied topography, vegetation and features create numerous routes, trip lengths and challenges.

D. **Special Features:**

Geological - Clover Mountains WSA straddles the edge of an ancient major volcanic center which formed the Caliente cauldron complex. The inferred boundary of a caldera which is part of this complex crosses the WSA from east to west. It features brightly hued tuff beds in the northern sectors of the WSA and is of academic interest as well.

Botanical - A rare stand of quaking aspen occurs at Quaking Aspen Spring and riparian vegetation consisting, in part, of willows and cottonwoods occurs along the perennial streams. In the upper reaches of the WSA are virgin stands of ponderosa pine along the perennial streams which, like aspen, are rare in this district. The Pine-Ash-Cottonwood Creek complex comprises perhaps, the longest unroaded flowing stream in southern Nevada.

Cultural - Cultural surveys are minimal but the area is considered sensitive. Known sites buttress the potential created by year-round water and extensive pinyon stands. An historic cabin and associated structures in Cottonwood Creek have not been studied but are of interest and may be of archeological value.

Zoological - Numerous raptor species inhabit the area including the endangered peregrine falcon. Others present are prairie falcons and golden eagles.

Diversity in the National Wilderness Preservation System

A. **Assessing the diversity of natural systems and features as represented by ecosystems:** Wilderness designation of the Clover Mountains WSA would add a diverse system of ecosystems to the ecosystems represented in the National Wilderness Preservation System. Bailey-Kuchler identifies only two major ecosystems present within the Clover Mountains, Great Basin sagebrush, approximately 21,234 acres and Juniper-Pinyon Woodland, approximately 63,701 acres. Not identified within the Bailey-Kuchler ecosystems data is the diverse intertwining of virgin western ponderosa pine forests along the drainages and perennial streams, and the complex pattern of ecotones created. Although the ecosystems identified are moderately represented in the nation and Nevada, the unusual mix of ecosystems and the diversity of the area warrants adding this area to the NWPS. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas Areas	NWPS Areas Acres	Other BLM Studies Areas	Other BLM Studies Acres
NATION WIDE				
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	59	1,088,540
Juniper-Pinyon Woodland	13	362,556	77	2,250,026
NEVADA				
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	38	847,326
Juniper-Pinyon Woodland	8	268,000	45	1,564,740

B. 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 one major population center. Las Vegas, with a population expected to exceed 1 million before the end of the century, is approximately 130 miles south of the Clover Mountains WSA. Table 3 summarizes the number and acreage of designated and other BLM study areas within five hours drive of Las Vegas.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

	NWPS Areas Areas	NWPS Areas Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: Designation of Forest Service wilderness in 1989 in Nevada, created a wide distribution of designated wilderness areas within the state. Designation the Clover Mountains WSA would enhance to the geographic distribution of areas within the National Wilderness Preservation System in Nevada and nationally, although not significantly. However, wilderness values inherent in the Clover Mountains WSA, in southeastern portion of Nevada, near rapidly expanding urban area, would provide the public a diverse and varied wilderness opportunity in relative close proximity to Las Vegas, and justifies addition of the Clover Mountains WSA to the National Wilderness Preservation System.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character)

The entire WSA and additional areas to complete the watershed are eminently manageable as wilderness for the long term. The area is a solid block of federal land with no inholdings or rights-of-way. No mining claims are present. Some ORVs occasionally penetrate part way up Cottonwood Canyon and thereby gain access to the canyon as well as the southern portion of the WSA, but the railroad tracks preclude all but the most determined from reaching the canyon's mouth. Control is possible for nearly all ORV penetration because of the terrain and vegetation which preclude off-road travel except for some portions of the southern end. All of the area was leased post-FLPMA for oil and gas, but no activity, even seismic data gathering, has taken place and the leases have been terminated.

A limited portion of the area adjacent to the Pennsylvania Mining district may be a little more difficult to manage due to activity on the district, flatter terrain, and because of the proximity of access roads.

Energy and Mineral Resource Values

The U.S. Geological Survey/Bureau of Mines mineral assessment (U.S. Geological Survey Bulletin 1729-D, 1988) has been completed. Minerals were assessed in the EIS using available data, including the G-E-M report. The USGS/BM report corroborates the analysis used in the EIS. According to it there are no identified mineral resources inside the WSA. Two parts of the WSA have moderate potential for molybdenum. A large portion of the southern part of the WSA area has low mineral resource potential for gold, silver, oil, gas and zeolite mineral resources. A small area outside of and adjacent to the western boundary of the WSA has low potential for gold and silver. Stone, sand and gravel along the Meadow Valley Wash portion of the WSA would have a limited market for use on the railroad and the accompanying access road. The WSA is open to mining location. There are no oil and gas leases in the WSA as of March 10, 1989 and the area will remain closed to leasing until the wilderness status is determined. The mining claims located in the northwestern corner of the WSA and for which the boundary of the area recommended for wilderness was adjusted, have been determined "void by law" due to lack of assessment work. Mining claims have been filed on the far western side of the WSA in 1986 and 1987 and assessment work was filed September 21, 1988. As of March 10, 1989, there were no other mining claims within the WSA.

Local Social and Economic Considerations

The socio-economic environment for Lincoln County was discussed in detail in the "Caliente Draft Wilderness Environmental Impact Statement-1984". This analysis identifies that no significant alteration in the regional economy will result from wilderness designation. Grazing is the only present economic use of the WSA and it will continue. Lincoln County's share of oil and gas leasing revenues derived from the WSA has ceased due to the dropping of leases by companies. With designation, it is likely that visitation will increase and, concomitantly, so will sales activity and sales tax receipts which will probably replace the leasing receipts.

Impacts on Resources

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for all of the alternatives considered, including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issues Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness	Alternative A Resource Development	Alternative B More Wilderness
Wilderness Resources	Wilderness values of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation would be retained on 84,875 acres recommended for wilderness designation. Nearly the entire watershed of a perennial stream is within the area recommended for designation. Wilderness values would be foregone on approximately 60 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation would be retained on 84,935 acres recommended for wilderness designation. Much of the entire watershed of the perennial stream is included. In spite of exploration for minerals, wilderness values would be retained on the area not recommended for designation.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation would be retained over most of the study area. Some reduction of the values would occur along the southern, southeastern and northwestern edges and in lower Cottonwood Creek. These values would be lost on 5,700 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation would be retained over 53,000 acres recommended for wilderness designation. These values would be reduced along the southern, southeastern and northwestern edges and lost on 3,200 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and primitive and unconfined recreation would be retained on 86,020 acres recommended for wilderness designation. These values would be lost on 30 acres in the northwest.
Development of Mineral Resources	Exploration on claims prior to designation would occur but valid discoveries are not anticipated. A minor market for sand and gravel would be met.	Exploration on claims prior to designation would occur but valid discoveries are not anticipated. A minor market for sand and gravel would be satisfied nearby.	Exploration on claims would occur but development is not anticipated. Sand and gravel would be produced along Meadow Valley Wash.	Exploration on mining claims would occur but development is not anticipated. Sand and gravel would be produced along Meadow Valley Wash.	Exploration on claims prior to designation would occur but valid discoveries are not anticipated. A minor market for sand and gravel would be satisfied nearby.
Motorized Recreational Vehicle Use	Current motorized recreational use of 10 visits annually would be displaced. Primitive recreational use would rise to 625 visits annually.	Current motorized recreational use of 35 visits annually would be displaced. Primitive recreational use would rise to 625 visits annually.	Current motorized recreational use would rise to 110 visits annually would be displaced. Primitive use will rise to 200 visits annually.	Current motorized recreational use of 35 visits annually would be displaced. Primitive recreational use would rise to 625 visits annually.	Current motorized recreational use of 35 visits annually would be displaced. Primitive recreational use would rise to 700 visits annually.
Deer Production	Natural fire may increase habitat productivity but, habitat manipulation opportunities would be limited.	Natural fire may increase habitat productivity but, habitat manipulation opportunities would be limited.	Deer populations would increase by 10 percent.	Deer populations would increase by 10 percent.	Natural fire may increase habitat productivity but, habitat manipulation opportunities would be limited.
Water Quality	Major effect on water quality would continue to be livestock and wildhorse grazing. All of Cottonwood Creek watershed, except 5,185 acres, would be within designated wilderness.	Major effect on water quality would continue to be livestock and wildhorse grazing. All of Cottonwood Creek watershed, except 4,475 acres, would be within designated wilderness.	Major effect on water quality would continue to be livestock and wildhorse grazing. All of Cottonwood Creek watershed would remain open to surface disturbance such as mineral exploration.	Major effect on water quality would continue to be livestock and wildhorse grazing. Included in the designated wilderness area would be 53,090 acres. Excluded are 31,845 acres, which would remain open to surface disturbance such as mineral exploration.	Major effect on water quality would continue to be livestock and wildhorse grazing. All of Cottonwood Creek watershed would be protected within the designated wilderness area, except for 3,330 acres in the Fife Spring area.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process starting with the inventory stage. Appropriate comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

Public meetings and hearings were held in association with the study phase and draft environmental impact statement for the WSAs located within Lincoln County and partially within Clark County. The meetings were a combination open house and scoping meeting and were held in Caliente and Las Vegas, Nevada. Formal public hearings were held in Las Vegas and in Caliente, Nevada for the draft EIS.

During the inventory phase, fifteen comments were received on the WSA, seven favorable to WSA status, two opposed and six offered information or boundary suggestions without specifically identifying a position regarding further study status. Those in favor noted vegetational diversity, water, rock formations, canyons and outstanding solitude. Those opposed noted oil and gas potential. One respondent noted the presence of sub-commercial fluorspar deposits south of the southern boundary and suggested careful study of this potential. A large mining company noted that it filed 147 mining claims in July, 1980, intended to evaluate them in 1981 and would appreciate notification regarding any changes in status of the area. Two other mining companies requested minor boundary adjustments while another noted an intrusion (road). One individual requested that the entire Cottonwood drainage be included in the WSA. An environmental group advised generally moving the boundaries out to ridgelines.

During the Issue Identification and Scoping process, the only specific comment received was that the Resource Development alternative was preferable and that it should also include the headwater areas of Horse Springs and Cougar Creeks. The grazing allotment holder had several questions regarding the potential effect of designation on his operation, but no specific comment.

During formal public review of the draft EIS, a total of 156 written and 5 oral comments specifically addressing this WSA were received. In general, 151 individuals who commented supported more wilderness designation than the preferred alternative, 3 supported the preferred alternative and 7 supported less.

Most comments which specifically mentioned the WSA and supported wilderness designation touch on exceptionally high wilderness values (outstanding opportunities for solitude and primitive recreation), important wildlife habitat, cultural resource values, significant vegetation, colorful rocks, open basins, narrow canyons and the rare opportunity to preserve all, or nearly all, of a flowing desert stream system. Comments opposing wilderness centered around speculative mineral resource potential and potential impacts to energy and mineral exploration and development.The U.S. Bureau of Mines recommended, in responding to the DEIS, that the border be drawn inward between a mile and three miles along the WSA's western and southwestern boundaries to exclude areas of postulated mineral resources. The Air Force proposed to locate a small electronic package in or near the eastern portion of this WSA. This system has been since accommodated outside of WSAs. The EPA noted that the Environmental Consequences chapter should address the water quality impacts for protection of sensitive areas of the Clover Mountain WSA stream.

The State opposed wilderness designation on the basis of its feeling that mineral values were higher than indicated in the DEIS and in the draft FEIS and that management of important mule deer habitat would be precluded by wilderness designation.

MEADOW VALLEY RANGE WILDERNESS STUDY AREA

1. THE STUDY AREA - 185,744 acres

The Meadow Valley Range Wilderness Study Area (WSA), NV-050-156, is located in Lincoln County except for approximately two miles of the southernmost end located in Clark County. The south end of the WSA is about fifty-five miles northeast of Las Vegas. The WSA contains approximately 185,744 acres of public lands administered by the Bureau of Land Management with no split estate or private or state inholdings.

The eastern WSA boundary is the Union Pacific Railroad right-of-way, private lands, west edge of the County road or the centerline of the stream in the Meadow Valley Wash. This wash is also the western boundary of the Mormon Mountains WSA (NV-050-131). Along the north side of the Meadow Valley Range WSA, the boundary follows a jeep trail to Avertt Reservoir, then cross-country to another jeep trail on the northwestern-tip. The west boundary is a series of peak to peak lines and ridges along the base of the mountains until it comes to the Aerojet lands where it shares a common border. The southern boundary cuts cross-country until it reaches Dead Man's Wash, thence up this drainage, across its divide into Farrier Wash which it follows to its intersection with Meadow Valley Wash.

The Meadow Valley Range WSA is boomerang-shaped, measuring about eight to twelve miles east to west, and arching about thirty-four miles from north to south. It consists of three major landforms. The main feature is the long arcuate ridgeline of the Meadow Valley Mountains which lies along the west side of the unit. The ridge falls steeply off on the west side and more gently on the east. The second feature is a very large bajada which begins high on the flanks of the main ridge and slopes easterly towards Meadow Valley Wash, terminating in bluffs where Meadow Valley Wash has downcut. Most of its drainages end in normally dry falls, while a few have cut a more even gradient through the bluffs. A third landform, lying about four to five miles in from the southeastern corner, is the Bunker Hills. This is an area of moderate relief punctuating the southern section of the central bajada. In the northeast, the Vigo Canyon drainage is another lightly incised bajada terrain. Vegetation consists of low desert shrub with the exception of the northern section of the Meadow Valley Mountains, which is pinyon and juniper forest.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Caliente Final Wilderness Environmental Impact Statement (EIS). The Final Wilderness EIS was filed in March 1989. Three alternatives were analyzed for the Meadow Valley Range WSA in the EIS: a Partial Wilderness alternative which is the recommendation in this report, an All Wilderness alternative and a No Wilderness alternative.

2. RECOMMENDATION AND RATIONALE - 97,180 acres recommended for wilderness
88,564 acres recommended for nonwilderness

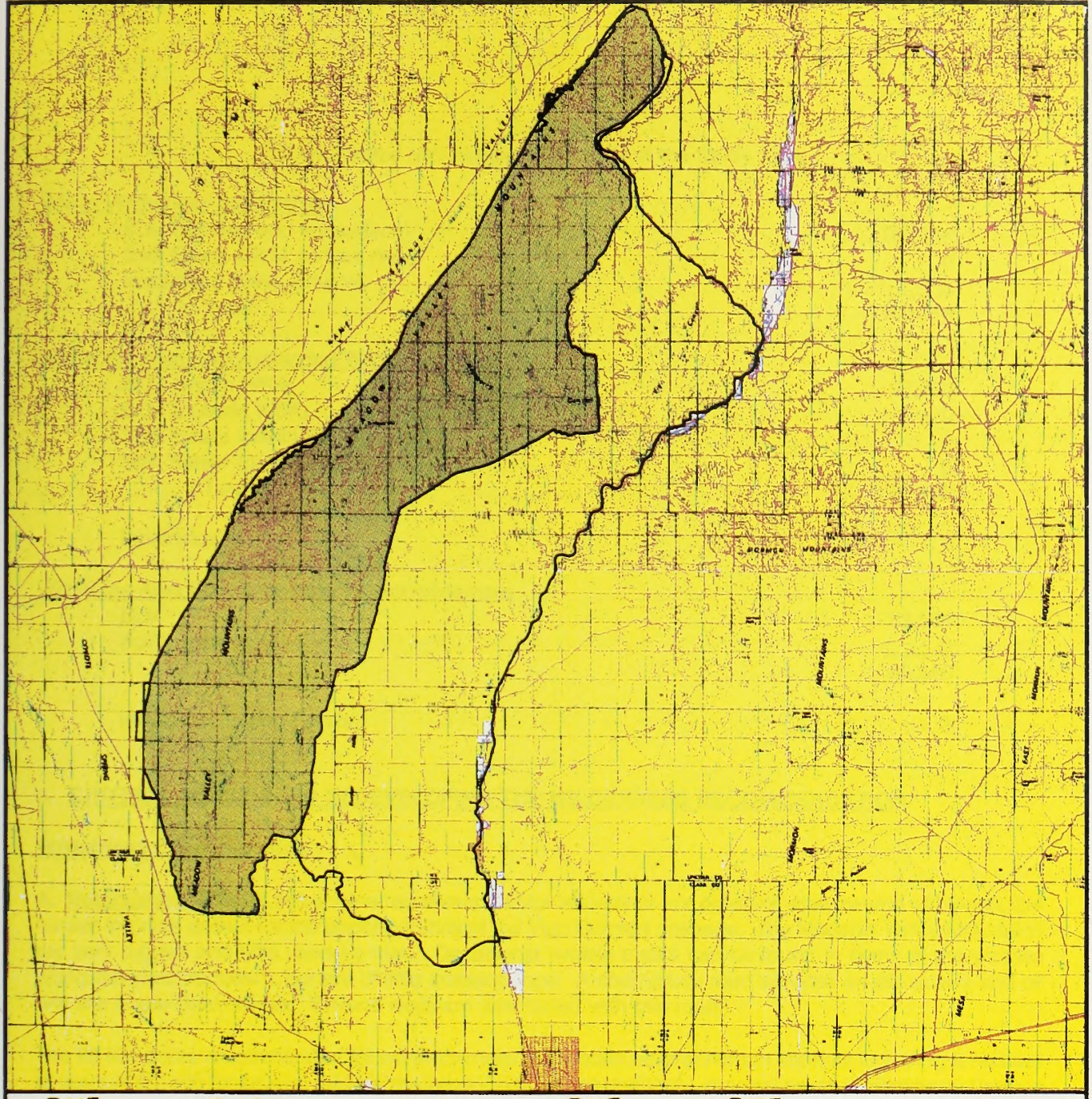
The recommendation for this WSA is to designate approximately 97,180 acres as wilderness and release approximately 88,564 acres for uses other than wilderness (Map 1). The All Wilderness alternative is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The Partial Wilderness alternative, the recommendation of this report, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The 97,180 acre area recommended for wilderness designation is natural, provides outstanding opportunities for both solitude and primitive and unconfined recreation, and provides better protection for solitude-dependent wildlife. The wilderness integrity of this area can be retained with minimal management because of the extremely rugged topography. Approximately thirty-four miles of jumbled, remote and extremely varied ridges stretch from one end of this area to the other precluding vehicular access. As a result, the area has remained very natural. Because of the area's size and precipitous topography along the western edge, solitude is outstanding. Steep cliffs, jagged peaks and hidden narrow canyons provide interesting places to explore. Conical buff-based Sunflower Mountain sits astride the main ridgeline, a visual focal point from great distances. The northernmost part of the area is forested with pinyon and juniper trees providing relief from continuous low desert shrub vegetation. This portion of the area also contains an attractive natural arch. Outstanding photographic opportunities exist, with grand vistas and animals such as bighorn sheep. Day-hiking, backpacking and hunting are good. Wilderness designation for this area would provide long-term protection for bighorn sheep and other solitude-dependent wildlife.

Mining claims do exist just inside the western boundary of this area and in the northern toe. However, it is unlikely that these few claims would have development or production.

The 88,564 acres recommended for uses other than wilderness comprise the east half of the WSA generally below the 3,200 foot contour and the northeastern shoulder of the unit. This acreage is not recommended for wilderness in order to reduce some of the resource conflicts presently occurring and projected to occur within the WSA. This area also offers less than quality wilderness values of solitude and primitive recreational opportunities.

These lands generally exhibit lower topographic diversity and lesser wilderness values. The southeastern end is an area of the nondescript low hills, susceptible to ORV use. North of this area are the Bunker Hills, an area of moderate and outstanding disturbance at its terminus. Ways associated with this road where it crosses the bajada, portend future ORV manageability problem. North of the Bunker Hills is a large bajada stretching two-thirds of the length of the WSA nearly to Hackberry Canyon. Wilderness values are mainly moderate and there is concern regarding ORV manageability should access be developed to this region. The lower end of Hackberry Canyon is not recommended for wilderness because it is readily accessible from Meadow Valley Wash and is frequently used by hunters and the grazing allotment permittee. Along the unit's northeastern corner, the area drained by Vigo Wash has generally low relief and low wilderness values. It is presently crossed by numerous ways and will be difficult to manage without heavy patrol.



RECOMMENDED FOR WILDERNESS

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

MILES

Meadow Valley Range Proposal

NV-050-156
February 1990

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	185,744
Split Estate (BLM surface only)	0
Inholdings (state, private)	0
Total	185,744
Within the Area Recommended Wilderness Boundary	
BLM (within WSA)	97,180
BLM (outside WSA)	0
Split Estate (within WSA)	0
Split Estate (outside WSA)	0
Total	97,180
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	88,564
Split Estate	0
Total	88,546
Inholdings (state, private)	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The 97,180 access recommended for wilderness are predominately natural with negligible human imprints except for the upper portions of the Vigo Canyon drainage. The Meadow Valley Mountains are very rugged and little used by man. Occasional vehicle tracks can be found in some of the washes along the west boundary, but are of little consequence. A cherrystem road services an old quarry and oil drill site in the Bunker Hills. Several ways are associated with this road.

The 88,564 acres recommended for nonwilderness do contain several human imprints including a number of ways which run for several miles in the large Vigo Canyon drainage. A corral exists in Hackberry Canyon and several quail guzzles are located near the western boundary of the WSA. This setting does not however, diminish the overall naturalness of the area.

B. Solitude: Within the area recommended for wilderness there are outstanding opportunities for solitude. The Meadow Valley Mountains are rugged and contain numerous small, narrow canyons, cliffs, peaks and rocky outcrops. Some solitude is obtainable in the Bunker Hills portions not recommended for wilderness but screening is limited due to low hills and shallow washes. On the central bajada (part of the recommended wilderness area) topographic relief and vegetation are limited, but its vastness contributes to the solitude. In Vigo and Hackberry Canyons, solitude can be readily obtained. Once out of Vigo Canyon and onto the lower relief lands of the upper drainage, solitude is more difficult to obtain because of the influence of boundary road and the many ways which cross it. In the toe, the narrowness allows a greater influence of outside sights and sounds to impinge on solitude, but vegetative screening is better which compensates somewhat.

Secluded spots are easily obtained in almost any portion of the recommended wilderness area and vistas of uninhabited, virtually empty space enhance the sense of solitude which is rated as outstanding.

C. Primitive and Undefined Recreation: The area recommended for wilderness offers outstanding opportunities for a primitive and unconfined recreation experience.

The long ridgeline offers numerous peaks, narrow canyons and passes. Sunflower Mountain is a focal point because its location, coloration, and texture contrast markedly with the surrounding terrain. Grapevine Spring on the west side also provides a destination for hikers on the way in or out of the WSA. On the east side, Hackberry and Vigo Canyons are good day-hiking areas.

Numerous loops and through routes are possible for backpackers. Routes mentioned for day-hiking could easily be expanded to longer trips.

Climbing and scrambling are available in most of the recommended wilderness area. Limited climbing opportunities are available as well.

There area excellent opportunities for photography of desert bajadas and grand vistas. Bighorn sheep are also present and may present photographic opportunities.

The WSA, is large and offers solitude and challenging hikes. It consequently has good opportunities for all types of primitive recreational usage.

D. Special Features:

Paleontological - Silicified wood logs and fragment have been found within the area.

Zoological - The WSA constitutes habitat for Golden eagles, peregrine falcon, prairie falcons and other raptors protected by the state. The northern spotted bat (classified "endangered" by the state) may also exist here. Bighorn sheep and deer populations also exist with the WSA.

Cultural - The WSA is considered archaeologically sensitive with expected site types being rocksheiters, open lithic and ceramic scatters and milling sites. Grapevine Spring, adjacent and external to the west boundary, contains a major prehistoric site complex with pictographs, bedrock manos and metates, and lithic and ceramic scatters.

The area not recommended for wilderness contains the most sensitive portion of the WSA within the segment paralleling Meadow Valley Wash. Major concentrations of petroglyphs, rockshelters, rock alignments, pueblo sites and aboriginal trail alignments are found near the perennial water course. Twelve historic sites are recorded here also, relating to early railroad and ranching efforts.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Meadow Valley Mountains WSA would add another system to the ecosystems represented in the National Wilderness Preservation System. Bailey-Kuchler identifies two major ecosystems present within the Meadow Valley mountains WSA, Intermountain sagebrush Province/Juniper-Pinyon Woodland (27,862 acres) and Intermountain Sagebrush Province/Great Basin sagebrush (102,159 acres). Although the ecosystems identified are moderately represented in the nation and Nevada, the unusual mix of ecosystems and the diversity of the area warrants adding this area to the NWPS. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	59	1,088,540
Juniper-Pinyon Woodland	13	362,556	77	2,250,026
	NEVADA			
Great Basin Sagebrush	7	103,842	38	847,326
Juniper-Pinyon Woodland	8	268,000	45	1,564,740

B. 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 one major population center. Las Vegas, with a population expected to exceed 1 million before the end of the century, is approximately 60 miles south of the Meadow Valley Mountains WSA. Table 3 summarizes the number and acreage of designated and other BLM study areas within five hours drive of Las Vegas.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	2,517,497

C. Balancing the geographic distribution of wilderness areas: Designation of Forest Service wilderness in 1989 in Nevada, created a wide distribution of designated wilderness areas within the state. Designation the Meadow Valley WSA would enhance to the geographic distribution of areas within the National Wilderness Preservation System in Nevada and nationally, although not significantly. However, wilderness values inherent in the Meadow Valley WSA, in southeastern portion of Nevada, near rapidly expanding urban area, would provide the public a diverse and varied wilderness opportunity in relative close proximity to Las Vegas, and justifies addition of the Meadow Valley Mountains WSA to the National Wilderness Preservation System.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The 97,180 acres of the WSA recommended for wilderness can reasonably be managed as wilderness to preserve values now present in the area. There is a small area of mining claims on the extreme western periphery of the WSA. These are physically isolated from the WSA proper by virtue of their being on the western escarpment. The area is a solid block of public land with no private inholdings, state lands or right-of-way. Although opportunities exist for ORV travel within the WSA, these opportunities are limited to the major drainage bottoms of the precipitous Wild Cat Wash and Vigo and Hackberry Canyons rocky terrain limits ORV travel in other parts of the WSA.

Energy and Mineral Resource Values

U.S. Geological Survey and Bureau of Mines prepared a mineral assessment for the 97,180 acres of the Meadow Valley WSA recommended for wilderness. The survey was conducted from 1983 through 1986. According to the report, U.S. Geological Survey Bulletin 1729-C, deposits of perlite crop out discontinuously at the base of volcanic slopes throughout the study area. Sand and gravel exist in significant quantities; consisting of alluvial deposits eroded from adjacent bedrock slopes.

Impacts on Resources

The comparative impact table (Table 4) on the next page summarizes the effects on pertinent resources for all of the alternatives considered, including designation or nondesignation of the entire study area as wilderness.

Local, Social Economic Consideration

The socio-economic environment for Lincoln County was discussed in detail in the "Callente Draft Wilderness Environmental Impact Statement-1984". This analysis basically identifies that no significant alteration in the regional economy will result from wilderness designation. Grazing is the only present economic use of the WSA and it will continue. Lincoln County's share of oil and gas leasing revenues derived from the WSA has ceased due to the dropping of leases by companies. With designation, it is likely that visitation will increase and, concomitantly, so will sales activity and sales tax receipts which will probably replace the leasing receipts.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness	Alternative A	Alternative B
Wilderness Resources	Wilderness Values of Naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 97,180 acres recommended as suitable. The area recommended as nonsuitable would lose those values on 62,800 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 138,444 acres. Much of the 17,300 acres of upper Vigo Canyon drainage would lose those values due to ORV use.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 72,844 acres. These values would be reduced or lost on 112,900 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 42,879 acres of the area recommended as nonsuitable. These values would be reduced or lost on 125,700 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 136,500 acres of the area recommended as suitable. These values would be reduced or lost on 19,244 acres recommended nonsuitable.
Development of Mineral Resources	Exploration may occur on claims in the southeast. No development is anticipated.	Exploration may occur on claims in the southeast prior to designation but valid discoveries are not anticipated.	Exploration may occur on claims in the southeast. No development is anticipated.	Exploration may occur on claims in the southeast. No development is anticipated.	Exploration may occur on claims in the southeast prior to designation but valid discoveries are not anticipated.
Motorized Recreational Vehicle Use	Motorized recreational use of 75 would be displaced. Use would reach 400 visits annually. Primitive recreational use would rise to 200.	Motorized use would decrease from 225 to 100 visits annually. Primitive recreational use would rise to 250 visits.	Motorized use would rise to 450 visits annually. Primitive recreational use would rise to 150 visits annually.	Motorized use would rise to 400 visits annually. Primitive recreational use would rise to 150 visits annually.	Motorized use would rise to 300 visits annually. Primitive recreational use would rise to 300 visits annually.
Livestock Grazing Management	Meeting wilderness management criteria would likely add an increment of effort and cost to one new reservoir project.	Two proposed reservoir projects would not be built.	There would be no impact.	There would be no impact.	Two proposed reservoir projects would not be built.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process starting with the inventory stage. Appropriate comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

Public meetings and hearings were held in association with the study phase and draft environmental impact statement for the WSAs located within Lincoln County and partially within Clark County. The meetings were a combination open house and scoping meeting and were held in Caliente and Las Vegas, Nevada. Formal public hearings were held in Las Vegas and in Caliente, Nevada for the draft EIS.

During formal public review of the draft EIS, a total of 153 comments specifically addressing this WSA were received. Of those, 150 were written and 3 were oral statements received at the public hearing on the draft EIS. In general 138 commentors supported wilderness designation for all or part of the WSA. Fourteen commentors supported less wilderness for the Meadow Valley Range WSA.

Most comments which specifically mentioned the WSA touch on high wilderness values (outstanding opportunities for solitude and primitive recreation). Comments opposing wilderness centered around the potential mineral resource values and potential mineral exploration development of the WSA.

County: Lincoln County did not respond. The Clark County Department of Comprehensive Planning concurred with the recommended wilderness designation contained within the preferred alternative in the Clark Draft EIS.

State: The Governor of Nevada in his consistency letter, dated December 28, 1984, supported the partial alternative with the livestock development of lower Hackberry Canyon left out.

Federal: The U.S. Bureau of Mines suggested a boundary change to exclude the mining claims on the unit's western boundary. The U.S. Air Force would like to place two electronic packages on the main ridgeline even if the area is designated as wilderness and would like to continue use of the region for low level supersonic training. The U.S. Environmental Protection Agency observed that the criteria for selecting suitable verses nonsuitable wilderness areas for selecting verses nonsuitable wilderness areas was unclear in the DEIS. The major reasons can be attributed to mineral resources, management of ORV traffic and aesthetics. EPA recommends a evaluation of the WSA in the proposed action because of the speculative nature of the units mineral resources and the filling that the ORV use can be somewhat managed. EPA also stated that larger areas should be included in the partial wilderness alternative which area considered manageable. This suggestion is based on the DEIS's description of the WSA's with regard to mineral resources as well as the areas that are not affected by manmade features. Finally EPA states that the FEIS should discuss the recovery of the areas mineral resources in greater detail.

MORMON MOUNTAINS WILDERNESS STUDY AREA

1. THE STUDY AREA - 162,887 acres

The Mormon Mountains wilderness study area (WSA), NV-050-161, is located approximately 75 miles northeast of Las Vegas, Nevada. The WSA contains the entire Mormon Mountains Range and is located in southeastern Lincoln County, Nevada, with a small portion of the WSA in northern Clark County. The study area consists of a rugged, jumbled, mountainous area made up of bajadas, deep canyons, and rugged escarpments. Elevations vary from 2,200 to 7,500 feet. The WSA contains 132,887 acres of public land with no private inholdings (Table 1).

The Mormon Mountains WSA is a large contiguous block of public land, surrounded on all sides by public land.

The study area configuration is generally rounded in shape, approximately 18 miles across on the east-west axis and approximately 30 miles across the north-south axis. The study unit is bound by the Carp-Elgin Road on the north and east; Meadow Valley Wash Road and Union Pacific Railroad on the west; and, a hunting access road/seismic "thumper" trail on the south. Several short roads on the east side of the WSA are cherrystemmed and two cherrystemmed roads extend into the heart of the WSA. One six mile cherrystemmed road leads to an area of fairly recent mineral interest on the west side of the study area. One way, in the bottom of an active wash, extends nearly 9 miles into the heart of the study area to a large wildlife water development. Another way, on the east side, extends several miles to a spring development for livestock use.

The area consists of rugged, jumbled, mountainous lands made up of bajadas, deep canyons, and rugged escarpments. Elevations vary from 2,200 to 7,500 feet. Limited access is achieved via the Meadow Valley Wash Road on the west and the Carp-Elgin road on the east. High cliffs and few points of ingress are available on the west side. The railroad right-of-way further limits accessibility from Meadow Valley Wash. The WSA contains 132,887 acres of public land with no private inholdings.

Mormon Mountain is a domical structure consisting of very rugged limestone peaks incised by deep canyons radiating from the peaks. Moapa Peak, on the south end of the WSA, is a striking landform feature with sheer cliffs on all sides making access to the top almost impossible with the exception of a hearty few with technical climbing expertise. Day-hiking, backpacking, rock climbing and scrambling, hunting, horseback riding and photographic opportunities are all outstanding. In addition, numerous caves, some with very unusual formations, provide outstanding spelunking opportunities.

Vegetation within the study area ranges from creosote and joshua trees on the bajadas to pinyon-juniper above 5,000 feet, to a small, relict, stand of ponderosa pine , isolated in a small area near Mormon Peak. Ridges and peaks provide outstanding vistas of the Tule Desert, Moapa Peak, Meadow Valley Range WSA, the Clover Mountains WSA and Meadow Valley Wash.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Final Caliente Wilderness Environmental Impact Statement (EIS) released in March 1989. There were four alternatives analyzed in the EIS: all wilderness; no wilderness; a partial wilderness alternative which is the recommendation of this report; and a second partial wilderness alternative in which 23,690 acres would be designated as wilderness and 139,197 acres released for uses other than wilderness.

2. RECOMMENDATION AND RATIONALE - 123,130 acres recommended for wilderness
39,757 acres recommended for nonwilderness

The recommendation for this WSA is to designate approximately 123,130 acres as wilderness and release 39,757 acres for uses other than wilderness (Map 1). The All Wilderness alternative is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The partial wilderness alternative, the recommendation of this report, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

BLM has carefully weighed existing and potential resources present in the WSA to develop the recommendation for the Mormon Mountain WSA. The configuration arrived at preserves areas of high wilderness and primitive recreation values while excluding large areas of bajadas which, although possessing wilderness and primitive recreation values, are not exceptional. At the same time, it also preserves substantial bajada areas which can be managed readily over the long term. The Bureau has been criticized for failing to recommend bajadas as suitable. These recommendations have occurred because bajadas are usually readily accessible to motor vehicles and have been impacted or are difficult to manage over the long term. The chief potential conflict within the area recommended for wilderness is between possible mineralization on one hand, and wilderness, wildlife, primitive recreation, scenic values and speleological resources on the other hand. Visitors to this area would have the opportunity to climb from the contrasting sere aspect of the Tule Desert, through increasingly abundant desert vegetation, to pines near the summits. A large population of bighorn sheep, mule deer and raptors provide wildlife observation opportunities. Caves and significant cultural resources comprise some of the more important special features present. These values are substantial and verifiable and best preserved through wilderness management.

BLM's conclusion, after carefully weighing the information is to recommend the majority of the WSA for wilderness designation. This is because the analysis showed some impact, but no significant impact to the mineral resource, which is highly speculative, and the presence is amply demonstrated of very popular, high quality primitive recreation and wilderness resources which are readily accessible to the Las Vegas metropolitan area via Interstate 15. Areas of mineral potential are common in northern and central Nevada but no significant commercial operations have been developed in the southern portion of the state. There is no indication that development of commercially viable minerals would occur here. Because of the configuration of the WSA and of the areas having potential mineralization, it would not be possible to separate the areas having potential mineralization and maintain suitable wilderness resources. For this, and the foregoing reasons, 123,130 areas are recommended for wilderness designation.

There are no mining claims nor any indications of substantive energy or mineral potential within the area recommended for wilderness. A small mine, long abandoned, is located at Whitmore on the south side of the WSA and a prospect is located on the north side. Occasional exploration has occurred on the southeastern side. Mining claims are filed at the prospect on the southwestern bajada. The bajada is not recommended for wilderness designation because of potential conflicts with mineral development of the claims, part of an active mine external to the study area, and difficulty of managing off-road vehicles in this area. Scattered claims are filed on the southeast quadrant.

The latest minerals data was incorporated in the recommendation for the Mormon Mountains WSA. Because of the radical change which occurred in the inferred mineral potential for the Mormon Mountains between the Bureau/Geological Survey Reconnaissance Geochemistry Report and USGS Bulletin 1729-B, very careful consideration was given to its data and findings. Attached is Appendix A which explains in greater detail, the classification system used in the DEIS and its relationship to other systems. This system, as noted in Appendix A, was updated with USGS Bulletins. Also attached to this report and necessary to its understanding, are the following tables and figures taken from the EIS: Tables 3-1 and 3-2, "Explanation of Mineral Groups Listed in Descending Order of Significance" and "Classification of Mineral Potential" (Appendices B and C respectively), and Table 4-1 "Threshold Level of Significant Impact", the impact matrix

used in the EIS (Appendix D).

In summary, no identified metallic mineral resources were found. An old mine and an old prospect were sampled and some anomalous values were found. Sampling elsewhere in the area produced some anomalous values indicating mineralized zones. The presence of favorable geologic environments and the evidence of resource formation for metallic minerals were demonstrated. Based upon the conjectured presence of intrusive bodies at depth which may have provided conduits for such fluids and upon the potential existence of appropriate host rocks, ore bodies may have formed. Whether or not this occurred or if it occurred, and if the deposits are sufficient in size, concentration and proximity to the surface to be exploitable cannot be determined with the present level of data.

Some areas are particularly abundant in invertebrate fossils. The WSA is extremely rich in cultural expressions and the entire WSA is highly sensitive. Among the hundreds of sites are rock-shelters, agave roasting pits, petroglyphs, pictographs, artifact scatters and rock alignments. Petroglyphs depicting Europeans on horseback are extremely interesting.

Visually, the WSA is spectacular. Taken alone, the ragged-topped dome flanked by Moapa Peak and the East Mormon Mountains, is extremely rewarding. Added to these beautiful crags are massive cliffs, some overhung, which accentuate the peaks. Colors range from cliffs slashed by purple-brown and gray bands to brownish-orange peaks and reddish outcrops. Spires, fins and egg-shaped peaks attract both eye and camera. Yuccas, agaves, Joshua trees, pinyon pine and a relic stand of ponderosa pine provide contrast and variety.

Public interest in the WSA is high due to relative ease of access to the Las Vegas metropolitan area from Interstate 15 and to its abundant resources. Climbs in the Mormon Mountains are featured in a Sierra Club guide. Concern was expressed over the limited size of the "Preferred Alternative" as given in the DEIS. Relative to the Mormon Mountains, 132 written and oral comments were received following public review of the DEIS. Of these, 156 supported more wilderness than the DEIS Preferred Alternative, while 4 supported the Preferred Alternative and 2 supported less than the Preferred Alternative.

Wilderness designation of the area recommended would enhance primitive recreational uses, particularly since the area is readily accessible from Interstate 15 and the size of the area, and diversity of landforms, ensure opportunities for solitude and unconfined recreation.

Good vegetative screening occurs above 5,000 feet, in the pinyon-juniper. Topographic screening in the Mormon Peek and Moapa Peak area is outstanding due to high cliffs, bold peaks, and numerous deep canyons and broad valleys. Secluded spots or locations are easily found and the sense of isolation and primitive values are readily apparent.

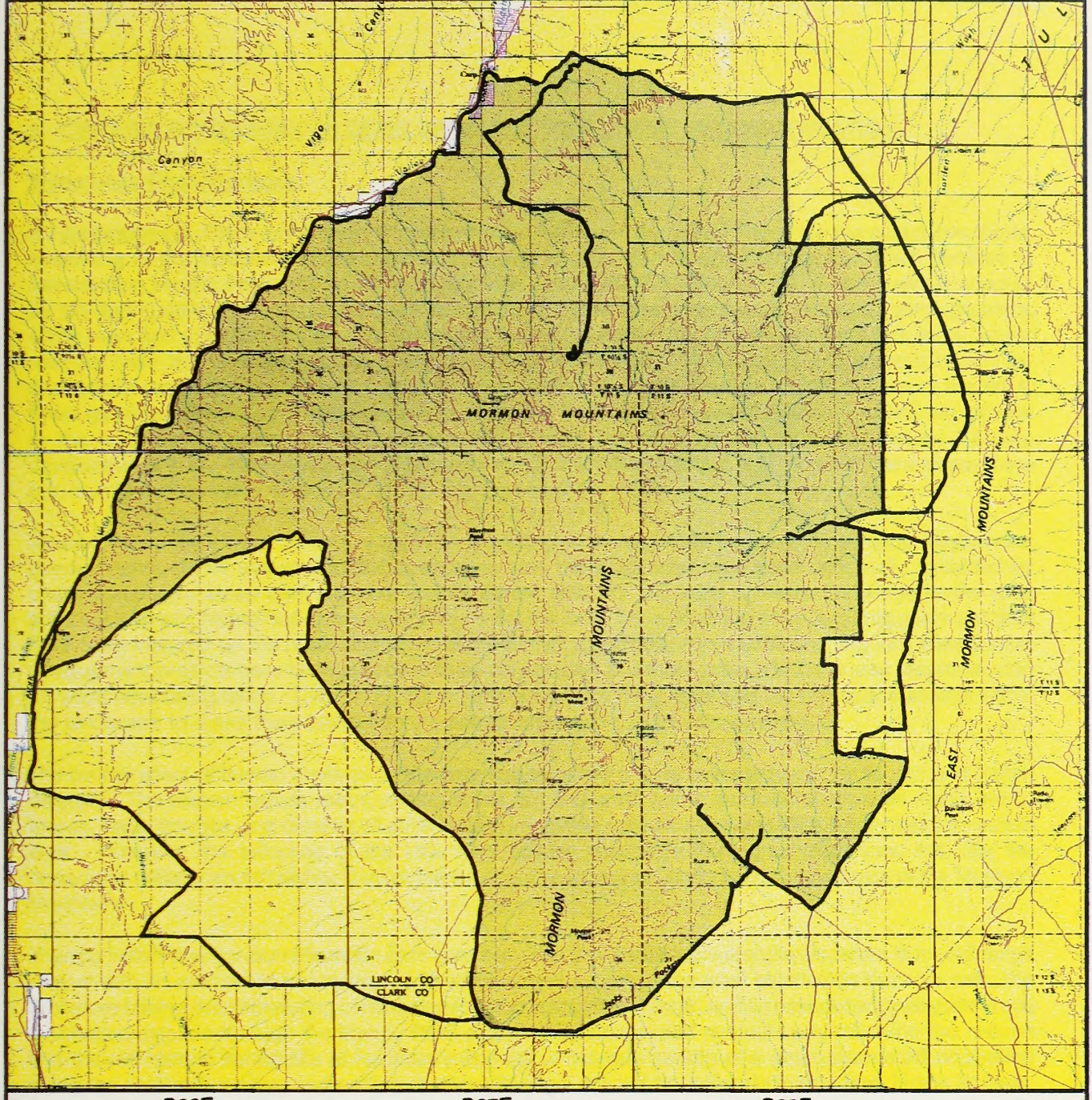
Much of the study area is unaffected by the affects of human use. Where the imprint of modern man is visible, the affects are isolated to a very small area or the passage of time has made the impacts nearly imperceptible.

Prehistoric occupation and use of the study area is clearly evident in the extensive cultural resources, including pictographs and dozens of roasting pits. Mormon Mountains has one of the highest concentrations of roasting pits in southern Nevada.

Removal of the southwestern bajada from the lands preliminarily recommended for wilderness designation resolves potential manageability problems with regard to the large block of mining claims located on a portion of it and with ORV access from two long ways which traverse it. Boundaries, for the portion of the study area recommended for wilderness designation, are easily identifiable and will preclude the majority of management concerns for the area recommended for wilderness.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	162,887
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	162,887
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	123,130
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	123,130
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	39,757
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	39,757
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS –

RECOMMENDED FOR NONWILDERNESS–

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

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MILES

Mormon Mtns.
Proposal

NV-050-161
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: There are five major physiographic regions in the WSA. These are the center two-thirds, consisting of the mountainous core and surrounding foothills, the Moapa Peak region which consists of freestanding Moapa Peak and the three bajada areas along the WSA boundaries. Naturalness is affected by old spring developments, an old mine at Whitmore, some assessment work, three big game guzzlers, some ways and a portion of a cherrystem road in the WSA's central portion. Moapa Peak has some "ways" near its base but is totally natural once the upland is reached. The bajadas are affected mostly by cherrystem roads and ways which penetrate every few miles on the average around the rim of the WSA. Small game guzzlers are scattered around the edges of the WSA. An area of scattered mining exploration in the west-central portion of the western bajada was excluded by use of a cherrystem. Range developments in the canyon leading to Horse Spring, on the WSA's eastern side, do affect naturalness there but, due to the canyon's enclosure, affect only the vicinity.

Approximately fifty to sixty percent of the WSA is unaffected by manmade features. Most roads, ways, water developments, mines and mining disturbances around the WSA most have been technically excluded by cherrystemming. Deep canyons and broken terrain limit the influence of these intrusions to the area adjacent to them. Numerous small quail guzzlers dot the lower elevations and three large big game guzzlers have been installed on the north side towards the higher elevations. Eight additional bighorn sheep water development projects have been approved to be constructed in remote areas within the area recommended for wilderness designation. These projects are designed to be fairly small and repeat visual elements within the landscape to make them blend into the environment and reduce maintenance.

The overall effect of human imprints on the naturalness of this area is overshadowed by its size and terrain diversity. The eastern bajada roads, mining areas, big and small game guzzlers, cherrystem roads, ways, fences, water troughs, and pipeline all substantially impair the naturalness of the WSA within their immediate area. However, the influence of the total may not be noticeable from great distances, but, like the occasional military aircraft flights, they all have a negative influence on the overall experience of the Mormon Mountains.

Impacts within the Mormon Mountain core area are: The Davies Spring water development is an old range project with an associated cherrystem road which extends through the west bajada into the core area; the Whitmore Mining Area consisting of minor exploration, assessment work, and an associated cherrystem road which also extends through the Moapa Peak region; a lightly traveled two-mile way following the canyon into the old historic spring site at Hackberry Springs; a two-mile stretch of a cherrystem road originating along the eastern boundary and ending at Horse Springs; a water trough and pipeline from Horse Springs; a heavily claimed mining potential area; the northern end of the core area has three large water developments, big game guzzlers, one a 50,000 gallon, above ground storage tank, and two smaller guzzlers (eight more smaller projects are proposed for construction in the future) and finally, a way originating along the north boundary and heading south through the north bajada into the core area and terminating at an historic mine.

Impacts on the western bajada consist of a large cherrystemmed mining area which excludes almost three sections of land due to assessment and associated mining activities and the access road; on the western boundary of the WSA near the Union Pacific Railroad site of Hoya, two seven mile cherrystem roads lead to Davies Spring; there are numerous vehicle tracks adjacent to the western boundary; also, scattered throughout the area are a series of small game guzzlers.

In the Moapa Peak region impacts are: an access cherrystem road to the Whitmore Mine Area, the road

starts along the southern boundary of the WSA and angles northeast six miles to the mine; the lower portion of this way leads into Hackberry Spring; and, there are vehicular tracks across much of the lower bench areas and washes.

The eastern bajada has a series of short 1-2 mile cherrystem roads, probably associated with weekend mining or hunting access, along the eastern edge of the area ; and the Horse Spring cherrystem road starts at the northern bajada has a long way running through the area, and into the core area terminating at an historic mine.

The Meadow Valley Wash which has some private inholdings, with associated buildings, lies along the western border of the WSA but the imprints are not significant. The boundary roads, as detailed under the physical environment discussion, are also outside human imprints. The entire WSA is frequently overflown by military aircraft in combat maneuvers at low altitudes, 50-200 feet at times, from Nellis Air Force Base.

In the Mormon Mountains core area, the Davies Spring site, Horse Spring site, and both mining sites affect only those areas adjacent to them because of topographic and vegetative screening; the three big game drinkers affect larger areas (probably several square miles) because of the lack of natural screening and poor design.

The west bajada already has a three section area removed due to mining activities, the cherrystem roads do not affect any additional area other than those adjacent to them.

The east bajada, with its short cherrystemmed roads, affects almost five square miles of area surrounding the boundary on that side of the WSA. The road into Horse Spring does impact the canyon or valley it lies in, with the corrals, water troughs, pipelines, and mining claim stakes. This area probably affects about ten square miles of the WSA. The northern bajada does not have an affected area. In summary, 50-60% of the WSA is unaffected by human imprints.

B. <u>Solitude</u>: The Mormon Mountains WSA contains outstanding opportunities for solitude. Much of the WSA consists of extremely rugged mountain peaks, rising 5,300 feet above the desert, large cliffs, deep canyons, numerous drainages, caves and difficult to reach bajadas. Majestic vistas of surrounding deserts, mountains and valleys enhance the feeling of solitude. Broken terrain isolates ridges and valleys from each other thus making activity nearly undetectable in the next one. Good vegetative screening above 5,000 feet also aids in obtaining solitude. Even in lower elevations where vegetation is inadequate for screening, areas exist where more arboreal specimens provide substantial screening.

Above 5,000 feet in the central portion, vegetation forms good screening in addition to that provided by the terrain. Below the elevation, desert vegetation ranges from low brush on the southwestern bajada to taller yuccas and Joshua trees on the east and north. On the bajadas vast open space contributes to the sense of solitude. Topographic screening in the central portion, which limits the effect of intrusions to the vicinity, also provides outstanding opportunities for solitude. Moapa Peak has thousand foot vertical cliffs, deep canyons and rugged, narrow ridged which knife the sky 2,000 feet above the mountain's base which lies horizontally, a scant half-mile away. These features provide the ultimate in opportunities for solitude.

Secluded spots are readily obtained almost everywhere in the WSA except for areas like the southwestern bajada and areas near the Carp-Elgin road. The extreme size of the WSA increases opportunities for solitude. The unit's configuration offers many opportunities for numerous areas of solitude.

Topographic screening in the Mormon Mountain core area is outstanding throughout, including high cliffs, rugged peaks, deeply cut canyons, washes, and draws. There is limited topographic screening provided by the washes and low rolling hills on the western bajada. Topographic screening in the Moapa Peak area

is also outstanding with its 1,000 foot vertical cliffs, deep canyons, and rugged ridges. The east and north bajadas have limited screening potential as does the north bajada.

Most of the WSA is far removed from outside influences, however, military aircraft flights do destroy the stillness of the experience needed for solitude. Secluded spots are easily locatable in all areas of the WSA due to the sheer size of the WSA. The best areas are found in the core area.

C. Primitive and Undefined Recreation: The Mormon Mountains WSA with its large size, diverse terrain, wildlife and vegetation offers outstanding opportunities for primitive and unconfined recreation.

Various dayhikes are available in conjunction with the cherrystem access routes and others could be undertaken off the numerous peripheral roads adjacent to the WSA. The large majority of the study area offers challenging and scenic hiking opportunities. Winter, spring, and late fall are the best times for use of this area due to prevailing moderate temperatures then,

Destination hikes and backpacks include trips to numerous cultural resource sites, the summit of the main mass of the Mormon Mountains, to Mormon Mountain Peak and Moapa Peak, to various springs and to cave resources. Hiking and camping are very challenging in this area. In addition to hiking and climbing, rock climbing and scrambling are well known activities. The central portion and Moapa Peak offer 500 to 1,000 foot cliffs to climb. Specific destinations for recreationists are several of the springs, including Hackberry and Davies springs, from which hikes can go into interesting side canyons, rockshelters and caves, and major canyons leading to Mormon Peak. The summit of Mormon Mountain can be reached from Davies Spring or from several canyons on the west side. A summit route also exists up Toquop Wash from the east. Henrie Canyon is a remote, enclosed canyon of considerable attractiveness which makes a good route to caves and the central core.

Hunting for bighorn sheep and small game are popular in the WSA. Recreation use, both primitive and ORV are the highest in this WSA of any of the WSAs studies in the Caliente Wilderness EIS. Primitive recreation use is estimated at 400 visitor-days annually, while motorized recreation and hunting use are 510 and 250 visitor-days annually, respectively. These are expected to reach 1,000, 300, and 200 visitor-days for primitive, motorized and hunting uses, respectively. This is due to the areas's attributes, roads and ways and relative proximity to the Interstate Highway and, consequently, to the Las Vegas metropolitan area. Limited reductions in motorized use will occur because of the access afforded by cherrystem roads.

The main mountain area offers beautiful big country vistas, fossils and bighorn sheep. Lower areas offer abundant cultural resources, particularly in the vicinity of springs.

The WSA lends itself to backpacking in spring or fall, but the lack of water may present a problem. Loop routes and through routes could be easily arranged and secluded camping sites are available. The scenic quality of the central escarpment makes for challenging and unique backpacking in a high desert environment.

The central escarpment of the WSA is well known as a scrambling, hiking, and climbing area. Mormon Peak, Moapa Peak and other unnamed peaks within the range are all well known desert climbs with 500 foot to 1,000 foot cliffs and offer an outstanding desert climbing experience.

The WSA is an outstanding example of an isolated high desert mountain range which lends itself to outstanding photographic opportunities. The small stand of ponderosa pine near the summit of Mormon Peak offers the opportunity for good composition photographic shots of trees in a desert environment. The range is home to desert bighorn sheep and the opportunity for observation is rated high. Fossils are abundant in some areas and the plant community is of considerable botanical interest.

There are outstanding caving opportunities within the limestone peaks, walls, and canyons of the Mormon Mountains. Spectacular caves abound in the area and offer challenging opportunities to the user.

D. Special Features: This WSA's special features add much to its wilderness experiences. These include living and non-living values. Zoological aspects include bighorn sheep, desert tortoise and, possibly, northern spotted bats, in addition to various raptors. Botanical features may include the Meadow Valley Range sandwort (Arenaria stenomerres), a state-listed sensitive species, a small, relic stand of ponderosa pine and unusually tall yuccas and chollas. The mountain has not been well surveyed and it is thought that undescribed endemic species may occur. A natural arch is present. Numerous caves and rock-shelters are found in the WSA. At least one cave is quite extensive and some are exquisitely decorated. Decorations include unusual ball stalactites and columnar structures. Other caves and shelters contain remarkable aboriginal pictographs. The area has not been well searched for caves and is thought likely to contain many more. Wilderness surveillance flights have led to the discovery of some openings which are accessible only by rock climbing techniques.

Geological The Mormon Mountains form a subcircular mountain mass termed the Mormon Mountain Arch. This arch is essentially a broad dissected dome of very ancient rock units which have been unroofed, the younger rock units having been removed by erosion through tributaries to the Colorado River. The oldest rocks in the Planning Unit are exposed here, Precambrian crystalline igneous and metamorphic basement. These are some of the only Precambrian rocks for study in the Planning Unit they may be a Proterozoic series equivalent to the Vishnu Schist exposed deep within the Grand Canyon.

The predominate rock units in this study area are limestone and dolomite. Most of the caverns, vaults, overhangs, high cliffs and jutting peaks consist of limestone and dolomite. The carbonate units were thinly and sporadically deposited on Precambrian basement through time. This area was a positive region (often above the ancient sea level) region during much of the time (Paleozoic and early Mesozoic) when the thicker shallow marine and continental deposits were accumulating elsewhere throughout what is now the Great Basin and Colorado plateau.

Several thrust plates occur in this area, and usually are older rocks having moved over younger units, some are thought to be remnants of extensive gravity block slides. The structure of the Mormon Mountains is poorly understood due to lack of detailed knowledge concerning the stratigraphic succession and also due to the remoteness of the area.

Tourmaline, scheelite, idocrase (vesuvianite) and barite may exist in Precambrian units as these minerals have been found in similar rocks in the East Mormon Mountains. Vermiculite (expanded mica) exists near one of the old prospect areas in Precambrian rocks in the west portion of the WSA. An old gold prospect is located in Precambrian rocks south of the higher parts of the range. Gypsum nodules occur in the northern reach of the WSA near Meadow Valley Wash east of Carp.

Botanical According to the most recent U.S. Fish and Wildlife Service Plant List there are no threatened or endangered plants within the study area but the area has not been well surveyed and it is thought that undescribed endemic species may occur. A relict ponderosa pine grove is of interest, as are unusually tall yuccas and chollas. However, the Meadow Valley Range Sandwort (Arenaria stenomeres) is presently protected by the State Statute (NRS 527.270) and according to habitat descriptions, may occur within the boundaries of the Mormon Mountains WSA.

Zoological Desert Tortoise are found around the southern, west, and east flanks of the WSA in the bajada. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and was subsequently permanently listed as a threatened

species on April 2, 1990.

Golden eagles (Federally protected), prairie falcons and other raptors (state protected) may utilize the area. The spotted bat (Classified "endangered" by the State) may exist in the Mormon Mountains WSA. A large population of desert bighorn sheep, classified as sensitive by both the BLM and Nevada Department of Wildlife, inhabit the Mormon Mountain WSA.

Cultural This WSA is extremely rich in cultural expressions and the entire WSA is highly sensitive. A sample cultural resource inventory of the area has yielded over 2,000 prehistoric sites. Site types include: a high density of agave roasting pits, shelter caves, lithic scatters, pictograph and petroglyph sites, and open camp and milling sites adjacent to the many springs in the WSA. Along the western boundary of the unit, which parallels Meadow Valley Wash, other site types include major concentrations of rock art panels, rock alignments, shelter caves, pueblo-like features, and aboriginal trail segments. Historically, there are mining related sites, such as the Whitmore Mine. Other historic sites relating to the construction of the Union Pacific Railroad are located along the western boundary of the WSA in the Meadow Valley Wash.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Mormon WSA would add four additional representative systems to the ecosystems represented in the National Wilderness Preservation System (NWPS). Bailey-Kuchler identifies four major ecosystems present within the Mormon Mountains WSA. Within the Intermountain Sagebrush Province are the Juniper-Pinyon Woodland ecosystem (97,732 acres), Great Basin Sagebrush ecosystem (13,289 acres),and the Saltbush-Greasewood ecosystem (24,433 acres). The American Desert Province/creosote bush ecosystem (24,433 acres) is in the lower steppes of the study area. Although two of the ecosystems identified are moderately represented in the nation and Nevada, the unusual mix of ecosystems and the diversity of the area warrants adding this area to the NWPS. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
NATION WIDE				
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	59	1,088,540
Juniper-Pinyon Woodland	13	362,556	77	2,250,026
Saltbush-Greasewood	3	45,553	40	1,077,742
NEVADA				
American Desert Province				
Creosote Bush	0	0	20	549,834
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	38	847,326
Juniper-Pinyon Woodland	8	268,000	45	1,564,740
Saltbush-Greasewood	0	0	9	287,681

B. 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 one major population center. Las Vegas, with a population expected to exceed 1 million before the end of the century, is approximately 60 miles south of the Mormon Mountains WSA. Table 3 summarizes the number and acreage of designated and other BLM study areas within five hours drive of Las Vegas.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Center	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: Designation of Forest Service wilderness in 1989 in Nevada, created a wide distribution of designated wilderness areas within the state. Designation the Mormon Mountains WSA would enhance the geographic distribution of areas within the National Wilderness Preservation System in Nevada and nationally, although not significantly. However, wilderness values inherent in the Mormon Mountains WSA, in southern Nevada, near a rapidly expanding urban area, would provide the public a diverse and varied wilderness opportunity in relative close proximity to Las Vegas, and justifies addition of the Mormon Mountains WSA to the National Wilderness Preservation System.

Manageability (the area must be capable of being effectively managed to preserve its wilderness values)

The area could be managed as wilderness. The biggest management challenge would be controlling motorized vehicle usage. There are several major washes aside from the cherrystem roads, which allow access into the area. The terrain along the periphery makes it accessible to vehicles. There are numerous tracks throughout the southwestern and southern areas, and control would be very difficult at best. The majority of the area does not have any problems from vehicles due to its very precipitous terrain. The portion exhibiting problems is associated with the southern boundary of the WSA and again control would be difficult. The entire WSA is composed of public land, with no encumbrances of record. The WSA is bordered on the west side by Union Pacific Railroad (200 foot wide, CC-06192) and WSA 0156 Meadow Valley. Currently, there are no utility corridors planned for the WSA.

The entire WSA is currently under oil and gas lease or application for lease, by post-FLPMA leases. There are no known oil or gas occurrences in or near this WSA. Seismic exploration has taken place in the southwest part of this WSA. There is no known history of other geophysical exploration work in or near this WSA. A deep test well was put down a few miles west of Meadow Valley Wash near Rox in the neighboring Meadow Valley WSA (NV-050-156) with no known results.

Approximately 11,500 acres (or 7.1 percent of the WSA) are covered by post-FLPMA mining claims. Only two pre-FLPMA lode mining claims exist (41.3 acres, part of which is a cherrystem). Other claims have been located but are presently abandoned. Historic mining or production is unknown.

The major management problem affecting the unit would be vehicle access problems on some of the bajada areas, the southeastern and portions of the northeastern and eastern bajadas, specifically. Some management difficulty will also occur in the valley area southeasterly of Whitmore mine, towards Moapa Peak and the East Mormon Mountains.

Energy and Mineral Resource Values

Mineral resource studies for the WSA were conducted and mineral potential determined. The studies for the Mormon Mountains WSA are: U.S. Geological Survey Open File Report 84-361; U.S. Geological Survey Bulletin 1729-B; Mormon Mountains Geological-Energy-Mineral Resource Area Technical Report (GRA No. NV-27; U.S. Bureau of Mines Report MLA 69-86.

The DEIS utilized an approach to minerals analysis which was developed for use in the California Desert Plan area. The Caliente Resource Area geologist modified the system somewhat to tailor its application to the wilderness study process. For the FEIS, this system was updated to incorporate the better data which had become available. The system used correlates the relative potential and the importance of the mineral commodity in question to the national defense, balance of trade and regional economy and is cognizant of the abundance of the resource. Strategic or energy related, high import reliance or major export minerals existing in significant quantities in known deposits or the preceding minerals mined in the Planning Unit would be identified as a sustaining a significant impact if their development were precluded by wilderness designation. Locally used minerals such as sand and gravel or building stone would be identified as being affected, though not significantly, if their production were precluded by wilderness designation. This system was used to enable a more defensible, refined, objective comparison of mineral resource potential with other resources than that which results from using the GEM system. For example, use of the GEM system would rate two different sand and gravel deposits, a common variety which is very sensitive to transportation costs, as equivalent even though one occurred in the Las Vegas Valley in a highly competitive market, and the other occurred in the Clover Mountains WSA 100 miles from Las Vegas and 20 miles from Caliente. Another example would rate a large, high grade deposit of platinum occurring next to an area with the proper infrastructure necessary to develop it, the same as a deposit of commercial grade limestone occurring in the remote portions of the district and similar to many other large limestone deposits occurring in proximity to transportation and labor pools. The system we used enabled us to better balance the known wilderness, recreation and other resource values occurring in the WSAs with mineral resource values which ranged from known and characterized to highly speculative.

In the Mormon Mountains WSA this system was applied using the data contained in the USGS Bulletin, which covered in detail, only a portion of the center of the WSA. The study found no identified resources but found occurrences of commercial grade limestone of undetermined extent and minor deposits of sand were found. Portions of the area studied have high mineral resource potential for copper, lead,zinc, silver, gold, arsenic and antimony. Part has moderate potential for antimony. Two areas have moderate potential for tungsten, molybdenum and/or tine. The remainder has low resource potential for all metals. The area studied has moderate resource potential for oil and gas, except for areas which have had significant hydrothermal activity. It has low resource potential for manganese, barite,vermiculite, coal and geothermal.

The National Defense Stockpile of Strategic and Critical Materials list dated, March 31, 1988, was obtained from FEMA and the potential resources listed above for the Mormon Mountains WSA were compared to it. This list has the stockpile goal for the particular commodity and the excess or shortfall as compared with the goal. In some cases such as molybdenum, the commodity is listed with a goal of "0". For the purposes of the analysis, if the commodity was listed, it was considered as Group 1 (Strategic or Energy-Related) (Appendix B) even though no stockpile requirement was identified.

The following minerals appear on the National Defense Stockpile List of Strategic and Critical Materials and have been found in anomalous amount in the Mormon Mountains: antimony, cooper[6], lead[7], silver[2], tin[1],

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[6] Excess in stockpile.

[7] Deficit in stockpile.

zinc[1], tungsten[1] and molybdenum[8].

Three mineralized zones were defined In the area studied. In the southern area mineralized zone, no metallic resources were identified. However, anomalous amounts of lead, silver,cooper,zinc and antimony were found. Applying the mineral rating system these are Group 1 commodities (Strategic or Energy Related). Mineralized zones occur in brecciated (shattered) zones along faults and mineralized rocks occur at depth. The Whitmore Mine, which is In this zone, and which apparently produced minor amounts of cooper from a total of 130 feet of adits (tunnels) Is cited as an example of the types of deposit which may be found in the brecciated fault zone. Favorability for discovery of future mineral deposits based on evaluation of limited date gives this a relative potential of 3 (Appendix C). The impact of desIgnating this zone as wilderness Is rated as some Impact, but not significant (Fig. 1).

In the northern area mineralized zone, no metallic mineral resources were identified. However, anomalous lead, silver, cooper, arsenic, antimony, Iron and mercury were found. Mineralization occurred in the vicinity of faults and in association with a latite (volcanic) plug. If a stock, or larger buried body of monzoite underlies the plug (is the source whIch fed the plug) and was a source of mineralized fluids, there may be gold, cooper, lead, and zinc deposits. Thus, a favorable geologic envIronment and evidence of resource formation exist. This zone has Class 1 (Strategic or Energy-Related) minerals in a Class 3 area. The impact of desIgnating this zone as wilderness is rated as some impact, but not significant (Fig. 1).

In the western areas mineralized zone, no metallic mineral resources were identified. However, anomalous tungsten and molybdenum were found. These sparsely mineralized zones appear related to an underlying intrusive granitoid body. Thus a favorable geologic environment exists. This mineralized zone has Class 1 (Strategic or Energy-Related) minerals in a Class 3 area. The impact of designating this zone as wilderness Is rated as some Impact, but not significant.

In the area studied,the following classifications appertain:

Copper	(Group 1, Class 3 area)
Lead	(Group 1, Class 3 area)
Zinc	(Group 1, Class 3 area)
Silver	(Group 1, Class 3 area)
Gold	(Group 4, Class 3 area)
Arsenic	(Group 4, Class 3 area)
Antimony	(Group 1, Class 3 area)
Tungsten	(Group 1, Class 3 area)
Molybdenum	(Group 1, Class 3 area)

Economic or subeconomic locatable resource values are not known to exist within this WSA. Hypothetical undiscovered resources of gypsum In unknown amounts are located in an identified area east of Carp. The inferred hypothetical gypsum prospect is less significant than several other gypsum prospects in the Caliente planning Unit. Other gypsum resources are produced in the State that are much closer to a market. The small area, surrounding the abandoned Whitmore Mine, could be Identified as a locality with inferred, hypothetical resources of metallic minerals based on a reported occurrence of small unknown amounts of copper In the presumed old prospect for gold. Copper is a strategic material, but it Is not known whether the reported occurrence of copper could be consIdered a suitable copper mineral source of strategIc or critical stockpile character. Undiscovered manganese, zinc, and tungsten (strategic listed minerals) may occur within this WSA, since these minerals occur in slmilar areas In the range immediately to the east.

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[8] Stockpile goal Is zero.

Indications that locatable resources may exist in the central and northeastern core of this WSA come from discoveries of mineralized areas in similar rock types in other ranges within the Caliente Resource Area and elsewhere in the State. The area identified as potentially containing undiscovered speculative resources has the lowest degree of geologic assurance and economic feasibility other than no known potential.

Saleable sand, gravel and other common variety mineral values exist around the periphery of this WSA and in numerous localities within. The saleable mineral potential is insignificant within this WSA, the Planning Unit, and the State as sufficient quantities of suitable quality mineral material are located along most all roads, highways, and railways. Additionally, building stone materials that exist within this WSA are far from any potential or existing market.

Oil and gas were rated as moderate in all areas except those in which significant geothermal activity would have baked out any resources. We feel that the oil and gas potential is probably lower than USGS's estimate for two reasons. Anschutz Corporation, which held the majority of the leases in the area was very active during the wilderness inventory stage in trying to trim the size of the WSA. During the review of the DEIS, Anschutz failed to even respond or comment. Nearly all of the leases in the WSA have either been relinquished or terminated several years ago. Another major corporation engaged in exploration in Lincoln County was asked informally about their assessment of the oil and gas potential of the WSAs in the Caliente EIS. They showed us a map of areas which they considered of interest for further work. None of these WSAs were included and we specifically inquired about the Mormon Mountains since this was the WSA which appeared to have the greatest potential. They rated the WSA as being of little potential.

In summary, no known leasable mineral values exist in the Mormon Mountain wilderness study area. No documented occurrences of oil, gas, or geothermal resources are known, although, the entire WSA is under oil and gas lease.

Impacts on Resources

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for all of the alternatives considered, including designation or nondesignation of the entire study area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness	Alternative A Partial Wilderness
Impacts on Wilderness Values	Naturalness and outstanding opportunities for unconfined recreation would be retained on most of the 123,130 acres recommended for wilderness. These values would be lost on 24,900 acres not recommended due to ORV use, mineral exploration and other uses.	Naturalness and outstanding opportunities for unconfined recreation would be retained on most of the 137,887 acres recommended for wilderness. Naturalness will be lost on 4,700 acres of the southern through eastern and northeastern edges due to ORV use.	Naturalness and outstanding opportunities for unconfined recreation would be retained in the central, northwestern, western, and Moapa Peak portions. These values will be reduced in large parts of the remainder and lost on the southwestern, southern, southeastern, eastern and northeastern edges due to ORV use, mineral exploration and other uses.	Naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 23,690 acres not recommended for wilderness. These values would be lost on 58,400 acres not recommended for wilderness.

Table 4 Continued
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action Partial Wilderness	All Wilderness	No Wilderness	Alternative A Partial Wilderness
Bighorn Sheep	Eight proposed bighorn sheep guzzlers would have to meet wilderness management criteria and one existing guzzler may have to be redesigned. Habitat would receive increased protection. Bighorn sheep would increase 25 percent.	Three proposed bighorn sheep guzzlers would have to meet wilderness management criteria and one existing guzzler may have to be redesigned. Habitat would receive increased protection. Bighorn sheep would increase 25 percent.	There would be no effect on projects. Some habitat would be affected by surface disturbance and human intrusion.	One existing bighorn sheep guzzler may have to be redesigned to meet wilderness management criteria. Some habitat would be affected by surface disturbance and human intrusion. Bighorn sheep numbers would increase 25 percent.
Cultural Resources	Maximizes protection of cultural resources including 114 roasting pits, 17 lithic scatters, 20 rock-shelters with art, 14 historic sites and 8 rock features. Four sites are outside, but proximate to the area recommended for wilderness and would benefit from increased patrols.	Provides the maximum protection for significant cultural resource sites, including 114 roasting pits, 17 lithic scatters, 20 rock-shelters with art, 13 historic sites, and 9 rock features.	No added protection above that afforded by antiquities laws and regulations for 260 cultural resource sites would be initiated.	Provides additional protection for eleven roasting pits, two lithic scatters, six rock-shelters with art, one historic site and one rock feature.
Mineral Resources	The designated wilderness is be withdrawn from mineral entry. If existing claims do not have valid pre-designation discoveries, exploration would not be possible. Exploration may occur on claims in the southwest area of the WSA but development is not anticipated.	The designated wilderness is be withdrawn from mineral entry. If existing claims do not have valid pre-designation discoveries, exploration would not be possible.	Exploration may occur on claims in the southwest and around Whitmore Mine and would continue sporadically in the southeast. Minor development is anticipated.	Exploration may occur on claims in the southwest and around Whitmore Mine and would continue sporadically in the southeast. Minor development is anticipated.
Recreation	Current motorized use of 510 visits would rise to 600 visits with 100 visits displaced. Primitive recreation use would rise from 400 visits to 1,000 visits annually.	Current motorized use of 510 visits would fall to 300 visits with 510 visits displaced. Primitive recreation use would rise from 400 visits to 1,000 visits annually.	Current motorized use of 510 visits annually would rise to 1,000 visits. Primitive recreation use would rise from 400 visits to 790 visits.	Current motorized use of 510 visits would rise to 1,000 visits. Primitive recreation would rise from 400 visits to 575 visits annually.

Local, Social Economic Consideration

The socio-economic environment for Lincoln County was discussed in detail in the "Caliente Draft Wilderness Environmental Impact Statement-1984". This analysis basically identifies that no significant alteration in the regional economy will result from wilderness designation. Grazing is the only present economic use of the WSA and it will continue. Lincoln County's share of oil and gas leasing revenues derived from the WSA has ceased due to the dropping of leases by companies. With designation, it is likely that visitation will increase and, concomitantly, so will sales activity and sales tax receipts which will probably replace the leasing receipts.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process starting with the inventory stage. Appropriate comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

Public meetings and hearings were held in association with the study phase and draft environmental impact statement for the WSAs located within Lincoln County and partially within Clark County. The meetings were a combination open house and scoping meeting and were held in Caliente and Las Vegas, Nevada. Formal public hearings were held in Las Vegas and in Caliente, Nevada for the draft EIS.

During formal public review of the draft EIS, a total of 132 comments specifically addressing this WSA were received. Of those, 158 were written and 4 were oral statements received at the public hearing on the draft EIS. In the Draft EIS only 23,690 acres of the study area was preliminarily recommended suitable for wilderness designation. An overwhelming majority of respondents, 130 (98.8%) of the 132 comments received supported wilderness designation for par or all of the study area, of those, 156 recommended more wilderness than the DEIS Preferred Alternative. Only two commentors recommended no wilderness for this study area.

County: Lincoln County did not respond. The Clark County Department of Comprehensive Planning concurred with the recommended wilderness designation contained within the preferred alternative in the Clark Draft EIS.

State: The Governor of Nevada in his consistency letter, dated December 28, 1984, did not address the Mormon Mountain WSA. During the State's review of the Preliminary Draft EIS the Governor recommended 23,690 acres for wilderness designation. The state clearinghouse has indicated it opposes the larger wilderness recommendation contained in the Final EIS and this report due to mineral potentials.

Federal: The U.S. Bureau of Mines recommended against wilderness designation for any portion of the Mormon Mountains WSA. The U.S. Air Force identified potential conflicts with continued use of the airspace over the Mormon Mountains WSA for military training and installation of electronic monitoring and tracking devices within the WSA. The U.S. Environmental Protection Agency observed that the criteria for selecting suitable verses nonsuitable wilderness areas for selecting verses nonsuitable wilderness areas was unclear in the DEIS. The major reasons can be attributed to mineral resources, management of ORV traffic and aesthetics. Finally EPA stated the FEIS should discuss the recovery of the areas mineral resources in greater detail.

Public comments recommending designation of 123,130 acres of the Mormon Mountains WSA centered on outstanding wilderness values of solitude, primitive recreation, scenic quality, diversity, and manageability.

APPENDIX A

Mineral Classification System

ENERGY AND MINERAL RESOURCES

Determination of energy or mineral resource potential for each of the five WSAs involved evaluation of existing and newly acquired data. The existing BLM mineral resource inventory for the Callente Planning Unit was supplemented with Geology-Energy-Mineral (GEM) Resource Assessment Reports for each WSA. The two assessments utilized published geologic and mineral information. The existing literature is somewhat limited both in quantity and detail for purposes of determining energy and mineral potential in these WSAs, this is largely due to the areas' remoteness and possibly due to a previous lack of interesting mineral potential. Known data was supplemented with limited field-checking and information from unpublished case-files and other records. Individuals and companies with inholdings were also solicited for their input. Additionally, newly acquired geochemical data was collected and is currently being analyzed and interpreted by the USGS for each WSA. A variety of schemes to classify mineral potential were used. The actual classification of mineral potential used in this analysis is discussed later. The geology, energy, and mineral resources and the classification of potential for each WSA is discussed in more detail in the Wilderness Technical Report. As new data becomes available from public input regarding areas of critical mineral potential or other industry or individual data contributions, the classification or confidence level of an area may change. A mineral survey will be conducted by the U.S. Geological Survey/Bureau of Mines for any of the areas that the BLM Director recommends as suitable for wilderness designation. This will bolster existing data.

The McKelvey system for the classification of mineral potential has traditionally been used in the mineral resource inventory portion of the Bureau Planning Process. This system compares the economic and geologic feasibility of a deposit based on known or inferred relationships. The system relies heavily on known occurrences and does not have an adequate breakdown for potentially undiscovered, but inferred deposits. It does not consider the relative importance of the potential of a particular type of commodity in contrast to those commodities of lesser or greater importance. The ranking scheme adopted for BLM GEM Resource Assessment compares the favorability for occurrence based on various degrees of known or inferred relations and is further qualified (or unqualified) by the level of confidence of the data used in the favorability classification. The GEM system also does not consider the relative importance of the potential of a particular type of commodity in contrast to those commodities of lesser or greater importance. This ranking system tends to rate inferred occurrences highly, regardless of economic, practical, or legal considerations. The classification system used in the EIS analysis involved relative ranking of commodity groups by method of legal acquisition and is based on the potential importance of a possible new deposit as a function of modern usage and domestic scarcity (see Appendix B).

The mineral commodity groups are defined and ranked in descending order of significance in Appendix B, with mineral types in Group 1 having a greater significance than the lower classes. The classification of mineral potential, Appendix C, is a function of these mineral groups and is based on what is known about the size, demand, or importance of a deposit containing a particular mineral group relative to others. In Appendix C, each Class (1-5) is ranked in descending significance and corresponds to a mineral deposit area, with Class 1 areas having a greater significance or mineral potential than the next lower class of area and likewise down the list.

Areas with the greatest potential (1) would contain a significant quantity of minerals from Group 1, 2, and 3 or would contain minerals of any group that are presently mined within the Planning Unit. Areas with the next lower amount of potential (2) would contain occurrences not in great quantities of minerals from Group 1, 2, and 3 and would include Group 4 minerals in insignificant amounts but without demand (this class also includes areas inferred to contain significant amounts of Group 1, 2, and 3 minerals). Areas with the next

lower amount of potential (3) are inferred favorable for discovery of group 1, 2, 3, and 4 minerals in unknown amounts. Areas with the next lower amount of potential (4) are areas with unqualified potential pending additional data. Areas with unqualified potential should not be considered as less than the areas with higher potential, much of the area with unqualified potential may be included with the next lower class once significant data is interpreted. The area with lowest potential (5) is considered either unfavorable for the type of mineral deposit or no data is expected that will determine otherwise. The potential classifications should not be viewed as (1) high, (2) moderate, (3) low, (4) unqualified, and (5) none; but, can only be used in the relative sense with one area either having somewhat higher or lower potential than another. In this way potential deposits can be compared with the Nation's importance of need. This avoids comparing potential, hypothetical, or speculative undiscovered resources with other known or undiscovered resources in other parts of the nation or world.

APPENDIX B

TABLE 3-1

EXPLANATION OF MINERAL GROUPS
LISTED IN DESCENDING ORDER OF SIGNIFICANCE

N0.	Mineral Group	Explanation
1.	Strategic or Energy Related	Those Minerals that are stockpiled and listed with strategic and/or critical materials or those minerals if not strategic are energy-related.
2.	Import Reliance	Those minerals produced domestically that are supported with a 50 percent or more import reliance.
3.	Major Export	Those Minerals that are Nationally Important or which the U,S, is a net exporter.
4.	Regional/Local Importance	Those minerals that are only of regional or local domestic importance.

Source: Callente Draft Wilderness Environmental Impact Statement, Bureau of Land Management, 1983

APPENDIX C

TABLE 3-2

CLASSIFICATION OF MINERAL POTENTIAL[9]

Relative Potential	Explanation
1.	This class includes areas interpreted on the basis of known mineral deposits of A) Group 1, 2, and 3 commodities existing in significant quantities and B) Group 1-4 commodities mined in the Planning Unit (includes presently producing areas).
2.	This class includes areas containing known mineral deposits with reserves and/or resources of A) group 1, 2, and 3 commodities not known in significant quantities, B) Group 1-4 commodities known in significant quantities but without significant demand, and C) inferred occurrences of significant amounts of Group 1, 2, and 3 class 1 commodities.
3.	This class includes areas interpreted to be favorable for future discovery of mineral deposits based on evaluation of geologic, geophysical and/or geochemical data (higher confidence than 4).
4.	This class includes areas for which the potential for mineral resources is interpreted on basis of preliminary evaluation of geologic, mineral occurrence and limited field verification data only. No further analysis has been done.
5.	This class includes areas that could not be classified due to insufficient data and areas where known geology is considered unfavorable for the type of mineral deposit.

Source: Bureau of Land Management, Las Vegas District, Caliente Wilderness EIS Team, 1983.

[9] Based on Commodity Significance (Figure 1) and Occurrence Potential

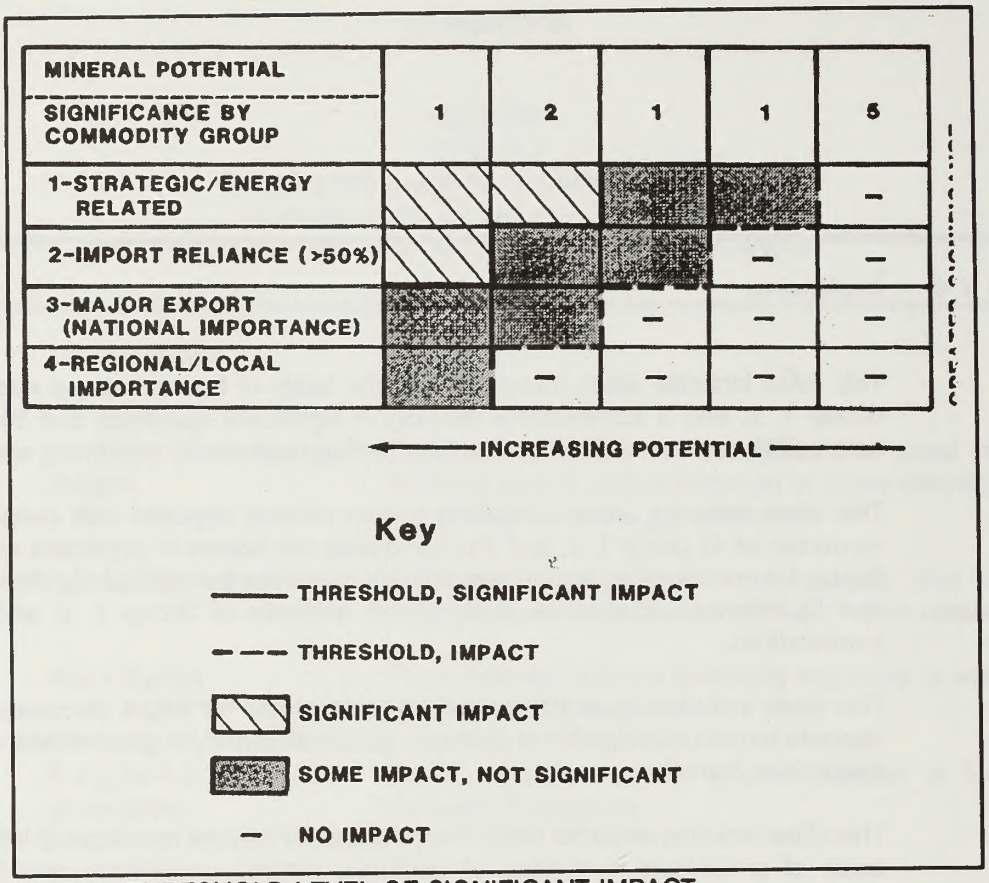


Figure 1 THRESHOLD LEVEL OF SIGNIFICANT IMPACT

NOTE:
Refer to Appendices B and C for definition and classification.

DELAMAR MOUNTAINS WILDERNESS STUDY AREA

1. THE STUDY AREA - 126,257 acres

Delamar Mountains Wilderness Study Area (WSA), NV-050-177, consists of the southern extension of the Delamar Mountain Range, is approximately 205 square miles, and is located in southern Lincoln County, seventy-five miles north of Las Vegas and approximately fifteen miles southeast of Alamo.

Roughly rectangular in shape, the WSA is 3 to 13 miles east to west, and 23 miles north to south. The western border is located along a powerline and unpaved roads, from its northwest corner, south to its juncture with Highway 93. It follows Highway 93 and old Highway 93 to another unpaved road on the south which eventually terminates, and the boundary goes on to meet Kane Springs County road. It follows the Kane Springs road for several miles, breaking off to follow an older road about one and one-third miles north of the Willow Springs road, continues on the road as it turns into the Delamar Mountains in a major drainage. The road and boundary continue northward through Gregerson Basin and around the north end of the unit to the northwestern corner. One long cherrystem penetrates from the northeast towards the unit's center and two shorter ones enter on the southwest.

Access to the western boundary of the WSA from Las Vegas is achieved via Highway 93. Kane Springs road and the Delamar powerline road, both bladed and maintained dirt roads, intersect Highway 93 and allow access to the southern and northwest portions. Three cherrystemmed roads out of the Gregerson Basin and Kane Springs areas, allow access via high clearance or four-wheel-drive vehicles into the eastern portion of the study area. One cherrystem road allows access into the central eastern portion of the Unit.

Delamar Mountains WSA consists of a series of ridges and small valleys tumbling into a rugged mountainous interior with elevations ranging from 2,600 to 6,300 feet. Bajadas extend from the mountain bases to the western, southern, southeastern and portions of the northwestern boundaries. The fringe around the southern half of the unit is a series of bajadas, while the central area is a broad rolling mesa-like surface punctuated by several ridges and washes. An abrupt cliff marks the west edge of this landform. On the north are jumbled, dissected mountains, becoming more rounded to the east and penetrated by some large canyons. The eastern portion contains rugged butte shaped mountains which rise above the mesa-like area in a series of ridges and small canyons. The southern end contains several spectacular canyons which cut into the mesa towards the unit's core.

Vegetation is diverse with desert shrub being the most dominant. Pinyon-juniper stands cover the north-central part and annual grasslands complete the cover.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Caliente Final Wilderness Environmental Impact Statement (EIS). The Final Wilderness EIS was filed in March 1989. Three alternatives were analyzed for the Delamar Mountains WSA in the EIS: a Partial Wilderness alternative, an All Wilderness alternative and a No Wilderness alternative, the recommendation of this report.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
126,257 acres recommended for nonwilderness

The recommendation for this WSA is not to designate the study area as wilderness and to release the entire area for uses other than wilderness (Map 1). The All Wilderness alternative is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The no wilderness alternative, the recommendation of this report, would be implemented in

a manner which would utilize all practical means to avoid or minimize environmental impacts.

BLM's decision not to recommend the Delamar Mountains WSA for wilderness designation is based upon a determination of potential resource conflicts and manageability concerns including an inability to recommend a boundary that would be easily identified, manageable, and clearly recognizable to the user public. A lack of physical barriers to limit the incursion of off-highway vehicles into the WSA weighed heavily in the recommendation for this WSA. Although the entire area could be managed as wilderness, the resources that would be required to ensure the integrity of the boundary and the management of an area of marginal wilderness values would be cost prohibitive and could not be effectively enforced.

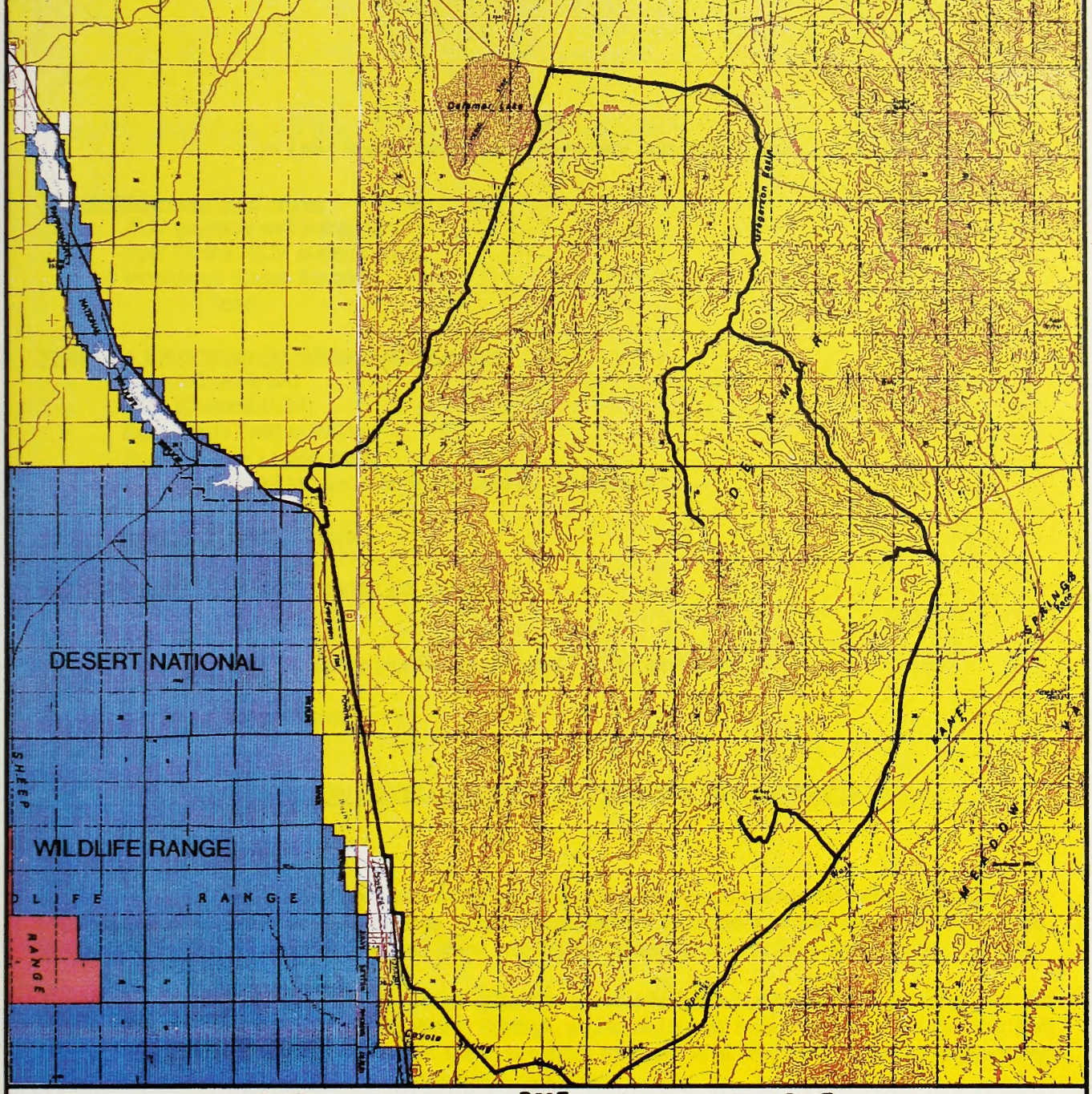
Topographic configuration of the WSA is such that most areas of the WSA are easily accessed from the cherrystemmed road and range improvements located deep in the center of the study area or up Bomber Wash from the south. Nevada Department of Wildlife has proposed placing up to eight upland gamebird water developments in the bottom of Bomber Wash. Development of these projects would encourage vehicle access deep into any area that would be recommended as wilderness. Slopes in the central portion of the WSA are such that they pose little impediment to off-road travel.

The highest quality wilderness values are in the Bomber Canyon area and along the periphery of the study area where solitude can be found. However, the majority of the study area exhibits a lack of quality wilderness values throughout a large portion of the WSA, the key consideration in the BLM's recommendation. While the WSA contained the wilderness values necessary for study, they are not considered to be of a quality and continuity throughout the WSA to merit the area's inclusion in the National Wilderness Preservation System (NWPS). The WSA generally appears natural but the aggregate affects of gradual incursion of human activity and resource development around the perimeter and core of the study area and the potential impacts in Bomber Wash and sights and sounds adjacent to highway 93, combine to reduce the area where a quality recreation experience can be gained to a small "H" or "U" shaped configuration near the top of the mountains. Opportunities for solitude are extremely limited on the west side of the WSA due to the severe slope of the Arrow Canyon Range and visibility to U.S. Highway 93.

The no wilderness recommendation for the WSA would emphasize maintaining access for motorized recreational activities such as off-road and cross country driving and would allow for development of wildlife projects to improve other recreation values of the area. In the plateau core area is a cherrystemmed five-mile, user, maintained road into Pony Well and a pipeline. A way also angles southwest away from Pony Well into the WSA for several miles. An old earthen stock reservoir and several ways leading from Pony Well to other areas within the core of the study area provide access to a large portion of the valley. Along the northeastern boundary, an old range project, a chaining and seeding, visually impacts the natural character of the WSA slightly.

Outside sights and sounds are of particular concern. Powerlines and utility corridors wrap around the study area on three sides. Two 500 KV powerline projects have been proposed to be constructed on both sides of the WSA. These two projects would be visible from many portions of the study area. Aerojet Corporation has acquired a large block of public lands for a rocket motor development and testing facility immediately to the south of the study area. Low-level military flight operations occur over the WSA almost daily. A large sand and gravel pit, for maintenance of U.S. 93 and several ways are on the west side of the WSA. The highway department requires the pit for the maintenance of the road and routinely brings in equipment to separate and stockpile large quantities of sand and gravel in the pit.

Along the southern bajada, there are occasional vehicle tracks leading cross country toward the interior of the unit but the only significant vehicular access taking place in the southern bajada is up the Bomber Wash, for hunter access. A cherrystemmed, three-mile user maintained road to Willow Spring extends into the WSA across the bajada from the Meadow Valley Wash road. Another short, one-mile access road to an earthen stock reservoir is within in the east mountain region.



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

MILES

Delamar Mtns.
Proposal

NV-050-177
March 1990

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	126,257
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	126,257
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	126,257
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	126,257
Inholdings (State, Private)	0

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The Delamar Mountains WSA is sixty-five to seventy percent natural with negligible human imprints except in certain areas. The area ranges from relatively featureless to very rugged and enclosed. With the exception of hunter access and water hauling for cattle, the area is little used by man currently.

The WSA contains two reservoirs, ten quail guzzlers, a five-mile bladed cherrystem road to one of the reservoirs, a three-mile cherrystem to Willow Springs, a one and a half mile cherrystem on the east and several ways. Affecting naturalness are the cherrystem to Pony Well, Highway 93 and the powerline corridor. Low level military jet aircraft overflights often occur.

With the exception of the terrain exposed to Highway 93, the overall influence of human imprints on the area's naturalness is negligible.

B. Solitude: The large size of the WSA increases opportunities for solitude. The desert shrubs, mixed with a small open stand of pinyon/juniper, do not provide adequate vegetative screening anywhere in the WSA.

Topographic screening in the plateau core area is severely limited. There is limited topographic screening provided by the cliff and bajada along the west side - this area does offer some topographic relief if a visitor actively seeks such features. The southern and eastern bajada areas again offer limited topographic screening, provided by the shallow washes and low hills found adjacent to the uplands of the WSA. Several deep twisting canyons that issue from the central core region and into the southern bajada do offer outstanding topographic screening provided by the cliffs and deeply eroded side drainages. Bomber Wash

probably offer the WSA's most outstanding topographic screening. Topographic screening is outstanding in portions of the eastern mountainous region due to the numerous hills, peaks, washes, and draws.

The majority of the WSA is remote from outside influences with the exception of the Pony Reservoir cherrystem road and the random aircraft overflights which destroy one's sense of aloneness.

The concept of secluded spots usually is attributed to vegetative and/or topographic screening but can be found or enhanced by large open areas. As previously discussed, there are several areas where outstanding solitude can be found, but one does not find many in the WSA. The primary areas where these spots can be found, lie in Bomber Wash and its associated drainages, along with selected areas in the more mountainous region of the east side of the WSA. The attractiveness of Bomber Wash would probably decrease opportunities for solitude in the area due to increased use. The sheer size of the area contributes to the opportunity of seclusion.

C. Primitive and Undefined Recreation: Most portions of the study area could be used for day-hiking, although long bajada areas would not be particularly attractive. Some of the long twisting canyons opening to the south, including most notably, Bomber Wash are likely routes. Many of the canyon areas and some of the boundary zones have rather spectacular cliffs which provide an attraction. In the canyons, these cliffs provide a sense of enclosure and isolation as well. On the north, a large northeasterly trending canyon makes an attractive hiking route. The higher peaks in the central and eastern portions are good destinations and provide expansive views of the Sheep Range, Pahranagat Valley, Meadow Valley Range, Mormon Mountains, Kane Springs Valley and beyond.

Numerous opportunities for loop routes and through routes could be easily arranged, but lack of water could be a problem for backpackers. The ruggedness of the areas would make the washes the best routes for travel. Due to the lack of water, any horseback riding would have to be limited to the east portion out of Gregerson Basin.

Large portions of the area lend themselves to various types of scrambling and climbing due to the steepness and rocky terrain. Opportunities for good photography of high, rugged, plateau type rock formations, rugged cliffs and Joshua trees are available throughout much of the WSA. The opportunity to observe and photograph desert bighorn sheep is possible. Hunting opportunities are limited for anything but scattered upland bird shooting.

The WSA lends itself to all types of primitive recreational opportunities, however, some precautions must be undertaken to ensure water is available in order to allow for any extended time periods. The size of the Unit and the topographic diversity make these recreational opportunities range from low to outstanding.

D. Special Features:

Geological The central-east portion of this area is the west portion of the Kane Springs volcanic center. A thick, essentially horizontal sequence of volcanic ash outpourings from numerous volcanic centers in the region cap the southern Delamar Mountains as revealed in the ash and tuff exposures in the extensive bench, mesa, and butte areas. The range was subjected to extensive faulting during the ancient development of the Kane Springs Caldera structure which has since been partially exhumed in Kane Springs Wash and is currently under study by researchers.

Erosion has exposed the underlying bedrock formations, which due to their jumbled and variously dipping, folded and overturned orientation form the steeply incised ravines and canyons along the south and west flanks of the range. A nearly complete Paleozoic section of fossiliferous marine sediment is exposed. Many ancient fossil forms have been collected and studied, mostly by the USGS, and several fossil localities and

finds are important to invertebrate paleontology in a regional sense and a worldwide correlation effort.

The disposition of the complex folded and faulted volcanic and marine sequences is, in addition to caldera development, related to thrust movements. The Delamar Mountain thrust and fold plate is thought to be a part of the regional Gas Peak thrust plate exposed in the Sheep Range to the Southwest. The north portion of this WSA is cut by several faults which truncate these thrust plates and align with major right lateral slip faults, shear movements related to ore deposits.

Botanical According to the most recent USFWS list there are no federally listed threatened or endangered plant species in the Delamar WSA. However, Astragalus nyensis Barneby or Nye milkvetch, which is protected by State Statute (NRS 527.270), may exist in the vicinity.

Zoological The desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently listed as threatened on April 2, 1990.

Golden eagles (Federally protected), prairie falcons, and other raptors (protected by the State) may pass through or exist in the area. The spotted bat (classified "endangered" by the State) might exist in the WSA.

Cultural Over a dozen prehistoric sites have been recorded within this study unit. Site types representative of the WSA include many open lithic and ceramic scatters, rock shelters, rock art sites and milling sites. In addition, the Kane Springs Wash area located immediately adjacent to the study unit to the south and east represents a highly sensitive complex of sites in the form of an obsidian quarry source with related open obsidian lithic workshop sites scattered along Kane Springs Wash. Also, Delamar Lake, which is located immediately adjacent to the northeast corner of the study unit, represents another highly sensitive area containing camp sites along the rim of the playa, rock art sites, and lithic scatters.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Delamar Mountains WSA would add another system to the ecosystems represented in the National Wilderness Preservation System. Bailey-Kuchler identifies two major ecosystems present within the Meadow Valley mountains WSA, Intermountain sagebrush Province/Juniper-Pinyon Woodland (27,862 acres) and Intermountain Sagebrush Province/Great Basin sagebrush (102,159 acres). Although the ecosystems identified are moderately represented in the nation and Nevada, the unusual mix of ecosystems and the diversity of the area warrants adding this area to the NWPS. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	59	1,088,540
Juniper-Pinyon Woodland	13	362,556	77	2,250,026
	NEVADA			
Intermountain Sagebrush Province				
Great Basin Sagebrush	7	103,842	38	847,326
Juniper-Pinyon Woodland	8	268,000	45	1,564,740

B. 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 one major population center. Las Vegas, with a population expected to exceed 1 million before the end of the century, is approximately 60 miles south of the Delamar Mountains WSA. Table 3 summarizes the number and acreage of designated and other BLM study areas within five hours drive of Las Vages.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Center	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: Designation of Forest Service wilderness in 1989 in Nevada, created a wide distribution of designated wilderness areas within the state. Designation the Delamar Mountains WSA would enhance to the geographic distribution of areas within the National Wilderness Preservation System in Nevada and nationally, although not significantly. However, wilderness values inherent in the Delamar Mountains WSA, in southeastern portion of Nevada, near rapidly expanding urban area, would provide the public a diverse and varied wilderness opportunity in relative close proximity to Las Vegas, and justifies addition of the Delamar Mountains WSA to the National Wilderness Preservation System.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

Terrain In the north portion of the study area makes it accessible to vehicular travel; casual and random use has taken place along this boundary. Access off the Pony Reservoir Road and Gregerson Basin Road provides ample opportunity to leave the known routes. Closing the existing ways and controlling this random travel would be nearly impossible. Access along the west side of the WSA does not appear to be to much of a problem as there are few destination points and means on ingress. Casual and random use has occurred up several washes. The terrain, however, does not lend itself to ready access. Maintaining control along this boundary would prove to be a challenge, but not insurmountable. All washes and most of the terrain in the south and east are accessible to vehicular travel. Current use patterns are low due to

the distance of travel for planned destinations. Little evidence of such use persists on the ground. Control would be difficult. Access along the east side is restricted to the boundary road and the short way leading to the stock reservoir.

Terrain limits accessibility throughout most of the study area except for the interior.

The BLM has been ordered by settlement of litigation to provide a permanent water in the pasture encompassing the Pony Well cherrystem road. A well was unsuccessful and other means such as a pipeline or catchment may be necessary to accomplish the requirement. This may or may not cause some manageability problems, depending upon whether installations could be confined to the cherrystem road.

The entire WSA is composed of public land with no encumbrances of record. There are some range improvements within the WSA. The WSA bordered on the west side by Highway 93. The WSA is bordered on the northwest side by an existing powerline in addition, one 500 KV line has been approved, for construction, to parallel the existing line, (Intermountain Power Project). Currently, another pair of 500 KV powerlines are being planned with the preference to parallel the other two, (White Pine Power Project). However, due to the WSA status of the preferred route, the project has proposed an alternate route down the east side of the WSA and south through Kane Springs Wash Valley.

The entire WSA is under oil and gas leases with a total of 68 leases. There are no known documented oil or gas occurrences. No known history of seismic exploration work or drilling exists in or near this WSA. No mining claims exist within or near this WSA. No known historic mining or production has occurred, other than minor sand and gravel extractions along U.S. Highway 93 and minor material extraction along the Kane Springs Road.

Two key management concerns affecting the Delamar WSA are vehicle access control in portions and the paralleling utility corridor external to the WSA's western boundary. One could preclude the assurance of manageability in accessible areas over the long term for wilderness. The other would have a depreciative effect on the southwestern sections.

Energy and Mineral Resource Values

No known locatable, strategic or critical mineral resources are known to occur in or near this WSA. Due to discoveries of mineralized areas in similar rock types in the northern part of the Delamar Range and elsewhere, the possibility of undiscovered resources exists. However, the potential of undiscovered locatable described as speculative. This level of classification has the lowest degree of assurance or significance other than no potential, but any valid new discovery would be significant.

Salable sand and gravel minerals exist along the southwest and southeast WSA boundaries in alluvial fan and wash materials along Highway 93 and the Kane Springs Road. Common variety stone materials exist throughout the WSA in bedrock and volcanic areas. The salable mineral potential in this WSA is insignificant because material sites and free use areas are plentiful along roads and highways near the WSA.

There are no known leasable mineral values present within this WSA, although the entire unit is under oil and gas leases.

No major conflicts are foreseen and no strategic minerals are known to occur in the WSA.

Impacts on Resources

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for all of the alternatives considered, including designation or nondesignation of the entire study area as wilderness.

Table 4
Comparative Summary of Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Resource Development	Wilderness Accent
Wilderness Values	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on most of the area. These values would be lost on the western and southern sides due to intrusions and ORV use over 25,000 acres.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 126,257 acres recommended for wilderness.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 48,134 acres recommended for wilderness. These values would be retained on much of the remaining 78,093 acres not recommended but would be lost on 23,000 acres on the western and southern sides due to ORV use and other intrusions.	Wilderness values of naturalness and outstanding opportunities for solitude and unconfined recreation would be retained on 102,490 acres recommended for wilderness. These values would be lost on 20,000 acres not recommended.
Development of Mineral Resources	Sand and gravel would remain available for road crew use.	Sand and gravel, abundant in the region, would not be available for road crew use.	Sand and gravel would remain available for road crew use.	Sand and gravel would remain available for road crew use.
Recreation Resources	Current motorized recreation use of 100 visits annually would rise to 200 visits. Primitive recreation use would rise from 25 to 75 visits.	Current motorized recreation use of 100 visits annually would not change. Primitive recreation use would rise from 25 visits to 175 visits.	Current motorized recreation use of 100 visits annually would rise to 200 visits. Primitive recreation use would rise from 15 visits to 75 visits.	Current motorized recreation use of 100 visits annually would rise to 130 visits. Primitive recreation use would rise from 25 visits to 79 visits.
Development of Utilities	There would be no impact.	Substantial impacts and resource conflicts would occur on other lands as a consequence of not allowing a utility corridor to be developed through the WSA.	There would be no impact.	There would be no impact.

Local, Social Economic Consideration

The socio-economic environment for Lincoln County was discussed in detail in the "Caliente Draft Wilderness Environmental Impact Statement-1984". This analysis basically identifies that no significant alteration in the regional economy will result from wilderness designation. Grazing is the only present economic use of the WSA and it will continue. Lincoln County's share of oil and gas leasing revenues derived from the WSA has ceased due to the dropping of leases by companies. With designation, it is likely that visitation will increase and, concomitantly, so will sales activity and sales tax receipts which will probably replace the leasing receipts.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process starting with the inventory stage. Appropriate comments received during the inventory process and early stages of the EIS preparation were used to develop significant study issues and various alternatives for the ultimate management of those lands found to have wilderness values.

Public meetings and hearings were held in association with the study phase and draft environmental impact statement for the WSAs located within Lincoln County and partially within Clark County. The meetings were a combination open house and scoping meeting and were held in Caliente and Las Vegas, Nevada. Formal public hearings were held in Las Vegas and in Caliente, Nevada for the draft EIS.

During formal public review of the draft EIS, a total of 158 comments specifically addressing this WSA were received. Of those, 150 were written and 8 were oral statements received at the public hearing on the draft EIS. In general, 150 commentors supported wilderness designation for all or part of the WSA. Eight commentors supported the BLM preferred alternative, not to recommend the Delamar WSA for wilderness designation.

The Governors consensus review, December 28, 1984, concurred with the BLM's recommendation not to designate the Delamar WSA because of the "many resource conflicts."

The Department of Energy, Western Area Power Administration observed that planned transmission lines in the corridor adjacent to the west side of the Delamar Mountains WSA would be greatly restricted if full wilderness status was designated, therefore, they support the Preferred Alternative. Los Angeles Department of Water and Power also identified conflicts with the WSA and potential rights-of-way adjacent to the study area.

The U.S. Environmental Protection Agency observed that "Criteria for selecting suitable versus nonsuitable wilderness areas within the Delamar Mountains ... were not clear in the DEIS. This is particularly true when the Preferred Alternative (p. 2-2 to 2-4) and the Wilderness Accent Alternative (p.2-6 to 2-8) are compared." The Environmental Protection Agency recommended reevaluation of the Delamar WSA "since mineral resources are speculative, except for sand, gravel and perlite, (sic) and ORV use has a potential to be managed to some degree".

FISH & WILDLIFE NO. 1, 2 and 3 WILDERNESS STUDY AREAS

1. THE STUDY AREA - 50,334 acres

Fish & Wildlife Nos. 1, 2 and 3 WSAs (NV-050-201, 213, and 217) are located in northern Clark and southern Lincoln Counties, about 35 miles north of Las Vegas, Nevada. The WSAs are a long, narrow configuration running north-south, approximately 45 miles long and about three miles wide at their broadest point. The study area is divided into three WSAs by two heavily traveled, well defined roads. For the purpose of this report, they are being considered as one unit. Fish and Wildlife No. 1 contains 11,090 acres, No. 2 contains 17,242 acres and No. 3 contains 22,002 acres, totalling 50,334 acres of public land (table 1). The WSAs are sandwiched between the Desert National Wildlife Range on the west and U.S. Highway 93 to the east.

Most of the WSAs are relatively flat, gently sloping bajadas extending from the base of mountains east to U.S. 95. The only mountain range, the Las Vegas Range, occurs in the central portion of Fish and Wildlife No.2. These are low mountains, elevations range from 2,000 to 4,560 feet. Low rolling hills, narrow washes, and the Las Vegas Range, provide the only topographic diversity in the WSAs. Vegetation is typical great basin shrub type with yucca, cactus and Joshua trees with cat-claw found along the narrow washes.

Fish and Wildlife 1, 2, and 3 were studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and were included in the Nevada Contiguous Lands Final Wilderness Recommendations Environmental Impact Statement released January 22, 1990. Two alternatives analyzed in the EIS for each WSA: all wilderness alternative and no wilderness, which is the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
50,334 acres recommended for nonwilderness

The recommendation is to not designate these WSAs as wilderness, but to release them for uses other than wilderness (Maps 1 thru 3). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation is to not designate the WSAs wilderness, the recommendation would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

Fish and Wildlife No. 1, No. 2, and No. 3 WSAs are recommended for uses other than wilderness because of conflicts with other potential resource uses and manageability concerns. Quality of wilderness values was a key consideration in the recommendation. Although the WSAs have wilderness values, these values are not considered to be of high enough quality, in comparison to similar WSAs in the Las Vegas area, to merit the area's inclusion in the National Wilderness Preservation System.

All three WSAs generally appear natural but there are several signs of man, primarily vehicle trails due to off road vehicle travel and a Nevada Department of Transportation materials pit right-of-way, located in the northern WSA. Most of the WSAs are easily accessible to vehicles from Highway 93 and the two roads that separate the three WSAs. Scattered vehicle tracks occur on the eastern edge of Highway 93, a short distance into the WSAs. Approximately 13 miles of ways are in the three WSAs. Topography in the WSAs primarily consists of an open bajada that is readily accessible to vehicles.

Solitude opportunities available in the WSAs are similar to those afforded by thousands of other acres of BLM land in Clark County. These opportunities are due to topography, remoteness and lack of human of activity in the area and are not due to any intrinsic values unique to the area. Opportunities to find solitude are extremely limited due to minimal topographic screening and the proximity and influence of outside sights and sounds associated with utility corridors, abandoned sand and gravel operations, and Highway 93.

Desert tortoise is a special feature within all three WSAs. Desert tortoise habitat occurs in approximately 41,909 acres (83 percent) of the 50,334 acres encompassed by the WSAs. Bureau objectives for the 41,909 acres of category one habitat are to manage tortoise habitat to ensure viable desert tortoise populations exist in perpetuity.

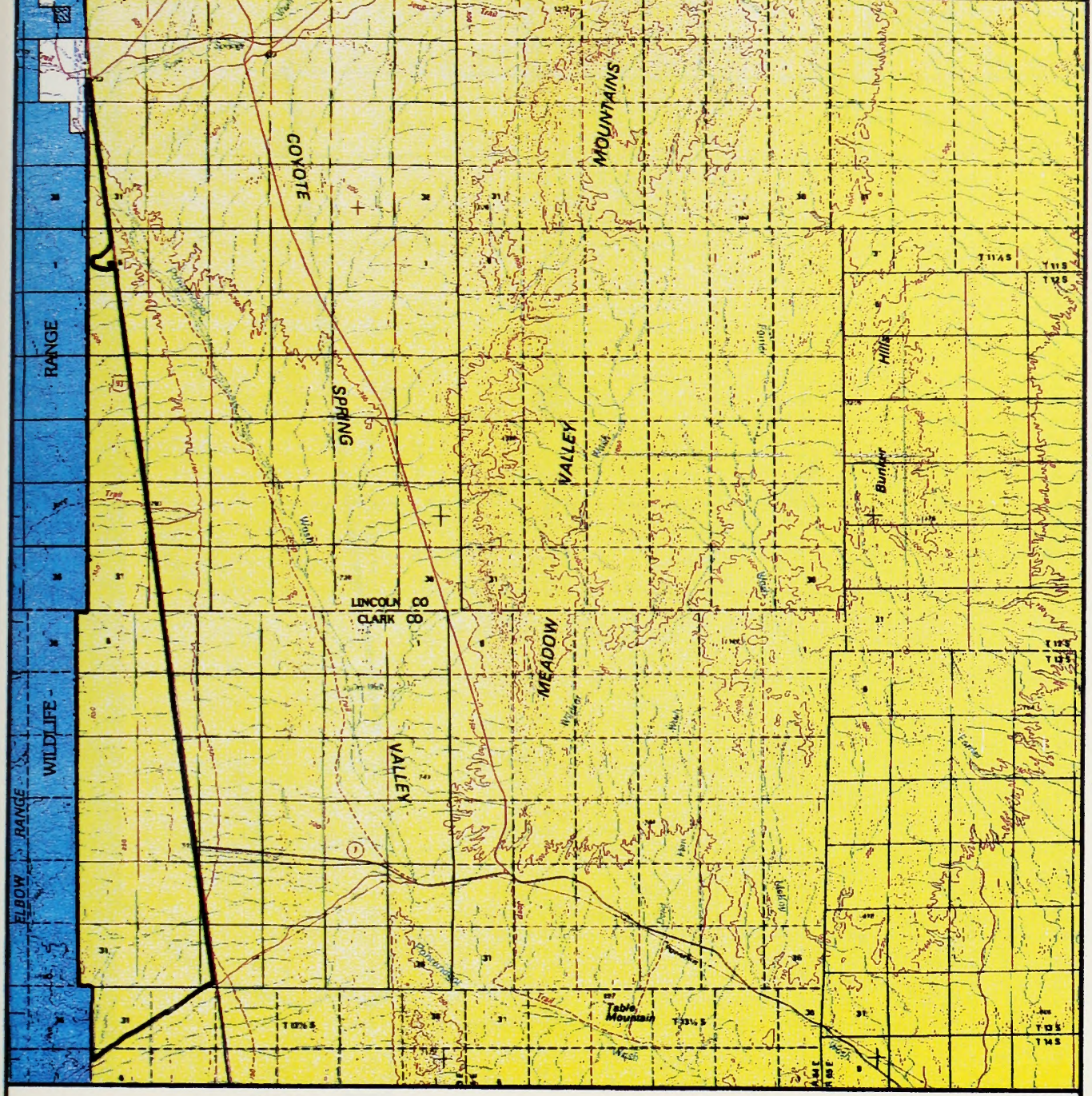
Fish and Wildlife 1, 2, and 3 WSAs have minimal potential for mineral development. However, the edge of the WSAs along Highway 93 has high favorability for salable quantities of sand and gravel. Several right-of ways, within the WSAs, have been issued to the Nevada Department of Transportation for sand and gravel material sites. These rights-of ways have been issued in perpetuity and the total physical impacts from these sites would be 300 acres.

At present, there is little threat to existing naturalness of the area. A utility corridor route extending the entire length of the three WSAs, has been identified by potential users, including the Western Utility Group ("Western Regional Corridor Study", 1986). It is projected that five 500 KV transmission lines and one access road could be built within designated utility corridor. Industry has recommended a one mile wide utility corridor that would extend west of Highway 93 across all three WSAs.

Construction of these projected utilities and removal of sand and gravel would physically disturb an estimated 1,919 acres within the WSAs. Western portions of the WSAs are protected due to topography and other physical and administrative constraints. Therefore, even without wilderness designation, the quality and level of values now found in the WSA are not expected to significantly change.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM Fish and Wildlife #1 (surface and subsurface)	11,090
BLM Fish and Wildlife #2 (surface and subsurface)	17,242
BLM Fish and Wildlife #3 (surface and subsurface)	22,002
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	50,334
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM Fish and Wildlife #1	11,090
BLM Fish and Wildlife #2	17,242
BLM Fish and Wildlife #3	22,002
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	50,334
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

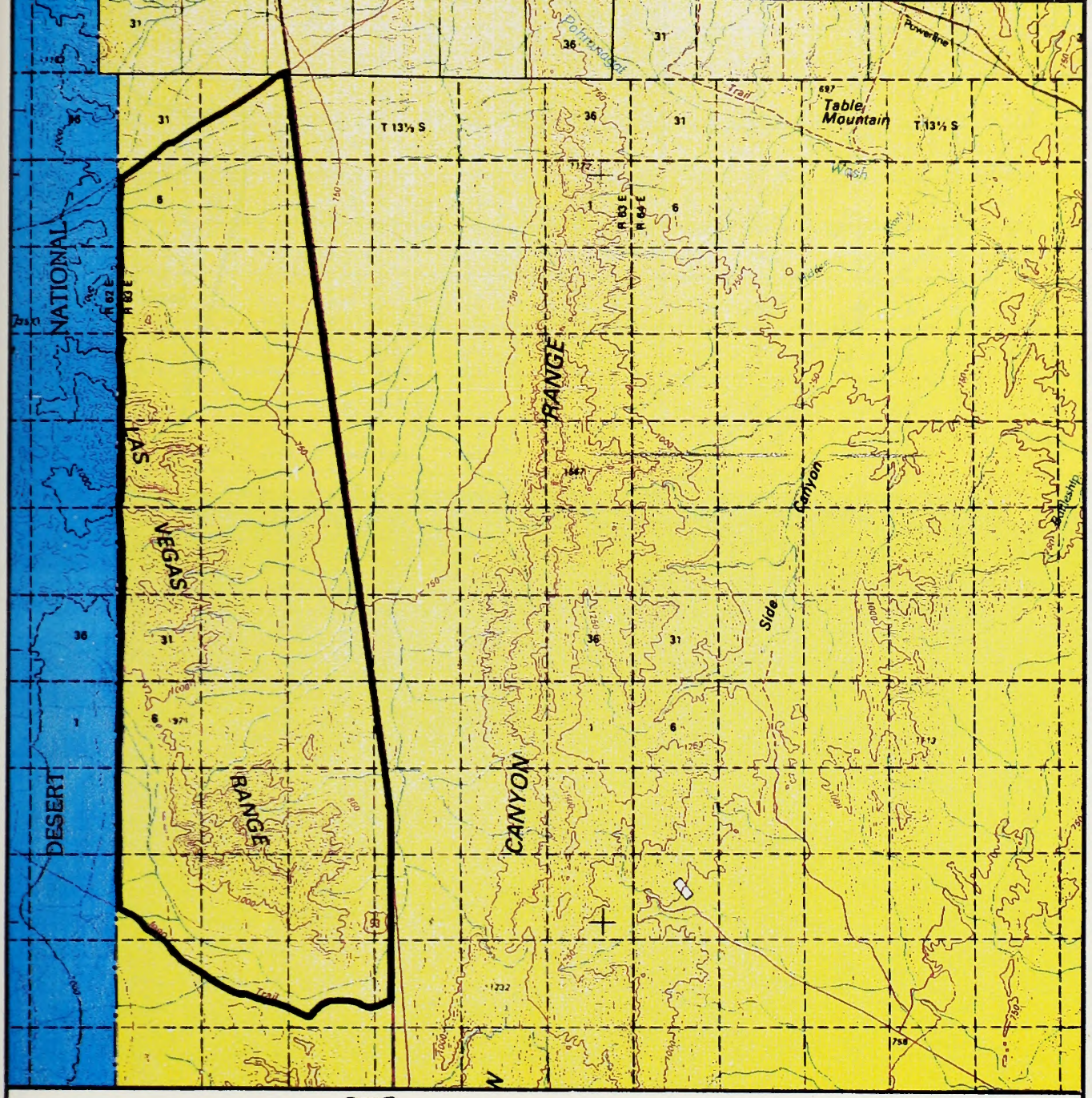
N

1 0 1 2 3 4 5

MILES

Fish and Wildlife #1
Proposal

NV-050-201
February 1990



RECOMMENDED FOR WILDERNESS – NONE

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

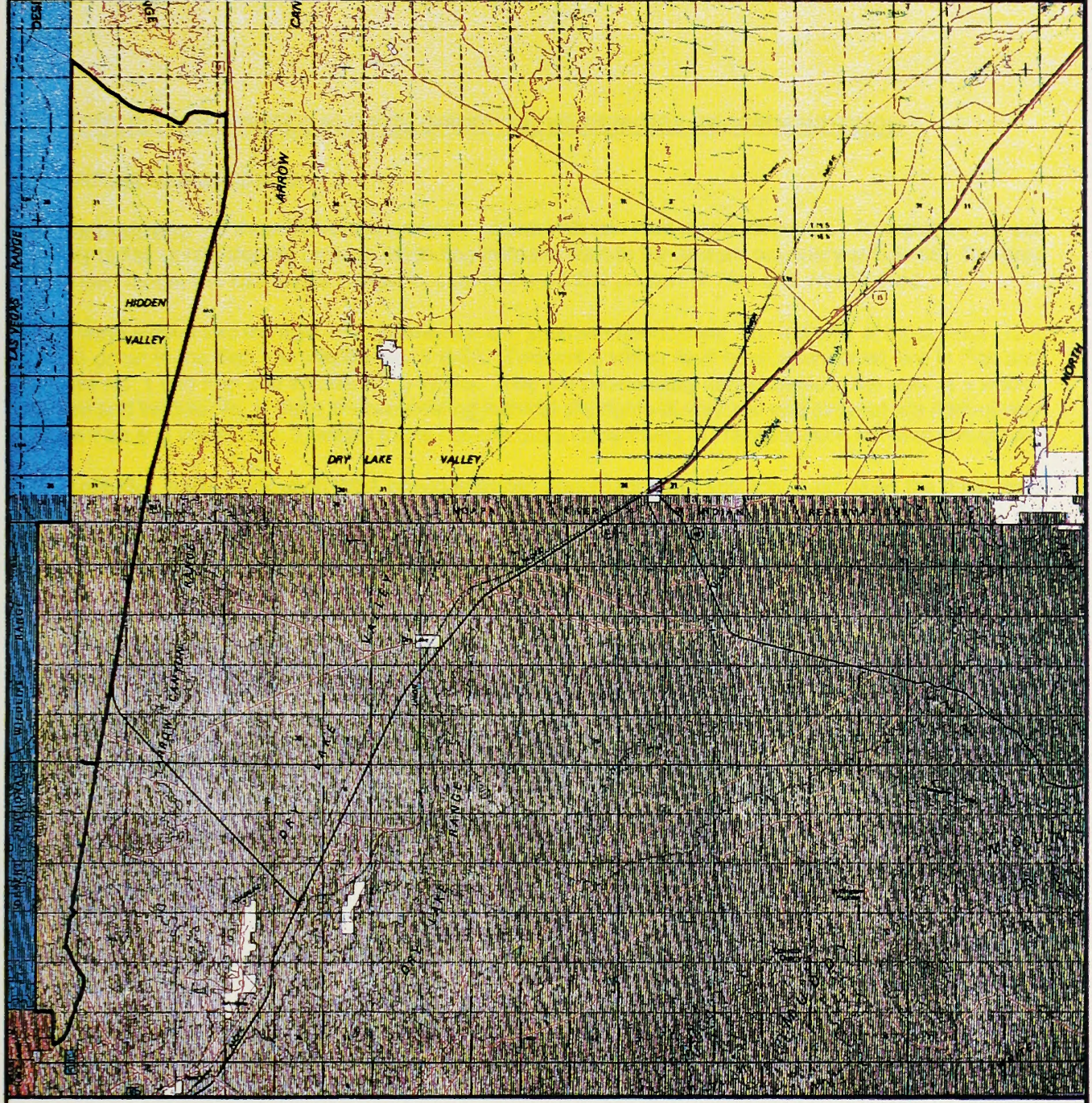
N

1 0 1 2 3 4 5

MILES

Fish and Wildlife #2
Proposal

NV-050-216
February 1990



Fish and Wildlife #3
Proposal

NV-050-217
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: All three WSAs are primarily natural with few man-made intrusions. Topography consist mainly of flat, gently sloping bajadas extending from the west to the eastern boundary at U.S. 95. The only mountain range, the Las Vegas Range, occurs in the central portion of Fish and Wildlife No.2.

Nine ways extend into the area from the eastern and southern boundaries. The majority of these ways (12.9 miles) occur in the Fish and Wildlife No. 3 WSA. Two wells, which have been abandoned, are in Fish and Wildlife No. 1 and Fish and Wildlife No. 3 WSAs. They are substantially unnoticeable in the area as a whole. In Fish and Wildlife No. 1, there are two existing material site rights-of-way and one material site right-of-way within Fish and Wildlife No. 3, issued to the Nevada State Department of Transportation for sand and gravel.

B. Solitude: Individually each WSA provides limited opportunities for solitude. Combined the three units provide areas of outstanding opportunities for solitude. Opportunities are somewhat limited due to the configuration of the units, and are primarily found in the central core area, in the low mountains of the Las Vegas Range, away from Highway 93 and the ways found in the southern end. Throughout most of the WSA topography and vegetation provide for minimal screening.

C. Primitive and Unconfined Recreation: Recreational opportunities in the study areas are fair for such activities as horseback riding, hiking, camping, nature study and sightseeing. All areas provide easy access for these activities, however, there are limited areas of interest or destination points within the WSAs. The Las Vegas Range in Fish and Wildlife No. 2 would provide the greatest opportunity for primitive and unconfined recreation. Other visits would most likely be transitory in nature, passing through the area to reach the Desert National Wildlife Range. Areas of interest to visitors for hiking and sightseeing would be the shelter caves found in Fish and Wildlife No. 2 and 3 and the bighorn sheep habitat in the Hidden Valley area. Primitive recreational use of the combined study areas is estimated to be 60 visits annually.

D. Special Features: Fish and Wildlife No.2 and 3 support a small herd of bighorn sheep in the Las Vegas Range and Hidden Valley. Approximately 80-90 sheep inhabitant these locations.

The desert tortoise (Gopherus agassizli), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. Forty-one thousand and nine hundred and nine acres within the three study areas have been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

A sensitive species of penstemon (Penstemon bicolor ssp. roseus), currently on the "Federal Register of Threatened and Endangered Species" as a Category 2 (Watch) species, has been identified within the WSAs.

Cultural resources include several sites consisting of lithic scatters, a rock alignment, some points and flakes and midden are located in the WSAs. The most important of the sites, Flaherty Shelter Cave in Fish and Wildlife 3, has been dated back to 10 B.C. None of these areas are currently listed on the National Register and there are no plans to list them in the near future.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the three portions of the Fish and Wildlife WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS) by including an additional area representing the American Desert Province/Creosote Bush ecosystem. This ecosystem is currently included in only one designated wilderness area. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote bush	0	0	20	549,834

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: Fish and Wildlife 1, 2, and 3 WSAs are within a five hour drive of one major population center. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population center.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: Fish and Wildlife Nos. 1, 2 and 3 WSAs would contribute to the geographic distribution of areas within the national Wilderness Preservation System in Nevada. Designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of Fish and Wildlife WSAs would contribute to the geographic distribution of areas within the national Wilderness Preservation System in Nevada. Designation of Fish and Wildlife Nos. 1, 2 & 3 WSAs, located in southeast Nevada, would provide the public a wilderness opportunity in another part of the state.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

Fish and Wildlife 1, 2, and 3 study areas are capable of being managed as wilderness however, there would be manageability concerns associated with the material sites and associated rights-of-way. There would also be management concerns with regard to the narrowness of the study areas and the unfettered accessibility for ORVs.

Energy and Mineral Resource Values

Energy and mineral potential of the WSAs has been rated by using the following information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling); (2) evaluation of the geologic setting; and (3) past and present mining activities.

Based upon available data, the following conclusions were reached: Fish and Wildlife Nos. 1 and 2 have moderate nonmetallic mineral potential through the entire WSAs for sand and gravel. The remainder of this area has low potential for nonmetallic minerals. Favorable locations of sand and gravel closer to the Las Vegas market has not created sufficient demand, for materials within the WSAs, to make these deposits of economic for commercial exploitation. All three WSAs have low potential for metallic minerals, even though there are four post FLPMA mining claims in the southern portion of Fish and Wildlife No.1. The claims have never been developed.

All of Fish and Wildlife Nos. 1 and 2 have moderate potential for oil and gas. There are no leases present.

Impacts on Resources

The comparative impact tables (Tables 4, 5 and 6) summarize the effects on pertinent resources for alternatives considered including designation or nondesignation of the three areas of the Fish and Wildlife WSA as wilderness. There is a separate table for each of the three areas.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA-Specific Comments

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. One of the oral comments supported the preferred alternative (no wilderness) for the study area. The other comments did not mention these WSAs.

Of 36 written comments, four supported the preferred alternative and five proposed all wilderness. The subjects of the comments were mineral potential, race courses and excessively easy accessibility, the use of a buffer area between the Desert National Wildlife Range and the highway, potential wilderness in the Range, an endangered plant, solitude and the placing of a transitional zone between the Mojave Desert and the Great Basin Desert into the National Wilderness Preservation System.

No comments were received from Clark or Lincoln County.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS.

Table 4
Comparative Summary of the Impacts by Alternative - Fish and Wildlife #1

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Projected development of utilities, motorized recreational vehicle use, extraction of sand and gravel and mineral exploration are projected to physically disturb an estimated 823 acres. The visual perception of naturalness would be impaired on the entire WSA. Outstanding opportunities for solitude and primitive recreation within the entire WSA would be diminished and, in some instances lost due to audio and visual distractions.	Extraction of sand and gravel is projected to physically disturb an estimated 320 acres. The visual perception of naturalness would be impaired on the entire WSA. Outstanding opportunities for solitude and primitive recreation within the entire WSA would be diminished during periods of active sand and gravel operations due to audio and visual distractions.
Exploration for, and development of Non-Energy Mineral Resources	All lands within the WSA would remain open to mineral entry. No adverse impacts on the exploration or development of mineral resources is anticipated.	Exploration for and development of mineral resources would be foregone within the WSA due to a withdrawal from mineral entry. 320 acres would be developed by the state for sand and gravel extraction on existing material sites.
Motorized Recreational Use	Motorized recreational use would increase under the Proposed Action. No adverse impacts to this use is expected to occur.	Motorized recreational use of 45 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.
Development of Utilities	The proposed action would allow the development of five transmission lines in the WSA, however, four buried utility lines would not be developed because of unacceptable impacts on desert tortoise in Category I habitat.	Under the All Wilderness Alternative, utilities could not be developed within the WSA.
Existing Material Site Rights-of-Way	No impact to existing material site rights-of-way.	No impact to existing material site rights-of-way.
Threatened and Endangered Species Desert Tortoise	823 acres of Category I desert tortoise habitat would be lost due to utility development, sand and gravel extraction, motorized recreational use and mineral exploration.	320 acres of Category I habitat would be lost due to the extraction of sand and gravel from existing material sites.

Table 5
Comparative Summary of the Impacts by Alternative - Fish and Wildlife #2

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Projected development of utilities and motorized recreational vehicle use are projected to physically disturb an estimated 400 acres. The visual perception of naturalness would be impaired on the entire WSA. Outstanding opportunities for solitude and primitive recreation within the entire WSA would be diminished and, in some instances lost due to audio and visual distractions.	Designating the WSA as wilderness would preserve wilderness values of naturalness, outstanding opportunities that exist for solitude, and would enhance the protection of desert tortoise.
Levels of Motorized Recreational Use	Motorized recreational use would increase under the Proposed Action. No adverse impacts to this use is expected to occur.	Motorized recreational use of 75 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.
Development of Utilities	The proposed action would allow the development of five transmission lines in the WSA, however, four buried utility lines would not be developed because of unacceptable impacts on desert tortoise in Category I habitat.	Under the All Wilderness Alternative, utilities could not be developed within the WSA.
Threatened and Endangered Species/Desert Tortoise	400 acres of Category I desert tortoise habitat would be lost due to utility development and motorized recreational use.	Category I habitat would be preserved within the WSA.

Table 6
Comparative Summary of the Impacts by Alternative - Fish and Wildlife #3

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Projected development of utilities, motorized recreational vehicle use, extraction of sand and gravel and mineral exploration are projected to physically disturb an estimated 696 acres. The visual perception of naturalness would be impaired on the entire WSA. Outstanding opportunities for solitude and primitive recreation within the entire WSA would be diminished and, in some instances lost due to audio and visual distractions.	Designating the WSA as wilderness would preserve wilderness values of naturalness, outstanding opportunities that exist for solitude, and would enhance the protection of the desert tortoise and the sensitive plant. Activities related to the authorized extraction of sand and gravel and unauthorized vehicle use would impair naturalness qualities over approximately 50 acres of the WSA.
Levels of Motorized Recreational Use	Motorized recreational use would increase under the Proposed Action. No adverse impacts to this use is expected to occur.	Motorized recreational use of 60 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.
Development of Utilities	The proposed action would allow the development of five transmission lines in the WSA. Four buried utility lines would not be developed because of unacceptable impacts on desert tortoise in Category I habitat. Special considerations would be given to the penstemon population.	Under the All Wilderness Alternative, utilities could not be developed within the WSA.
Existing Material Site Rights-of-Way	No impact to existing material site rights-of-way.	No impact to existing material site rights-of-way.
Threatened and Endangered Species/Desert Tortoise	696 acres of Category I desert tortoise habitat would be lost due to utility development, sand and gravel extraction, and motorized recreational use.	Category I desert tortoise habitat would be preserved within the WSA except for an estimated 50 acres of which would be lost due to the extraction of sand and gravel from an existing material site.

LIME CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA - 34,680 acres

Lime Canyon WSA (NV-050-231) is located in the Overton Arm region, near Lake Mead, northwest of Gold Butte in eastern Clark County, Nevada. The study area includes 34,680 acres of public land and surrounds 838 acres of patented mining claims (Table 1). The WSA has a generally elongated shape that is north-south oriented. It is about 13 miles long and varies between three and seven miles wide. Lake Mead National Recreation Area (LMNRA) borders the WSA on the west and the boundary is the western boundary of the WSA. Gold Butte Wash and the Old Gold Butte Road is the eastern boundary. Quail Spring Wash Road is the southern boundary for approximately 2.5 miles before the boundary turns down a major wash north of Mocking Bird Spring.

The WSA consists of small, rugged drainages, gently rolling hills, two paralleling ridges, a narrow canyon and several wide, sandy washes. Lime Canyon offers outstanding scenic vistas of Lake Mead to the south and west and the Muddy Mountains beyond the National Recreation Area. It also has colorful rock strata and dynamic geologic formations. Faulting and erosion have exposed a variety of sediment deposits throughout the WSA.

The WSA contains noncrucial desert tortoise habitat along the western boundary. Vegetation is typical of Mojave Desert type with some interspersed areas of Joshua trees.

Lime Canyon WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Nevada Contiguous Lands Final Wilderness Recommendations Environmental Impact Statement released in January, 1990. Three alternatives were analyzed in the EIS: an All Wilderness Alternative, a No Wilderness Alternative, and a Partial Wilderness Alternative, which is the recommendation of this report, where 13,895 acres would be designated as wilderness and 20,785 acres would be released for uses other than wilderness.

2. RECOMMENDATION AND RATIONALE - 13,895 acres recommended for wilderness
20,785 acres recommended for nonwilderness

The recommendation for this WSA is to designate approximately 13,895 acres of as wilderness and release approximately 20,785 acres for uses other than wilderness (Map 1). All Wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. The partial wilderness alternative,the recommendation of this report, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The central portion of the WSA is recommended for wilderness because of high quality wilderness values of naturalness, outstanding opportunities for solitude and primitive recreation, and the lack of conflicts with other actual or potential users of the area.

Topographically diverse, the recommended area consists of alluvial and badlands formations, a hogback like limestone ridge, deep rock drainages, and wide sandy washes. Remoteness and topographic diversity of the area coupled with the adjacent undeveloped lands to the east, ensures outstanding solitude opportunities of the highest quality.

Designation of the area recommended for wilderness would expand the spectrum of primitive recreational opportunities for residents and visitors within the southern Nevada region. Pristine scenic vistas would also

be preserved. Popular recreation activities such as sightseeing, photography, hiking, and backpacking would be enjoyed within an expansive primitive setting.

Wilderness designation will preserve an undisturbed area of ecological interest, providing educational and scientific information. A variety of wildlife inhabit the area and the potential for identifying prehistoric cultural sites exists. Three major faults cross the area and make interesting geologic features.

Inaccessibility of the adjacent Lake Mead National Recreation Area land and rugged terrain provide natural, physical barriers to vehicular access. Remoteness of the area, demanding topography, and easily recognizable boundaries would enhance manageability of the area as wilderness.

Conflicts with other resource uses of the lands recommended for designation are limited. The U.S. Geological Survey and Bureau of Mines report indicate that high volume-low value commodities, such as limestone, dolomite, and sand and gravel would not be mined in the area because of the distance to market and the availability of similar resources in the region. Development of gypsum resources and exploration for energy resources is projected to occur on lands adjacent to the area recommended for wilderness. Projected activity would indirectly conflict with opportunities for solitude along the recommended area's eastern boundary. No other resource conflicts are projected for the area.

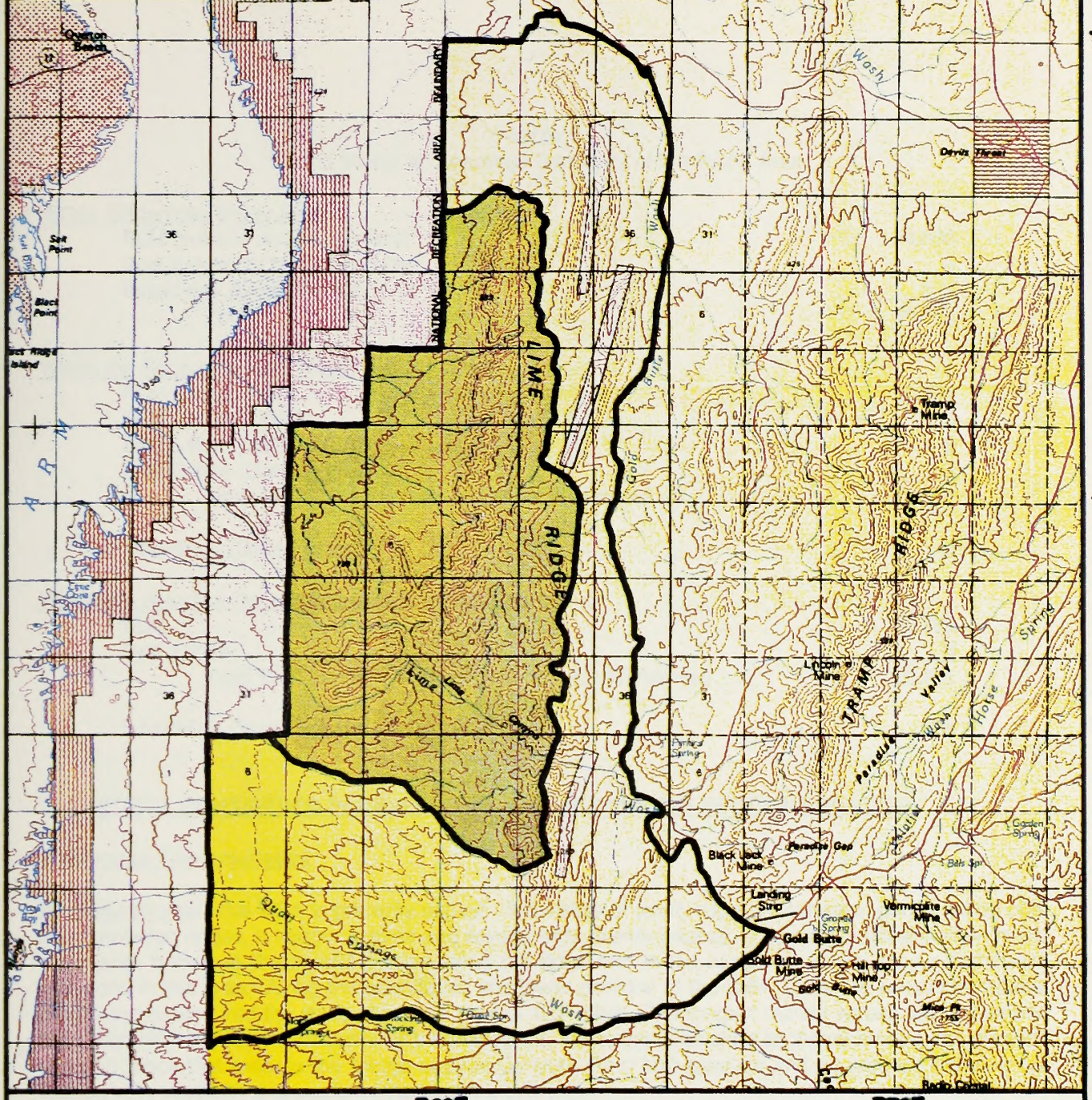
The 20,785 acres of public land, not recommended for wilderness, completely surrounds the land recommended for wilderness on all sides except for the border contiguous with the Lake Mead National Recreation Area. Three parcels of patented land are within the land not recommended for wilderness.

Mineral development is projected to occur within the area an on the three patented mining claims. Development of minerals would require access into the patented claims, across public land. Development of minerals within the patented mining claims would negatively influence wilderness values on the surrounding public land not recommended for wilderness. Exploratory drilling of one oil and gas well is projected to occur along the WSA's eastern border.

Not designating 20,785 acres of public land for wilderness would enhance management of the area by eliminating conflicts with potential development of access to private land, mineral development, and oil and gas exploration activities.

Lands not recommended for wilderness designation would be negatively impacted by any activity occurring on the patented mining claims. Not recommending these areas for wilderness emphasizes maintaining access for motorized recreational activities, such as off-road and cross country driving.

Over the long-term, naturalness values and opportunities for solitude within those lands not recommended for wilderness would be diminished by increased motorized recreational use and mineral and energy exploration and development. Desert tortoise (Gopherus agassizi), golden bear poppy (Arctomecon california), and gila monster (Heloderma suspectum), special features identified in the area, would not receive the added protection afforded from wilderness designation.



RECOMMENDED FOR WILDERNESS

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE - NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Lime Canyon Proposal

NV-050-231
March 1990

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	34,680
Split Estate (BLM surface only)	0
Inholdings (State, Private)	838
Total	35,518
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	13,895
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	13,895
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	20,785
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	20,785
Inholdings (State, Private)	838

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is primarily natural. It consists of small, rugged drainages, gently rolling hills, two paralleling ridges, a narrow canyon and several wide, sandy washes. The most pristine portion of the study area occurs in the central portion along the ridge and in the canyons. There are no man-made intrusions in this area. Along the boundaries and lower portions of the WSA, there are several intrusions. Eight ways extend into the study area for a total of 12.7 miles. The longest occurs across the bajada and wide washes in the southwest corner of the study area. There are three short allotment fences, one of which is a gap fence that crosses the mouth of Lime Canyon. Two bird guzzlers and an earthen reservoir are found in the southern and eastern fringes of the WSA.

B. Solitude: Within the area recommended for wilderness designation outstanding opportunities for solitude exist. Excellent topographic screening exists due to the large diversity of topography which ranges from small, rugged drainages to gently rolling hills. Two paralleling ridges extend the length of the WSA to the narrow canyon and several wide washes on the edge of the unit. The central and northern portions (approximately 10,000 acres) provide maximum topographic screening and secluded areas where outstanding opportunities for solitude occur. The most prominent secluded area occurs along Lime Ridge, which runs the length of the WSA. Excellent opportunities also exist in Lime Canyon.

Vegetation within the unit is typical of the Mojave Desert, including cactus, creosote bush, annual grasses, scattered communities of Joshua trees and yucca plants. Low growing vegetation provides nominal screening, except along the eastern boundary where intermittent stands of Joshua provide better screening.

C. Primitive and Unconfined Recreation: There are numerous opportunities for primitive and unconfined recreational activities, including day hikes, backpacking, nature study, hunting and photography. Outstanding opportunities for primitive recreation occur mostly in the central portion of the study area along major ridges, canyons, drainages and rolling hills. The greatest variety of topography, wildlife and points of interest are located within this portion of the WSA.

D. Special Features: Lime Ridge and Lime Canyon are of unique scenic and geologic quality resulting from faulting activity within he WSA. The desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. In 1988, a habitat management plan for the tortoise was adopted by the BLM. It calls for the categorization of their habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently permanently listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Lime Canyon WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS). The Lime Canyon WSA is within the American Desert Province, and Creosote Bush is the predominant ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS areas Areas	NWPS areas Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province/ Creosote Bush	1	343,753	117	4,233,229
	NEVADA			
Creosote Bush	0	0	13	377,660

B. 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 one major population center, Las Vegas Nevada. Phoenix is within 250 air-miles of the WSA although actual travel time would be approximately seven hours. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive or 250 air-miles of population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Center	NWPS Areas Areas	NWPS Areas Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: The Lime Canyon WSA would contribute to the geographic distribution of areas within the NWPS in southeastern Nevada by providing the public a wilderness opportunity in an area of the state presently limited in wilderness opportunities.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire WSA is not reasonably manageable as wilderness. Management of vehicular access along the southern and eastern portions of the WSA due to accessibility and limited physical impediments is a significant concern. The 838 acres of patented mining claims within the interior of the WSA and access to those claims is a concern.

The 13,895 acre portion of the WSA recommended for wilderness designation is easily managed as wilderness. The patented mining claims are external to this area.

Five pre-FLPMA load claims are located within the WSA. Valid existing rights are uncertain at this time. There are no known post-FLPMA mining claims within the WSA as of the date of this report.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following information: (1) a mineral report submitted by the U.S. Bureau of Mines (Report Number MLA 34-88 studied 9,599 acres of the WSA.), (2) a literature search, (3) evaluation of the mineral setting, (4) field verification by BLM and BoM geologists (such verification included chemical analysis of rock samples.), (5) the GEM Report of 1983 (GRA No. NV-35), and (6) past and/or present mining activities.

As a result of this information, the following conclusions were reached: The entire WSA has moderate potential for nonmetallic minerals (gypsum). Although there is abundant deposits of limestone and dolomite, they have low development potential. Similar deposits closer to a market make these deposits of lower value. The Lime Canyon WSA is considered to have low favorability for the occurrence of energy resources.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (Partial Wilderness)	All Wilderness	No Wilderness
Wilderness Values	Wilderness values and the special geological value of Lime Canyon would be retained within 12,905 of the 13,895 acres recommended for wilderness. Wilderness values on the remaining 985 acres of the recommended area would be diminished and, in some instances lost, due to projected gypsum mining occurring on adjacent public and private lands and occasional unauthorized cross country vehicle use. There would be a loss of wilderness values on the 20,785 acres not recommended for wilderness designation as continued and increasing cross country recreational vehicle use, projected mineral development, and oil and gas exploration would negatively impact wilderness values. Special features would be afforded some protection through mitigative measures and the implementation of future management actions.	Designation would preserve wilderness values of naturalness, outstanding opportunities for solitude, and primitive recreation and the special features of the aforementioned Category 2 "Threatened and Endangered" species and Lime Canyon that exist within 17,880 of the WSA's 34,680 acres. Approximately 615 acres within the WSA would be physically disturbed by the projected activity associated with authorized mining and unauthorized vehicle use. The scarification of topography and the sights and sounds from heavy equipment associated with the mining would negatively impact the natural perception, outstanding opportunities for solitude and primitive recreation, and the scenic features of Lime Ridge within approximately 13,800 acres of the WSA.	The sights, sounds and surface disturbances created by increased cross country motorized recreational use, projected mineral development and oil and gas exploration would contribute to the loss of wilderness values on 21,765 acres of the WSA. Special features would be afforded some protection through mitigative measures and the implementation of future management actions. Wilderness values would be retained within the remaining 12,915 acres of the WSA as no surface disturbing activities are projected to occur.
Exploration for and Development of Non-Energy Mineral Resources	Exploration and development of gypsum resources would be foregone on unclaimed lands within the area recommended for wilderness. However, no mineral exploration or development of these lands is projected. The development of two gypsum mines is projected to occur in the area not recommended for wilderness.	Exploration and development of mineral resources would be foregone on unclaimed lands within the WSA. The development of two mines is projected to occur within the WSA under the All Wilderness Alternative. As no other mineral exploration or development in the WSA is projected, impacts to mineral resources would not occur.	Mineral resources within the WSA would be available for exploration and development. The development of two mines for gypsum is projected to occur within the WSA. There are no projected adverse impacts on the exploration for and development of mineral resources.
Threatened and Endangered Species/Desert Tortoise	The status of tortoise habitat in the area is unknown. Adverse impacts could unknowingly occur until further population studies are conducted.	Tortoise habitat which may exist within the area would be protected by wilderness designation.	The status of tortoise habitat in the area is unknown. Adverse impacts could unknowingly occur until further population studies are conducted.

Table 4 Continued
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (Partial Wilderness)	All Wilderness	No Wilderness
Exploration for Oil and Gas	Exploration of potential oil and gas resources would be foregone within the area recommended for wilderness. However, exploration is not projected to occur. The exploration of one well is projected within the area not recommended; production is not expected.	The exploratory drilling of one oil and gas well projected within the WSA would be foregone.	Oil and gas resources within the WSA would be available for exploration. The drilling of one exploratory well is projected to occur within the WSA. There are no projected adverse impacts on the exploration for energy resources.
Motorized Recreational Use	Motorized recreational use would be eliminated on the 13,895 acres recommended for wilderness designation and approximately 40 visits would be displaced annually. The impacts of shifting this use to other public lands would be negligible.	Motorized recreational use of 180 visits would be displaced annually from the WSA. The impacts of shifting this use to other public lands would be negligible.	Motorized recreational use would benefit under the No Wilderness Alternative. No adverse impacts to this use is expected to occur.

Summary of WSA Specific Comments

In 1986, the area was reinstated in the wilderness study process as a result of an April 1985 decision in Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983. As a result of the court case, the area was reinventoried to document wilderness characteristics.

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. One of the oral comments supported the Preferred Alternative (Partial Wilderness) for the Lime Canyon WSA. None of the other comments mentioned this WSA.

Of the 36 written comments, eight supported the preferred alternative and none specifically recommended another alternative for this WSA. The subjects of the comments were mineral potential, race courses, designation of adjacent lands as wilderness, watershed and wildlife habitat.

No comments were received from Clark County.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS and the recommendation is partial wilderness.

MILLION HILLS WILDERNESS STUDY AREA

1. THE STUDY AREA - 21,296 acres

The Million Hills WSA (NV-050-233) is located in northeastern Clark County, approximately 45 miles east of Las Vegas, Nevada, across Lake Mead in an area known as Gold Butte. Although relatively close to Las Vegas, Million Hills WSA is more than two hours driving time away. The study area contains 21,296 acres of public land (Table 1). The border is composed of nine miles of section lines, 3.4 miles of fence (bordering land reserved by the Bureau of Reclamation), 10.5 miles of road and physiographic features for 8.8 miles.

Million Hills WSA is an elongated shape, approximately 10 miles in length and slightly more than five miles wide, at its widest point. The Arizona-Nevada border is the eastern boundary of the WSA from the Thomas Gap Road south to Bureau of Reclamation withdrawn land. Lake Mead National Recreation Area is contiguous to the southern three miles of the WSA. The northeast boundary extends slightly more than one mile along the shoulder of the Thomas Gap Road from the Arizona-Nevada state line to a wash. The west boundary of the WSA starts at the Thomas Gap road and extends southwest, up a wash, to a mining exploration road, along the shoulder of that road south to the Garden Spring Road. The west boundary continues south along an old dirt road from the Garden Spring Road to the Devils Cove Road. The boundary continues south on the shoulder of the Devils Cove Road to the intersection of the road and Bureau of Reclamation land in township 19 south, range 71 east, section 31. Bureau of Reclamation withdrawn lands, from the Devils Cove Road to the Arizona-Nevada border, is the southern boundary.

The study area consists of a minor relief outwash plain at its north end that gives way to gently rolling hills leading southward into the center of the unit. A low, eastward sloping ridge with a prominent peak occupies the west central portion of the area. Behind the main ridge to the east lies a north-south trending ridge of lower relief hills. The area has been active geologically, showing faulting, erosion of bedrock, foliation and light banding. Numerous canyons, drainages and washes dissect the unit, most of which drain into Lake Mead. Elevations range from 1,883 feet to 4,183 feet. Vegetation consists of low desert shrubs, creosote, yucca and small areas of pinyon pine and juniper on higher elevations.

Approximately 1800 acres within the northern portion of the WSA have been identified as crucial desert tortoise habitat.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 and was included in the Final Nevada Contiguous Lands Wilderness Environmental Impact Statement (EIS) released January 22, 1990. Three alternatives were analyzed in the EIS; an All Wilderness Alternative, a Partial Wilderness Alternative where 11,050 acres would be designated as wilderness and 10,246 acres released for uses other than wilderness and a No Wilderness Alternative, which is the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - 0 acres recommended for wilderness
21,296 acres recommended for nonwilderness

The recommendation for this WSA is to release all 21,296 acres of the WSA for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although our recommendation is not the all wilderness alternative, the recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The recommendation for the Million Hills WSA emphasizes maintaining access to the entire WSA for mineral exploration and extraction. The entire WSA has moderate nonmetallic mineral potential (dolomite and limestone) and the central portion has moderate metallic mineral potential (base metals). Of most significance is the presence of high grade cobalt in the area, which was identified in the Bureau of Mines Mineral Land Assessment Report of 1988 (MLA 34-88). Cobalt is currently listed as a Strategic and Critical Material. The collected samples showed a grade comparable to that found in the nation's only primary cobalt deposit.

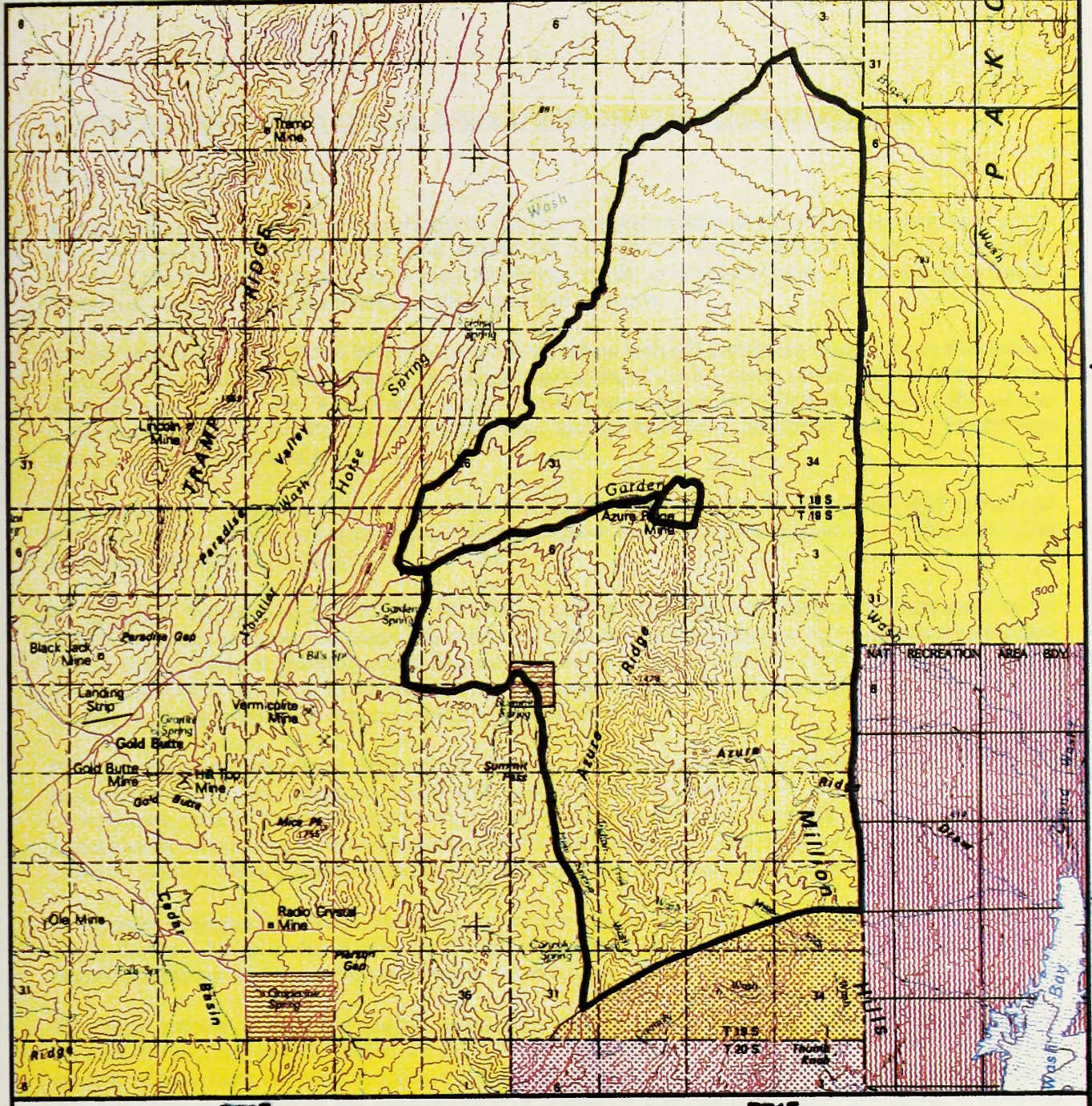
The recommendation would also permit exploration of oil and gas within the northern portion of the WSA. Although the area rates a low potential for the occurrence of energy resources, exploration adjacent to the WSA has been active. In addition interest has been expressed by the holder of the five oil and gas leases in the area to actively explore for energy resources.

The significant showing of cobalt in the area combined with the current interest (80 acres of mining claims) is sufficient evidence to conclude that in the future this area could produce significant quantities of important mineral resources.

The exploration and potential extraction of mineral resources in this WSA, particularly cobalt, will cause the loss of wilderness values. The projected exploration of some or all of the 80 acres of mineral claims and the 2,800 acres of oil and gas leases would affect an estimated 12,656 acres of the WSA. Even after mineral exploration much of the extreme southern portion of the WSA will retain wilderness characteristics.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	21,296
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	21,296
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	21,296
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	21,296
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

Million Hills Proposal

NV-050-233
March 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is primarily natural. The topography of the area's north half is composed of low ridges and gently rolling hills. Wide sand washes cut through the hills and alluvial slopes. The southern portion of the WSA consists of a north-south tilted ridge made up of colorful folds. The ridge gives way to numerous steeply rugged perpendicular drainages and canyons.

Several ways pass through the WSA. A two mile way runs through Immigrant Canyon from the Garden Springs Road to the Devil's Cove Road. A second way extends from the north side of Garden Springs Road along the wash's ridge line. A third way, about 1/2 mile long, comes into the WSA from the southwest and a fourth extends from Devil's Cove Road into New Spring Wash to a developed spring. The fifth way extends from the northeast boundary.

Two short barbed wire fences are located within the WSA for a total of 1.8 miles in the northeast corner and in the southwest. There are two developed springs present, New Spring in the southwest corner and Julies Spring northwest of Azure Ridge.

B. Solitude: Outstanding opportunities for solitude can be found within approximately 9,500 acres of the WSA. These opportunities are essentially offered by abundant rock outcrops along Azure Ridge and Million Hills, a broken chain of low-lying hills separated from Azure Ridge by a draw. Combined vegetative cover of the mountain brush community and desert community species, the numerous drainages and canyons provide essential features to enhance solitude opportunities.

C. Primitive and Unconfined Recreation: Recreational opportunities are good to excellent. There are fantastic scenic vistas, secluded spots and geologic features that would entice visitors for hiking, photography, nature study or backpacking. These opportunities are available in two distinct desert atmospheres. The northern portion provides a low desert environment with marginal desert landscape. The southern portion offers excellent opportunities in a mid-elevation mountain brush environment.

D. Special Features: The WSA offers excellent raptor nesting sites, few of which are found within the Las Vegas District. There is also a large population of burros. They congregate here because of the gentle sloping landscape and the proximity to water in Lake Mead.

The desert tortoise (Gopherus agassizii), listed as a threatened species by the U.S. Fish and Wildlife Service on April 2, 1990, has been identified within the WSA. Eight thousand nine hundred and sixty acres of the study area have been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Million Hills WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS). The Million Hills WSA is within the American Desert Province, and Creosote Bush is the predominant ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS areas Areas	Acres	Other BLM Studies Areas	Acres
	NATION WIDE			
American Desert Province/ Creosote Bush	1	343,753	117	4,246,613
	NEVADA			
Creosote Bush	0	0	13	391,044

B. 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 one major population center, Las Vegas Nevada. Phoenix is within 250 air-miles of the WSA, although actual travel time would be approximately seven hours. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive or 250 air-miles of population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas Areas	Acres	Other BLM Studies Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: Designation of the Million Hills WSA would contribute to the geographic distribution of areas within the NWPS in Nevada. Designation of the Million Hills WSA, which is located in southeast Nevada, would provide the public a wilderness opportunity in an area of the state presently limited in its offering of wilderness opportunities.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire study area can reasonably be managed as wilderness to preserve wilderness values now present. The area is a solid block of public land with no private inholdings, State lands or rights-of-way. The perimeter is easily identifiable on all sides, except for the eastern boundary on the Arizona-Nevada state line, or is contiguous to the Lake Mead National Recreation Area. Accessibility to off-highway vehicles in the northern area would require additional commitment of resources to manage. Vehicular access would be mainly confined to the washes.

Five pre-FLPMA and two post-FLPMA mining claims are located in the central and west-central portion of the WSA, encumbering less than 120 acres. Five oil and gas leases, in the northwest portion of the WSA, encompass less than 2800 acres. Data on mining claims and oil and gas leases is from District micro-fiche files and current as of July 1, 1989.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated using the following information: (1) a mineral report submitted by the U.S. Bureau of Mines (Report Number MLA 34-88 studied 9,599 acres of the WSA.), (2) a literature search, (3) evaluation of the mineral setting, (4) field verification by BLM and BoM geologists (such verification included chemical analysis of rock samples.), (5) the GEM Report of 1983 (GRA No. NV-35), and (6) past and/or present mining activities.

As a result of this information, the following conclusions were reached. The entire WSA has moderate nonmetallic mineral potential (dolomite and limestone) and twenty per cent of the WSA has moderate metallic mineral potential (base metals).

Field review of the area by the U.S. Bureau of Mines identified the presence of cobalt (strategic mineral) associated with manganese deposits. The presence of cobalt is of special significance as the grade is comparable to that found in the Blackbird Mining district in Idaho, the nations only primary cobalt deposit.

Exploration on claims near the Azure Mine is projected to cause 6.4 acres of surface disturbance associated with three miles of road construction, drill pad construction and trenching of test pits.

Million Hills WSA is considered to have low favorability for the occurrence of energy resources. Presently, there are five oil and gas leases (2,800 acres) in the study area. Based on current energy exploration activity occurring outside the WSA, it is projected that two exploratory wells would be drilled within the northwestern portion of the WSA. Surface disturbance from the wells would total approximately 13.5 acres, involving six acres for well pads cleared of surface vegetation and topsoil and the construction of 2.5 miles of access roads.

In summary, quantities of various mineral or energy resources are unknown, but the potential is from low to moderate.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness	Partial Wilderness
Wilderness Values	The sights, sounds and surface disturbances created by increased cross country motorized recreational use, projected mineral and oil and gas exploration would contribute to the loss of wilderness values on 12,656 acres of the WSA. Wilderness values are expected to be retained in the remaining 8,640 acres of the WSA as no surface disturbing activities are anticipated.	Designation would preserve wilderness values of naturalness, outstanding opportunities for solitude, primitive recreation and the scenic features of Azure Ridge.	Naturalness, outstanding opportunities for solitude and primitive recreation and the geologically scenic Azure Ridge, would be retained in the 11,050 acres designated. Wilderness values would be lost on the 10,246 acres not designated as continued and increasing cross country motorized recreational use and the projected exploration of oil and gas would negatively impact the area.

Table 4 Continued
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness	Partial Wilderness
Motorized Recreational Use	Motorized recreational use would continue and increase under the Proposed Action.	Motorized recreational use of 150 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.	Motorized recreational use would be eliminated on the 11,050 acres recommended suitable for wilderness designation and approximately 75 visits would be foregone annually. The impacts of shifting this use to other public lands would be negligible.
Exploration for and Development of Non-Energy Mineral Resources	Mineral resources within the WSA would be available for exploration and development. The exploration of existing mining claims is projected to occur within the WSA. There are no projected adverse impacts on the exploration for and development of mineral resources.	Exploration and development of mineral resources would be foregone on all unclaimed lands within the WSA. Mineral exploration activity on existing claims would not occur due to the lack of significant mineralization to support validity examinations. Development of base metal resources is not projected to take place.	Exploration and development of mineral resources would be foregone on all unclaimed lands within the recommended suitable portion of the WSA. Mineral exploration activity projected to occur without wilderness designation would not occur due to the lack of valid claims if designation occurs. Development of base metal resources is not projected to take place within either the recommended suitable or nonsuitable areas.
Exploration for Oil and Gas	Oil and gas resources within the WSA would be available for exploration. The drilling of two exploratory wells is projected to occur within the WSA. There are no projected adverse impacts on the exploration for oil and gas resources.	The exploratory drilling of two oil and gas wells projected for the WSA would be foregone.	Lands within the recommended suitable portion of the WSA would be unavailable for energy exploration. However, no oil and gas exploration is projected to occur within this portion of the WSA. The drilling of two exploratory wells is projected to occur within the recommended nonsuitable area. No adverse impact to oil and gas exploration is projected to occur. Production from the wells is not expected.
Threatened and Endangered Species/Desert Tortoise	20 acres of Category I desert tortoise habitat would be lost to projected oil and gas exploration activity and increased cross country motorized vehicle use.	Designation of the WSA would eliminate the loss of 20 acres and enhance the protection of the 1,800 acres of Category I desert tortoise habitat.	20 acres of Category I desert tortoise habitat would be lost to projected oil and gas exploration activity and increased cross country motorized vehicle use.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA Specific Comments

In 1986, the area was reinstated in the wilderness study process as a result of an April 1985 decision in Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983. As a result of the court case, the area was reinventoried to document wilderness characteristics.

Public comments received during the reinventory (1986) supported the wilderness study area status because of the following reasons: opportunities for solitude, naturalness, special features and close proximity to National Heritage Sites. Of the seven comments four recommended that the area be designated wilderness. One comment specifically stated that the area should not be recommended for wilderness designation because of oil and gas and mineral resource potential.

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing in Reno, Nevada on August 4, 1988. None of the oral comments supported the all or partial wilderness alternatives and 2 supported the Proposed Action (No Wilderness Alternative).

Of 36 written comments, two supported the all wilderness recommendation, two favored the partial alternative and three supported no wilderness. The subjects of the comments were; desert tortoise, oil and gas leases, mineral resources, race courses, the possibility of adjacent wilderness in the NRA, wildlife habitat and watershed.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS.

The Great Basin Complex of the U.S. Fish and Wildlife Service supported the partial alternative to preserve the habitat of the desert tortoise.

No comments were received from Clark County.

GARRETT BUTTES WILDERNESS STUDY AREA

1. THE STUDY AREA - 11,835 acres

The Garrett Buttes WSA (NV-050-235) is located in eastern Clark County, approximately 45 miles due east of Las Vegas, Nevada. The study area contains approximately 11,835 acres of public land (Table 1).

The boundary begins at the intersection of the Catclaw Road and the Scalon Ferry Road. It proceeds to the west along the Catclaw Road to the boundary of the Lake Mead National Recreation Area and heads south along this boundary for almost four miles. It then meets land reserved by the Bureau of Reclamation and follows the northern edge of this land in a southeasterly direction until it meets the Lakeside Mine Road. The boundary then follows this road easterly to the Scalon Ferry Road and then to the north until it meets the Catclaw Road, the starting point. The WSA is approximately five miles wide by five miles long.

This WSA consists generally of a gently sloping outwash plain on the west, two rounded buttes to the east, and a small ridge running the length of the southern boundary. Elevations range from 1,195 to 3,920 feet. Vegetation is sparse, low desert shrub typical of the southern Mojave type.

The desert tortoise (Gopherus agassizii), currently listed on the "Federal Register of Threatened and Endangered Species" as a threatened species, has been identified within the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Nevada Contiguous Lands Wilderness Recommendations Final Environmental Impact Statement released January 22, 1990. There were two alternatives analyzed in the EIS: an All Wilderness Alternative and a No Wilderness Alternative which is the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
11,835 acres recommended for nonwilderness

The recommendation for this WSA is to release all 11,835 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation is not the All Wilderness Alternative, the recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

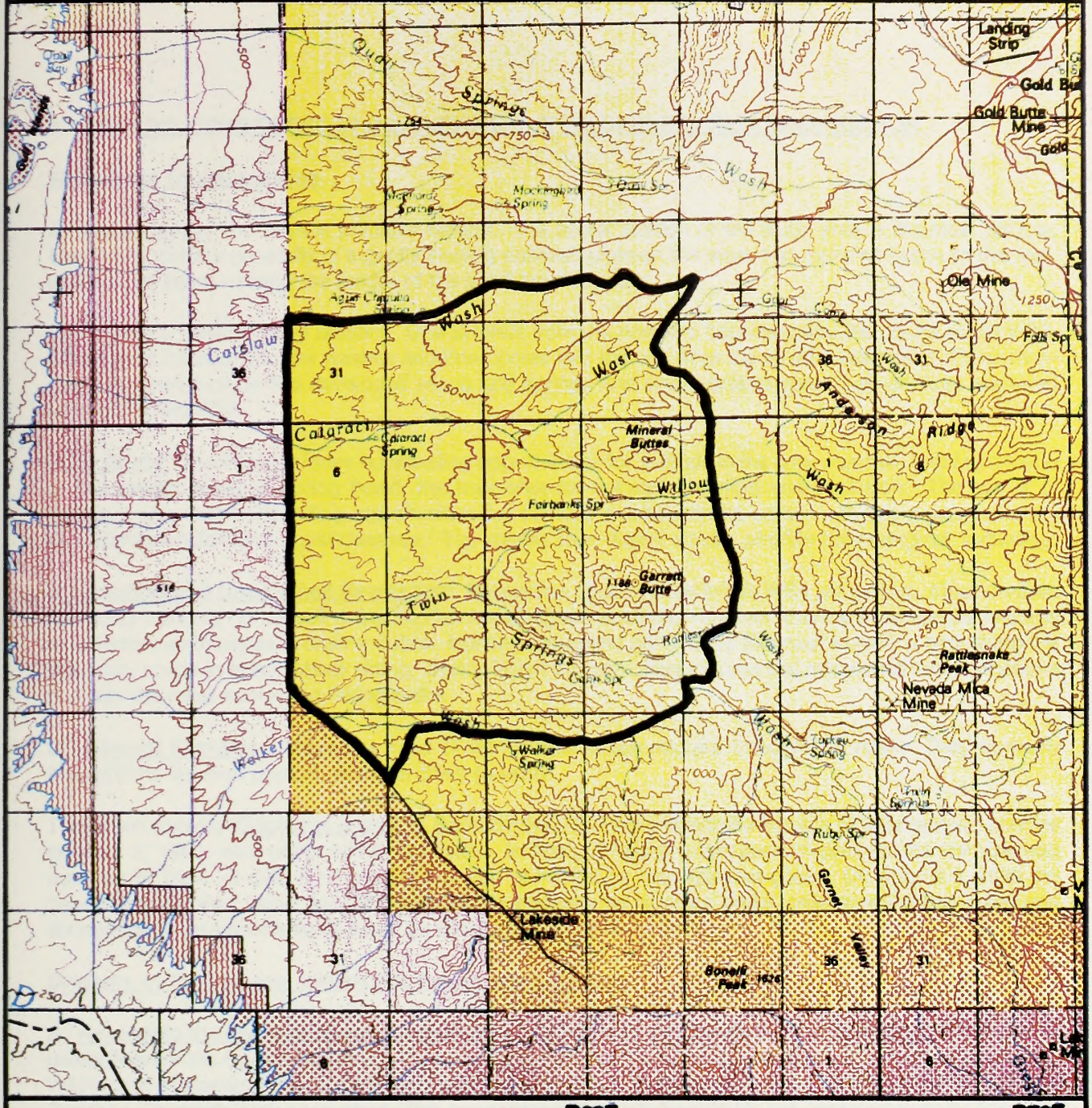
The quality of the wilderness values was the key consideration in the recommendation. While the WSA contained the wilderness values necessary for study, they are not considered to be of a quality to merit the area's inclusion in the National Wilderness Preservation system. The WSA generally appears natural but there are several site-specific signs of man, primarily rangeland improvements and wildlife developments, which impact naturalness locally. Solitude opportunities available in the WSA are similar to those afforded by the thousands of acres of land adjacent to the WSA. These opportunities are due to the remoteness of the area and not due to any intrinsic values unique to the WSA. The WSA does not offer outstanding opportunities for primitive and unconfined recreation.

In addition, the no wilderness recommendation for the WSA would emphasize maintaining access for motorized recreational activities such as off-road and cross country driving and upland game bird hunting. The WSA provides excellent opportunities for these activities as the area's character and terrain is best suited for these types of uses.

Over the long-term naturalness values and opportunities for solitude within the WSA would be diminished by the increase in motorized recreational activity. The desert tortoise (Gopherus agassizli), the special feature identified in the area, would not receive the added protection afforded from wilderness designation.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	11,835
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	11,835
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	11,835
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	11,835
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS – NONE

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE – NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Garrett Buttes Proposal

NV-050-235
March 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is primarily natural. The center portion of the study area is the most pristine. This WSA consists generally of a gently sloping outwash plain on the west, two rounded buttes to the east, and a small ridge running the length of the southern boundary.

There are 4.9 miles of ways present. One extends from the northern boundary into the center of the WSA. Other short intrusions follow washes and one comes into the unit from the eastern boundary. Other man-made features include five developed seeps and springs and seven upland game bird drinkers scattered throughout the WSA.

B. Solitude: The WSA provides outstanding opportunities for solitude in the short, narrow, twisting canyon at the eastern edge of Spring Wash, the best area for natural screening and seclusion. The unit is of sufficient size that outstanding opportunities for solitude exist within its center. At this point, the unit's boundaries would be at equal distance. The sparse, low, desert shrubs provide only marginal screening.

C. Primitive and Unconfined Recreation: Recreation opportunities in this WSA are limited. Opportunities for hiking, hunting, horseback riding and backpacking are available; however, there are few special features or attractive landscapes to draw a visitor. Hunting for upland game birds (Gambel's quail) is best along the boundary roads as is horseback riding. Spring Wash Canyon offers colorful and interesting rock formations and has the most interesting hiking areas.

D. Special Features: There is a herd of wild burros which migrate through the WSA. They normally frequent the western portion, which is close to water.

The desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, may occur within the WSA. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Garrett Buttes WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS) by including an additional area representing the American Desert Province/Creosote Bush ecosystem. This ecosystem is currently included in only one designated wilderness area. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas Areas	NWPS Areas Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote bush	0	0	20	549,834

B. 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 one major population center. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population center.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas Areas	NWPS Areas Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: The Garrett Buttes WSA would contribute to the geographic distribution of areas within the NWPS In Nevada. Designation of Garrett Buttes would contribute to the geographic distribution of areas within the NWPS in southeastern Nevada by providing the public with wilderness opportunities in an area of the state presently limited in its offering of wilderness areas.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character)

The study area is capable of being managed as wilderness but there will be some manageability concerns regarding the 20 acres under an oil and gas lease. There are no mining claims present.

There would be management concerns regarding unauthorized access for motorized types of recreational activities and access for maintenance of range improvements.

Energy and Mineral Resource Values

The energy and mineral potential of the WSA has been rated by using the following pieces of information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report-GRA No. NV-35 was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling.), (2) evaluation of the geologic setting and (3) past and present mining activities.

As a result of this information, the following conclusions were reached: 79 percent of the WSA

(approximately 6,509 acres) has moderate potential for nonmetallic minerals (sand and gravel). The entire study area has low potential for metallic minerals and energy resources. There is no known indication of mineralization within the WSA. Exploration of and development for potential minerals is not expected to occur within the WSA due to lack of interest, absence of mining claims and prospecting activity and poor marketable location.

The WSA is rated as having low potential for energy resources. Neither exploration nor development of potential energy resources is projected to occur as the rock strata of the WSA are not suitable reservoirs for hydrocarbon accumulation.

There are no mining claims or oil and gas, geothermal leases present as of the date of this report.

In summary, quantities of various mineral or energy resources are unknown, the potential for occurrence is from moderate to low in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for all alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Wilderness values of naturalness, outstanding opportunities for solitude and special features would be diminished and, in some instances, lost due to the sights, sounds and surface disturbances created by continued and the projected increase in motorized recreational use within the WSA. Special features would be afforded some protection through mitigative measures and the implementation of future management actions.	Designating the WSA as wilderness would preserve wilderness values of naturalness, outstanding opportunities that exist for solitude, and would enhance the protection of desert tortoise.
Motorized Recreational Use	Motorized recreational use would benefit under the Proposed Action. No adverse impacts to this use is expected to occur.	Motorized recreational use of 180 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.
Threatened and Endangered Species/Desert Tortoise	Dispersed motorized recreational use has the potential for impacting desert tortoise and their habitat.	Impacts on desert tortoise due to motorized vehicle use would be eliminated.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA-Specific Comments

In 1986, the area was reinstated in the wilderness study process and reinventoried to document its wilderness characteristics as a result of an April 1985 decision in Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983.

Public comments received during the reinventory (1986) supported the wilderness study area status because of the following reasons: opportunities for solitude, naturalness, special features and close proximity to National Heritage Sites. Of the seven comments, four recommended that the area be designated wilderness. One comment stated that the area should not be recommended for wilderness designation.

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. Two of the oral comments supported the preferred alternative (no wilderness) for this WSA. None of the other comments mentioned this WSA.

Of the 36 written comments, five supported the preferred alternative and one proposed all wilderness. The subjects of the comments were mineral potential, race courses and excessively easy accessibility.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS.

No comments were received from Clark County.

JUMBO SPRINGS WILDERNESS STUDY AREA

1. THE STUDY AREA - 3,466 acres

Jumbo Springs WSA (NV-050-236) is located in eastern Clark County, near the Lake Mead National Recreation Area (NRA), approximately 50 miles east of Las Vegas, Nevada and encompasses approximately 3,466 acres of public lands (Table 1). The WSA boundary is defined by physical features and common boundaries with the Lake Mead National Recreation Area to the east and Bureau of Reclamation withdrawn lands to the south. The western and northern boundary is defined by a progression of peak to peak lines and ridgelines. Section lines common with the Lake Mead National Recreation Area define the east boundary. A section line common with Bureau of Reclamation withdrawn land, immediately south of the WSA, is the southern boundary. Jumbo Springs WSA is approximately 3.5 miles long in a north-south direction and 1.5 miles in an east-west direction.

The WSA consists of the upper canyons of three major washes which drain from the edge of a plateau (Jumbo Basin) east toward Lake Mead. The canyons are rugged. Elevations range form 2,700 feet along the southeastern boundary to the 4,700 foot ridge on the northern end. Vegetation consists of low mountain brush species.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act and was included in the Final Nevada Contiguous Lands Wilderness Environmental Impact Statement (EIS) released in January, 1990. Two alternatives were analyzed in the EIS: an All Wilderness Alternative and a No Wilderness Alternative, which is the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - 0 acres recommended for wilderness
3,466 acres recommended for nonwilderness

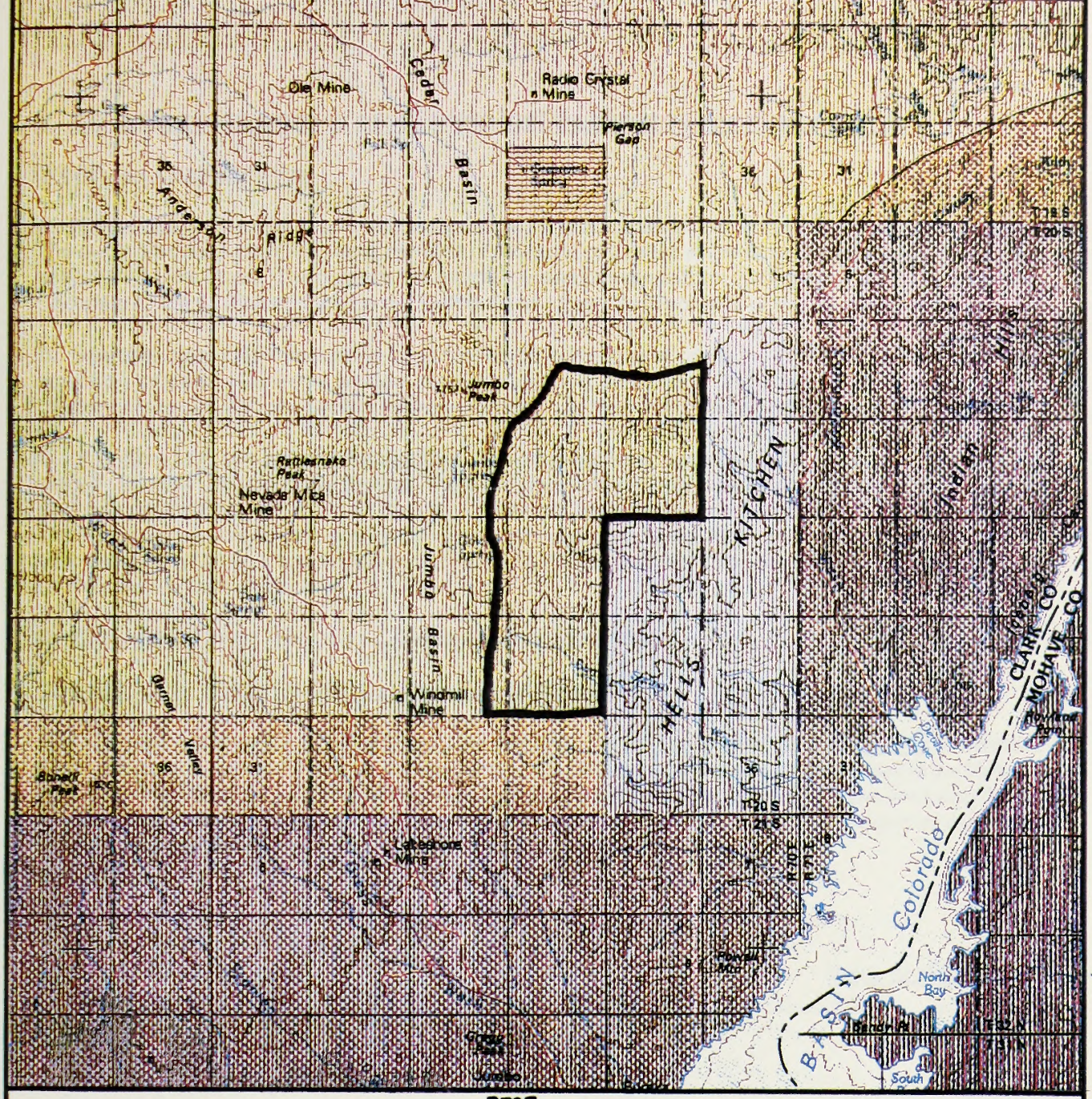
The recommendation for this WSA is to release all 3,466 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although our recommendation is not the all wilderness alternative, the recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

Lack of wilderness values and small size of the WSA were key considerations in the recommendation. The WSA generally appears natural, but outstanding opportunities for solitude and primitive recreation are lacking. The area's small size limits opportunities for solitude as there are few secluded locales or isolated spots. Visitors would frequently encounter one another due to the area's restrictive size and limited screening. Outstanding opportunities for primitive types of recreation are unavailable as interesting destinations and focal points of interest are absent.

The WSA would retain its natural qualities without wilderness designation as no surface disturbing activities are proposed for the area.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	3,466
Split Estate (BLM Surface only)	0
Inholdings (State, Private)	0
Total	3,466
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	3,466
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	3,466
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS – NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Jumbo Springs Proposal

NV-050-236
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is predominantly natural. It is in a pristine condition with no man-made features. The study area consists of the upper canyons of three major washes which drain from the edge of a plateau east toward Lake Mead. The canyons are rugged. Elevations range form 2,700 feet along the southeastern boundary to the 4,700 foot ridge on the northern end. Vegetation consists of low mountain brush species.

B. Solitude: Less than outstanding opportunities for solitude exist within the WSA. There is no vegetative screening present. Canyons provide some topographic screening. They are subdivided into several tributary drainages with intervening ridges and rocky outcrops that provide limited locales for seclusion.

C. Primitive and Unconfined Recreation: The area contains recreation opportunities similar to other rugged mountain ranges in the region. There are no particularly unusual recreation draws, attractions or desirable destinations within the study area. There are limited opportunities for hiking and backpacking. Visitors would be able to gain scenic views of portions of Lake Mead National Recreation Area (LMNRA), such as Iceberg Canyon, and the lower reaches of the Grand Canyon. They can also pass through the area on their way to Lake Mead NRA.

D. Special Features: There are no special features in this WSA.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Jumbo Springs WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS) by including an additional area representing the American Desert Province/Creosote Bush ecosystem. This ecosystem is currently included in only one designated wilderness area. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote bush	0	0	20	549,834

B. 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 one major population center, Las Vegas Nevada. Phoenix is within 250 air-miles of the WSA, although actual travel time would be approximately seven hours. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive or 250 air-miles of population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
Arizona				
Phoenix	90	4,156,455	13	79,322

C. **Balancing the geographic distribution of wilderness areas:** Designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of the Jumbo Springs WSA, which is located in southeast Nevada, would provide the public a wilderness opportunity in an area of the state presently limited in its offering of wilderness opportunities.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The entire study area can reasonably be managed as wilderness to preserve wilderness values now present. The area is a solid block of public land with no private inholdings, State lands or rights-of-way. The perimeter is easily identifiable on all sides, except for the southeastern boundary which is common with Bureau of Reclamation withdrawn lands, or is contiguous to the Lake Mead National Recreation Area.

Energy and Mineral Resource Values

The energy and mineral potential has been rated using the following information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling.), (2) evaluation of the geologic setting and (3) past and present mining activities.

Based upon available information, the following conclusions were reached: the study area is rated as having moderate potential for the occurrence of nonmetallic minerals (titanium) in 25 percent of the area (866 acres). The remainder of the WSA is rated as low for both metallic and nonmetallic minerals. Exploration for or development of potential minerals is not expected to occur due to lack of interest and poor marketable location. The WSA is considered to have low favorability for the occurrences of energy resources. Exploration for or development of potential energy resources is not projected to occur as the rock structure of the WSA is not suitable for the accumulation of hydrocarbons. There is no known mineralization within the WSA.

There are no known pre-FLPMA or post-FLPMA mining claims, oil and gas or geothermal leases within the WSA at the date of this report.

In summary, quantities of various mineral or energy resources are unknown, but the potential for occurrence is from moderate to low within the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for all alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	No long-term negative impacts to the natural qualities would occur within the Jumbo Springs WSA under the Proposed Action because no surface disturbing actions are projected.	Designation of the Jumbo Springs WSA would preserve the less than outstanding opportunities for solitude and primitive unconfined recreation. In addition, the naturalness values that exist within the WSA would be retained.
Threatened and Endangered Species/Desert Tortoise	No activities which would adversely impact desert tortoise habitat are projected.	Wilderness designation would provide additional protection for desert tortoise through elimination of possible motorized vehicle use.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA-Specific Comments

In 1986, the area was reinstated in the wilderness study process as a result of an April 1985 decision in Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983. As a result of the court case, the area was reinventoried to document wilderness characteristics.

Comments to the initial inventory cited roads, mining activity, spring developments, a communication site, and a lack of opportunity for solitude or recreation as disqualifying the unit from further study. Concern was expressed that further study would conflict with oil and gas exploration, exploration for sheet mica and gold, recreational rockhounding, and other potential mineral resource values. Opposition was expressed to WSA designation of any area contiguous to the National Park Service wilderness proposal if the BLM area did not meet the wilderness criteria when evaluated by itself. Other comments supported further wilderness consideration of the unit because it is natural and contiguous to the National Park Service proposal and because excessively strict criteria were used to evaluate it. These comments were about the original 35,936 acre study unit, of which Jumbo Springs WSA is only a small part.

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. One of the oral comments supported all wilderness and one supported the Preferred Alternative (no wilderness).

Of the written comments, two supported the all wilderness recommendation and four supported no wilderness. Subjects of the comments were the mineral resources, race courses, wildlife habitat, and protection of the watershed.

No comments were received from Clark County.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS.

QUAIL SPRINGS WILDERNESS STUDY AREA

1. THE STUDY AREA - 12,145 acres

The Quail Springs WSA (NV-050-411) is located in northwestern Clark County, approximately 10 miles northwest of Las Vegas, Nevada. The study area includes 12,145 acres of public land (Table 1).

The boundary is a combination of roads, a shared boundary with the Desert National Wildlife Range, corporate boundary for the City of Las Vegas, a common border with the Moapa Indian Reservation, and an old abandoned railroad grade. Approximately thirteen and three-quarter miles of section lines on the entire north and eastern boundary of Quail Springs WSA are the common boundary with the Desert National Wildlife Range, administered by the U.S. Fish and Wildlife Service. The western boundary begins near the Corn Creek Station and continues in a southerly direction, a little over three miles, along the Corn Creek Springs Road until it intersects with the abandoned Tonopah-Tidewater Railroad grade. From this point the boundary extends southeast approximately four miles, along the abandoned railroad grade, to the Las Vegas Corporate Boundary. Near the center of the center of the boundary on the southwest side the boundary jogs around the Moapa Indian Reservation and shares a common boundary. The southern boundary is approximately four and three-quarters of a mile long, along section lines, and is the Las vegas Corporate Boundary. Irregular in configuration the WSA is slightly more than ten miles in length, northwest to southeast, slightly more than three miles wide at it's widest point and a little over one mile wide at it's narrowest point. The northern and eastern boundary is contiguous with the Desert National Wildlife Range.

The WSA is primarily flat with gentle sloping bajadas on the southern end. A major wash runs through the southern part of the study area. There are no major geologic formations in the unit and vegetation consists of low desert shrubs and grasses.

WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Nevada Contiguous Lands Final Wilderness Recommendations Environmental Impact Statement released January 22, 1990. Two alternatives were analyzed in the EIS: an All Wilderness Alternative and a No Wilderness Alternative which is the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
12,145 acres recommended for nonwilderness

The recommendation for this WSA is to release all 12,145 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change form the natural environment over the long-term. Although the recommendation is not the All Wilderness Alternative, the recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

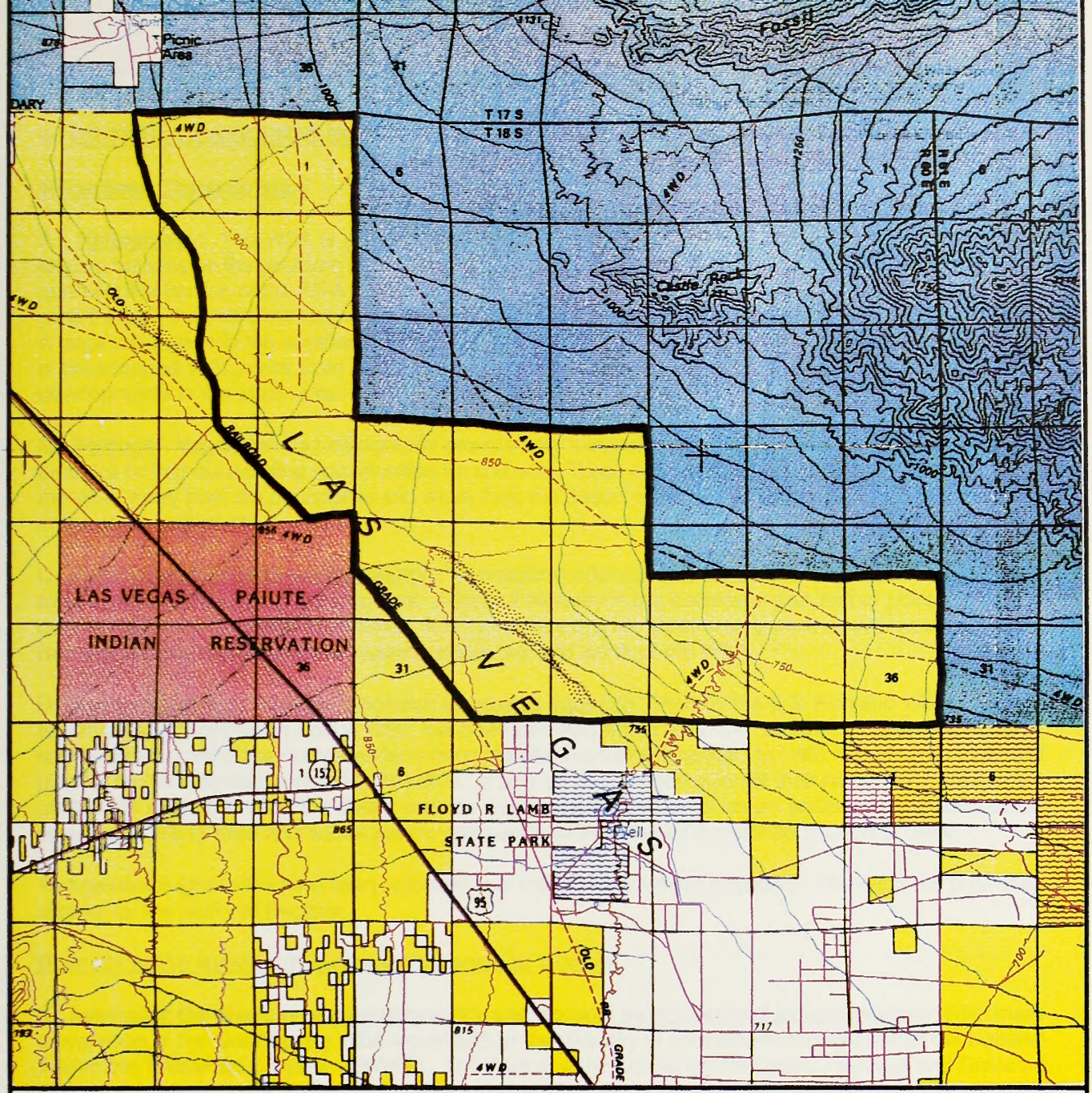
The recommendation for the Quail Springs WSA emphasizes maintaining access to the entire WSA for uses other than wilderness. The quality of the wilderness values and the reduction of conflicts with utility and rail line development were the key considerations in the recommendation. While the WSA contained wilderness values necessary for study, they are not considered to be of a quality to merit the area's inclusion in the National Wilderness Preservation system. Solitude opportunities available in the WSA are limited to a small area and are similar to other lands adjacent to the study area. Opportunities for solitude are due to the remoteness of certain portions of the WSA and not due to any intrinsic values unique to the area. Quail Springs WSA does not offer outstanding opportunities for primitive and unconfined recreation.

The no wilderness recommendation for the WSA would also emphasize making the area available for utility and rail line development. Expansion and growth of Las Vegas Valley has sparked the need for utility expansion. In addition, the Department of Energy has identified a route through the WSA for development of a rail line to the Yucca Mountain repository site. Values of these potential developments outweigh the WSA's wilderness values.

Over the long-term naturalness values and opportunities for solitude within the WSA would be diminished by increased motorized recreational activity and utility and rail line development. Desert tortoise (Gopherus agassizii), a special feature identified in the area, would not receive added protection afforded from wilderness designation.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	12,145
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	12,145
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	12,145
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	12,145
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-I

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

Quail Springs Proposal

NV-050-411
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is primarily in a natural condition. The WSA is moderately flat with gentle sloping bajadas on the southern end. A major wash runs through the southern part of the study area. The north-central portion of the WSA, north of the wash, is the most natural. There are 9.3 miles of ways which pass through the WSA, the longest of which is 3.8 miles long and crosses the north half of the study area. A large sand wash in the southeastern portion of the WSA provides an ideal area for ORV use. This area is crisscrossed with tracks from motorcycles and other off-road vehicles. There are no range or wildlife developments in the study area.

B. Solitude: Vegetation and topography provide only minimal screening; however, the study area's size provides limited outstanding opportunities for solitude. These opportunities occur in the central portion of the WSA, away from the boundaries and ways, near the Desert national Wildlife Range, which cross the unit in the south and north.

C. Primitive and Unconfined Recreation: Recreational opportunities are best for horseback riding. Gently sloping terrain provides for easy access. A lack of diversity in the landscape and lack of points of interest does not offer a high quality experience. It is more likely that the study area is used as access to the Desert National Wildlife Range which is located contiguous and north of the WSA.

D. Special Features: The desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. Twelve thousand one hundred and forty-five acres of the study area have been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by the BLM. It calls for the categorization of their habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Two paleontological sites have been recorded near the WSA's southern boundary. These are not potentially eligible for the National Register.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Quail Spring WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS). The WSA is within the American Desert Province, and Creosote Bush is the predominant ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification	NWPS Areas		Other BLM Studies	
Province/PNV	Areas	Acres	Areas	Acres
		NATION WIDE		
American Desert Province/				
Creosote Bush	1	343,753	117	4,266,695
		NEVADA		
Creosote Bush	0	0	13	411,126

B. **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 two major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	28	2,919,234	135	4,958,751

C. **Balancing the geographic distribution of wilderness areas:** Designation of the Quail Springs WSA would contribute to the geographic distribution of areas within the NWPS in Nevada. Designation of the Quail Springs WSA, which is located in southeast Nevada, would provide the public a wilderness opportunity in an area of the state presently limited in its offering of wilderness opportunities.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The study area can reasonably be managed as wilderness but, there would be manageability concerns associated with the 13 pre-FLPMA mining claims (260 acres). These claims have valid existing rights and development would create intrusions from mining or drilling operations which would seriously and adversely impact wilderness values present. Noise, dust and visual intrusions are a few of the impacts. Access to these parcels would also have to be granted. This would involve new roads scarring up the countryside and additional noise and dust caused by vehicles working in the area. Development of these claims is not projected to occur.

There will also be management concerns associated with unauthorized motorized vehicle use. The area's terrain is readily accessible to motorized vehicles as few natural barriers exist. The possibility of frequent unauthorized use is magnified by close proximity to a large residential population to the study area's southern boundary.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources, incorporating literature search with field verification and extensive sampling.), (2) evaluation of the geologic setting and (3) past and present mining activities.

Utilizing this information, the following conclusions were reached: 12,145 acres (100% of WSA) rated as having moderate nonmetallic mineral potential for sand and gravel (GEM 1983). Geologic formations are not considered to be favorable for the location of metallic minerals or energy resources.

As of the date of this report there were 13 placer claims located in the southwestern portion of the WSA. There has been no development of these claims in the past and none is expected in the future. There are no oil and gas leases in the study area. Favorability for energy resources within the WSA is unknown.

In summary, quantities of various mineral or energy resources are unknown, but the potential for occurrence is from moderate to low.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA Specific Comments

In 1986, the area was reinstated in the wilderness study process as a result of an April 1985 decision in Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983. As a result of the court case, the area was reinventoried to document wilderness characteristics.

Public comments received during the reinventory (1986) supported the wilderness study area status because of the following reasons: opportunities for solitude and naturalness. Of the seven comments received three specifically stated that the WSA should not be recommended for wilderness designation. One specific comment supported the area for wilderness designation.

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. None of the oral comments supported the all or partial wilderness alternatives and 1 supported the preferred alternative (no wilderness).

Of the 36 written comments, one supported the all wilderness recommendation and six supported no wilderness. Subjects of the comments were race courses, lack of outstanding opportunities for solitude and potential rail rights-of-way. This last issue was a concern of the U.S. Department of Energy.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS.

No comments were received from Clark County, or the cities of Las Vegas and North Las Vegas.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Wilderness values within the WSA would be negatively impacted under the Proposed Action. The projected development of utilities, rail lines, associated access routes, and increased cross country vehicle use would physically disturb an estimated 285 acres within the WSA. The natural perception of the entire WSA would be impaired by the construction of utilities (towers, lines, roads) and rail lines across the landscape. The outstanding opportunities for solitude would be lost due to the sights and sounds created by the aforementioned activities occurring in the WSA. Special features would be afforded some protection through mitigative measures and the implementation of future management actions.	Designating the WSA as wilderness would preserve wilderness values of naturalness, outstanding opportunities that exist for solitude, and would enhance the protection of desert tortoise.
Motorized Recreational Use	Motorized recreational use would benefit under the Proposed Action. No adverse impacts to this use is expected to occur.	Motorized recreational use of 150 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.
Development of Utilities	The development of utilities could occur as a result of the entire WSA being recommended nonsuitable for wilderness designation. No adverse impacts to these uses are expected to occur.	Under the All Wilderness Alternative, utilities could not be developed within the WSA.
Development of a Rail Line	The development of a projected rail line could occur as a result of the entire WSA being recommended nonsuitable for wilderness designation. No adverse impacts to these uses are expected to occur.	Under the All Wilderness Alternative, the WSA would be unavailable for the development of a rail line.
Threatened and Endangered Species/Desert Tortoise	At least 265 acres of Category II desert tortoise habitat will be lost due to utility and railroad line construction.	The loss of 265 acres of desert tortoise habitat would not occur.

EL DORADO WILDERNESS STUDY AREA

1. THE STUDY AREA - 12,290 acres

El Dorado Wilderness Study Area (NV-050-423) lies in the southeastern portion of Clark County, Nevada, approximately one hour's drive from Las Vegas, Nevada. The study area contains 12,290 acres of public land and surrounds a private inholding of 87 acres in a roughly rectangular configuration, 5 miles long and 4 miles wide.

The WSA is bordered by the El Dorado Act Lands, public lands identified for disposal under the El Dorado Valley Lands Act, to the north, Nevada State Highway 60 to the west, Lake Mead National Recreation Area on the east, and the mining town of Nelson to the south. The WSA encloses rugged mountainous terrain of volcanic and metamorphic rocks along the western edge of the Eldorado Mountains. A prominent north-south ridgeline, cut by numerous wide washes and canyons, dominates the landscape. Desert shrubs and cacti cover the foothills, while small pockets of mountain brush species (scrub oak) and stands of cholla occur in the canyons. Elevations range from 2,000 feet on the eastern side of the WSA to 3,800 feet at the top of Nelson Peak. Access to the WSA is provided by dirt roads and by Nevada Stale Route 60, a paved route that forms a portion of the western boundary.

El Dorado WSA is contiguous, along its eastern boundary, to the National Park Service Lake Mead National Recreation Area (NRA). The NRA Final Environmental Impact Statement-General Management Plan released in July, 1986 identified these lands as meeting the criteria of the Wilderness Act of 1964. Management Zoning areas identified in the General Management Plan places these lands within the Environmental Protection Subzone and the Resource Utilization Subzone (mineral leasing permitted). A wilderness plan will be prepared for the NRA allowing completion of the General Management Plan.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Final Nevada Contiguous Lands Wilderness Environmental Impact Statement (EIS) Issued in January 1990. There were three alternatives analyzed in the EIS: No wilderness which is the recommendation of this report; all wilderness; and a partial alternative where 9,570 acres would be designated as wilderness and 2,720 acres released for uses other than wilderness.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
12,377 acres recommended for nonwilderness

The recommendation is to not designate this WSA as wilderness, but to release the area for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation is to not designate the WSA wilderness, the recommendation would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

BLM's decision not to recommend the Eldorado WSA for wilderness designation is based upon a determination of potential resource conflicts, manageability concerns and the fact that the area possessing the highest wilderness values would not be sufficiently large to stand alone as wilderness without designation of the contiguous NRA lands. Placing the lands back in multiple resource management would allow for future reconsideration, under Section 202 of the Federal land Policy and Management Act, of this area as a portion of the much larger area within the Lake Mead National Recreation Area, should the Park Service recommend that area for wilderness designation. Pending that review, the BLM would continue to manage the Eldorado WSA in a manner that would preserve those values inherent in the study area.

The National Park Service, Lake Mead National Recreation Area has not yet determined the wilderness suitability of contiguous NPS administered lands.

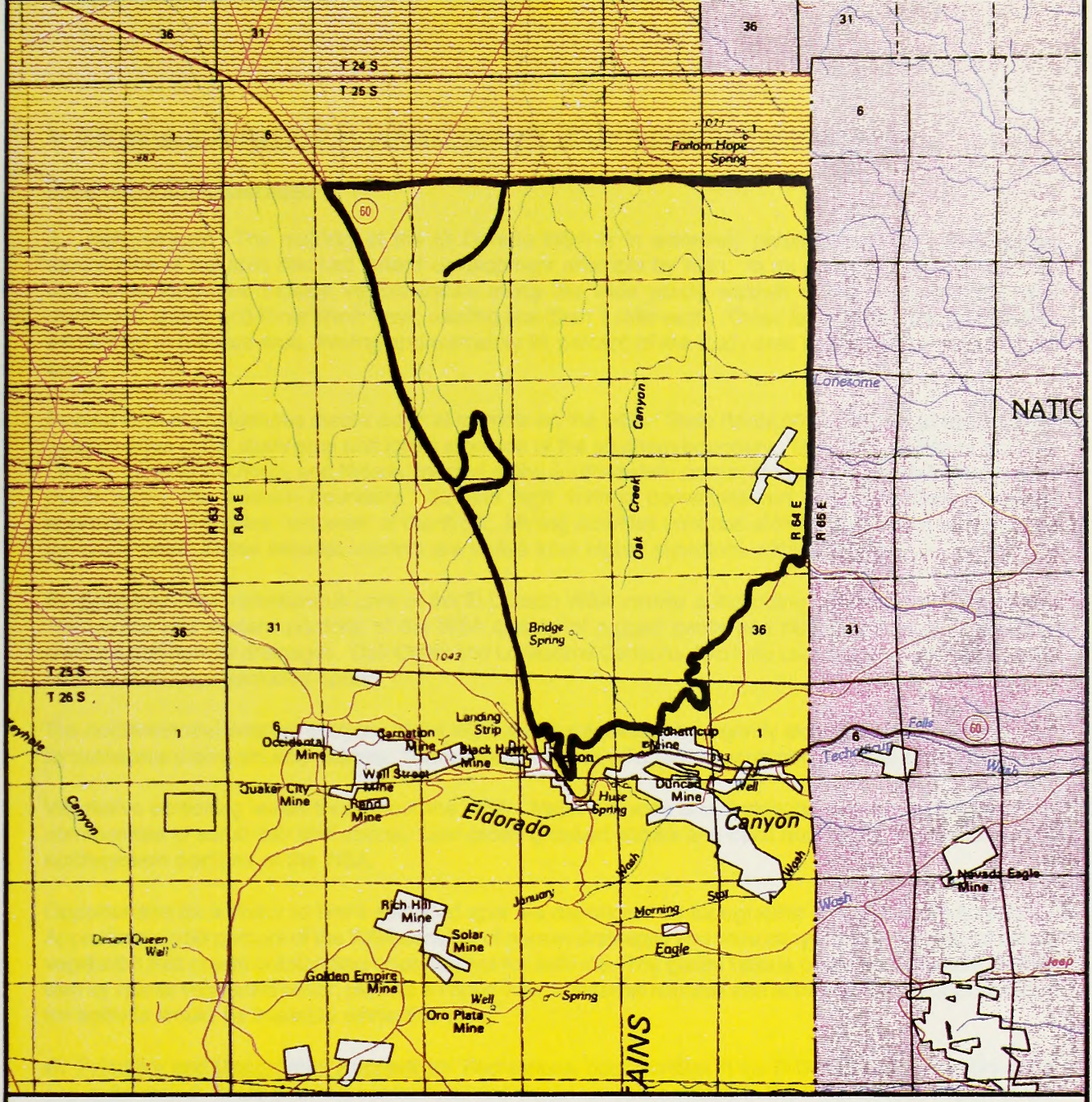
External activities that could potentially impact or induce additional impacts to the WSA are future development of the El Dorado Valley Act lands for urban or industrial uses. Development of the valley would create additional roads and ways contiguous to the northern portion of the study area which would improve access and encourage off-road travel into the WSA. There are few natural barriers to impede encroachment of off-road activity into much of the west and north-central portions of the WSA.

The El Dorado mining district is adjacent to the southern portion of the WSA. There is one patented mining claim within the WSA. Designation of the WSA as wilderness could significantly impact future development of mineral resources and exploration within and adjacent to the mining district. BLM concurred with the State of Nevada that the highest and best use for this area is mineral development. Development of the patented mining claim in the eastern portion of the WSA would require BLM to authorize an access road which would significantly impair the wilderness values in the northeast portion of the WSA and detract from solitude and wilderness experience over a relatively large area.

Much of the northern portion of the WSA affords easy and unrestricted, off-road access to the core of the WSA up broad washes. Although delineation of the boundary would be easy, implementation of a vehicle closure would be nearly impossible due to a distinct lack of clearly identifiable natural features to be used in developing a manageable boundary. Off-road recreation in southern Nevada continues to rise with the increased popularity of ATVs and motorcycles and the proximity of this area and the scenic amenities of the region are an inducement to recreationists to ride in this area.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	12,290
Split Estate (BLM surface only)	87
Inholdings (State, Private)	0
Total	12,377
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	12,290
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	12,290
Inholdings (State, Private)	87



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

El Dorado Proposal

NV-050-423
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The majority of the El Dorado WSA is in extremely natural condition. The rugged topography of the area has had limited development attempts by man. In an area of over 12,000 acres, man-made intrusions include vehicle tracks along the wide sandy washes of the western WSA, one developed spring and three short ways, totaling less than 1 mile each. These features are primarily visible within their immediate area, leaving approximately 95 percent of the study area unaffected by man and his works.

Several man-made features create external imprints on the WSA. State Route 60 is adjacent to much of the western edge of the study area and forms a portion of the southern boundary. The communities of Boulder City, 13 miles to the north, and Nelson, located at the southwestern corner of the WSA, are visible from high points along the western boundary. Several high voltage powerlines run across El Dorado Valley, approximately 3.5 miles northwest of the WSA. Mining activities continue along the southern boundary of the study area. These external imprints are visible from higher elevations within the WSA.

B. Solitude: The mountainous core of the El Dorado WSA insures outstanding opportunities for solitude. The central and eastern portions of the WSA consist of rugged peaks and ridges, cut by wide washes, canyons and narrow drainages. Oak Creek and Lonesome Canyons, two long canyons filled with scrub oak, contain numerous secluded spots.

The northwest and western sections of the WSA are characterized by a gently sloping bajada, crisscrossed by numerous drainages and washes. Topographic features offer limited screening and few secluded areas.

Vegetative screening varies throughout the WSA. Major canyons and drainages support mountain brush communities of scrub oak and acacia. Low-growing desert shrubs and cacti dot the sloping bajada of the northwestern portions of the WSA.

Opportunities for a visitor to find a secluded spot are dependent on topographic and vegetative screening. Approximately 50 percent of the WSA consists of narrow drainages and wide canyons with pockets of dense vegetation that create outstanding opportunities for solitude. The gentle bajada of the northwestern region, with its sparse vegetative cover, permits an open view of external features and activities; limited opportunities for solitude would be available within this area.

C. Primitive and Unconfined Recreation: Recreational opportunities in the El Dorado WSA are very good and quite varied. More primitive recreational use would be concentrated in the mountainous region of the study area where major canyons and drainages provide interesting features, seclusion and varying degrees of challenge. A powerline road and State Route 60 permit year-round access to the north, south and west boundaries of the WSA.

Backpacking, horseback riding and camping opportunities are considered outstanding in 50 percent of the WSA. Several routes north through the unit would permit scenic-hikes of more than one day's duration. Excellent camping sites are available in Oak Creek Canyon, with topographic and vegetative screening contributing to the wilderness experience.

Wildlife related recreational activities such as nature studies, photography and hunting are available in the WSA. Desert wildlife, including desert tortoise, bighorn sheep and wild burros, can be seen in the study area. Colorful landscapes, diverse geologic formations and scenic vistas provide excellent subject matter for photography. Populations of bighorn sheep and Gambel's quail make the WSA attractive to hunters.

D. Special Features: The El Dorado WSA contains several supplemental values, not the least of which is its proximity to the Lake Mead National Recreation Area. Broad, uninterrupted vistas across the NRA and the Colorado River into Arizona are spectacular from the ridges and peaks in the WSA. Unique geologic features enhance scenic qualities of the study area. Colorful tuff formations, basalt flows and a natural bridge, Gregory's Arch, contribute to the aesthetic experience within the WSA.

Desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. Twenty-seven hundred acres of the study area have been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Ecologically, the area supports populations of Gambel's quail, bighorn sheep and wild burros. The El Dorado area is reported to be habitat for a mating pair of peregrine falcons, an endangered species. Two sensitive species (Penstemon bicolor ssp. bicolor and Penstemon bicolor ssp. roseus) have been identified in the study area. These two penstemons are currently listed in the "Federal Threatened and Endangered Plant Register" as a Category 2 Watch) listing.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of El Dorado WSA would add 12,377 acres of the Creosote Bush Ecosystem to the National Wilderness Preservation System (NWPS). Presently, only one wilderness area in the NWPS contains this ecosystem. The one area representing this ecosystem is quite large. However, adding another area to the system would be desirable and improve the diversity of the representation of this ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
American Desert Province				
Creosote Bush	0	0	20	549,834

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: El Dorado WSA is within a five hour drive of three major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	27	2,876,234	135	4,958,751
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: Designation of the El Dorado WSA would contribute to the geographic distribution of areas within the National Wilderness Preservation System in Nevada. Jarbidge Wilderness Area (113,177 acres), in northeast Nevada, was the only designated wilderness in Nevada until designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of the El Dorado WSA, located in southeast Nevada, would provide the public a wilderness opportunity in another part of the state.

Manageability

El Dorado study area is capable of being managed as wilderness however, there would be manageability concerns associated with OHV management and access for mineral development. The WSA surrounds a 120 acre undeveloped patented mining claim which lies along the study area's eastern boundary. Present access requires cross country travel across a small portion of the WSA. Exercising of the rights of access to the patented parcel could include motorized types of transportation.

The Western Utility group and other utility companies have proposed designation of an above and below ground utility corridor (in "Western Regional Corridor Study", 1986) across the southern portion of the WSA.

The northern boundary of the WSA is contiguous to the El Dorado Valley Act (P.L.-85-339 1958) lands. These lands were set aside by special federal legislation to allow the State of Nevada an option for purchase. The El Dorado Act Lands will most likely be intensively developed.

The El Dorado WSA is contiguous along its eastern boundary to the National Park Service Lake Mead National Recreation Area (NRA). The NRA Final Environmental Impact Statement-General Management Plan released in July, 1986 identified these lands as meeting the criteria of the Wilderness Act of 1964. The Management Zoning areas identified in the General Management Plan places these lands within the Environmental Protection Subzone and the Resource Utilization Subzone (mineral leasing permitted). A wilderness plan will be prepared for the NRA following completion of the General Management Plan.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling); (2) evaluation of the geologic setting; and (3) past and present mining activities.

Based upon available data, the following conclusions were reached: The entire El Dorado WSA is classified

as having low favorability for metallic and non-metallic minerals and moderate favorability for the occurrence of uranium (GEM, 1083). There are no known deposits of these resources in the study area. The entire WSA has a low favorability for the occurrence of sand and gravel (GEM, 1983). No material sites occur within the study area at present.

The El Dorado WSA forms the western edge of the El Dorado Range. Precambrian gneiss, schist and granite have been locally intruded by Lower Tertiary granitic masses. Predominant rock types come from Mid-Tertiary volcanics, ranging in composition from rhyolite to basalt.

The WSA lies within the El Dorado Mining District. The area to the south of the WSA was actively mined in the late 1800's up to 1942. Significant amounts of gold, silver, and copper were produced within the mining district. Currently 24 mining claims are located within the WSA. No development has taken place to date on these claims.

No known oil and gas or geothermal deposits occur in the WSA. No oil and gas leases exist in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Partial Wilderness
Wilderness Values	Wilderness values of naturalness and any outstanding opportunities for solitude and primitive recreation that exist within 6,600 acres of the WSA would be diminished and, in some instances, lost. The sights, sounds and surface disturbances created by increased motorized recreational use, projected mineral exploration and utility construction and maintenance would adversely impact wilderness values. Wilderness values would be retained within the remaining 5,690 acres of the WSA. The special qualities of Gregory's Arch would be retained. The desert tortoise population is not expected to be adversely affected by not designating the WSA as wilderness.	Designation would preserve wilderness values of naturalness, outstanding opportunities for solitude and primitive recreation and the special features of desert tortoise and the scenic features of Gregory's Arch that exist within 12,257 of the WSA's 12,290 acres. About 33 acres within the WSA would be physically disturbed by projected unauthorized vehicle use.	Naturalness, outstanding opportunities for solitude and primitive recreation and the special geological value of Gregory's Arch would be retained within 8,970 of the 9,570 acres recommended for wilderness. Wilderness values on the remaining 600 acres would be diminished and, in some instances lost, as a result of off-road motorized vehicle use, mineral exploration and utility line construction and maintenance projected to occur on adjacent public lands. Wilderness values would be lost on the 2,720 acres not recommended for wilderness as continued and increased cross country motorized vehicle use, projected mineral exploration and construction of utilities would adversely impact the area. The desert tortoise population is not expected to be adversely affected by nondesignation of the area recommended for uses other than wilderness.

Table 4 Continued
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Partial Wilderness
Exploration for and Development of Non-Energy Mineral Resources	Mineral resources within the WSA would be available for exploration and development. The exploration of existing mining claims is projected to occur within the WSA. There are no projected adverse impacts on the exploration for or development of mineral resources.	Exploration and development of mineral resources would be foregone on all unclaimed lands within the WSA. Mineral exploration activity projected to occur if the area is not designated as wilderness would not take place due to lack of valid discoveries on existing claims. Development of precious metal resources is not projected to take place.	Exploration and development of mineral resources would be foregone on all unclaimed lands within the recommended wilderness area. Mineral exploration projected to occur on existing claims in this area would not take place since none of the claims are expected to pass a validity exam. Exploration of existing mining claims is projected within the recommended nonwilderness area. There are no projected adverse impacts on the exploration for mineral resources within this area. Development of precious metal resources is not projected to take place within either the recommended wilderness or nonwilderness areas.
Motorized Recreational Use	Motorized recreational use would benefit as the entire WSA remains open to vehicles and new access routes, resulting from projected mineral exploration and utility development makes the study area more accessible. No adverse impacts are expected.	Motorized recreational use of 470 visits would be displaced annually from the WSA. The impacts of shifting this use to other public lands would be negligible.	Motorized recreational use would be eliminated on the 9,570 acres recommended for wilderness designation and approximately 260 visits would be displaced annually. The impacts of shifting this use to other public lands would be negligible.
Recreational Management	The development of an interpretative recreational program would benefit as a result of the entire WSA being recommended nonsuitable for wilderness designation. No adverse impacts to this use are expected to occur.	The proposed interpretative program could not be fully implemented under the All Wilderness Alternative as interpretative signing would be precluded. Designation of the WSA as wilderness would not adversely affect this program.	The proposed interpretative program could not be fully implemented under Alt. A as interpretative signing would be precluded. Designation of the recommended wilderness area would not adversely affect this program.
Development of Utilities	The development of utilities could continue as a result of the entire WSA being recommended for uses other than wilderness. No adverse impacts to this use are expected to occur.	Under the All Wilderness Alternative, the WSA would be unavailable for the development of utilities.	Under Alt. A the recommended wilderness area would be unavailable for the development of utilities.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA Specific Comments

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. One of the oral comments supported the preferred alternative (no wilderness) for the study area. The other comments did not mention specifically mention the WSA, but, general opposed wilderness from the position of restricting personal rights and unknown mineral potential.

Of the 35 written comments, five commentors supported the preferred alternative not to designate the area wilderness, two of those also identified the option for a modified partial wilderness alternative for the east portion of the study area not accessible to off-road vehicles, and two supported a modified partial wilderness alternative that would include the east side of the WSA (9,570 acres) and the upper portion of the drainage system into the Lake Mead National Recreation Area proposed wilderness area. The subjects of the comments opposed to wilderness designation centered upon unknown wilderness potential and historic off-road vehicle use of the area.

No comments were received from Clark County.

The Governor's consensus review of the recommendation for this study area was included in a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS and the recommendation is to release the entire WSA for uses other than wilderness. Comments from other state agencies also concurred with the recommendation.

There were no comments received from Federal agencies specifically directed towards this study area and none took a position on the recommendation for any WSA. The Environmental Protection Agency referred to mineral potential in all WSAs without rendering a statement or position on wilderness designation. The National Park Service mentioned unknown cultural resources as a reason for recommending designation of the WSA. the U.S. Fish and Wildlife Service identified wilderness designation as a method of protecting the threatened desert tortoise. Bureau of Mines comments were not specific.

IRETEBA PEAKS WILDERNESS STUDY AREA

1. THE STUDY AREA - 14,994 acres

The Ireteba Peaks Wilderness Study Area (WSA), NV-050-438, is located south of the old mining town of Nelson in Clark County, Nevada, approximately one hour's drive south of Las Vegas, Nevada. The study area contains approximately 14,994 acres of public land in a rectangular configuration nearly 7.5 miles long and 3.5 miles wide.

The study area encloses a major north-south knife-edge ridge is primarily of volcanic rocks, intrusives, breccias, and metamorphic rocks, granites and schists. Deeply incised rocky draws on the east side drain into the Colorado River and the Lake Mead National Recreation Area. The western slope drops quickly and drains into the El Dorado Valley. Elevations range from about 2,000 feet on the east side to 5,060 feet at Ireteba Peak. Vegetation is scattered and sparse, consisting mainly of low-growing desert shrubs throughout most of the study area to a few pinyon and juniper at the higher elevations. access to the WSA is gained from a few dirt roads on the north and west sides. None penetrate into the WSA.

The northern boundary of the study area is the south edge of a powerline right-of-way. A common boundary with the Lake Mead National Recreation Area Is the east boundary. The western and souther boundaries follow along the base of the mountain and a drainage.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Final Nevada Contiguous Lands Wilderness Environmental Impact Statement (EIS) issued in January 1990. There were three alternatives analyzed in the EIS: No wilderness which is the recommendation of this report; all wilderness; and a partial alternative where 10,179 acres would be designated as wilderness and 4,839 acres released for uses other than wilderness.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
14,994 acres recommended for nonwilderness

The recommendation is to not designate the Ireteba Peaks WSA as wilderness, but to release the area for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation is to not designate the WSA wilderness, the recommendation would be implemented in a manner which would utilize all practical means to avoid or minimize environmental Impacts.

BLM's decision not to recommend the Ireteba Peaks WSA for wilderness designation Is based upon a determination of potential resource conflicts, manageability concerns and the fact that the area possessing the highest wilderness values would not be sufficiently large to stand alone as wilderness without designation of the contiguous NRA lands. Restoring the lands to multiple resource management would allow for future reconsideration, under Section 202 of the Federal land Policy and Management Act, of thls area as a portion of the much larger area within the Lake Mead National Recreation Area, should the Park Service recommend that area for wilderness designation. Pending that review, the BLM would continue to manage the Ireteba Peaks WSA in a manner that would preserve those values inherent In the study area.

The National Park Service, Lake Mead National Recreation Area has not yet determined the wilderness suitability of contiguous NPS administered lands.

Wilderness values, intrinsic to the Ireteba Peaks WSA, are centered along the narrow ridgeline and canyons on the east face of the mountains. This core area is only about four miles long and a mile wide. Canyons

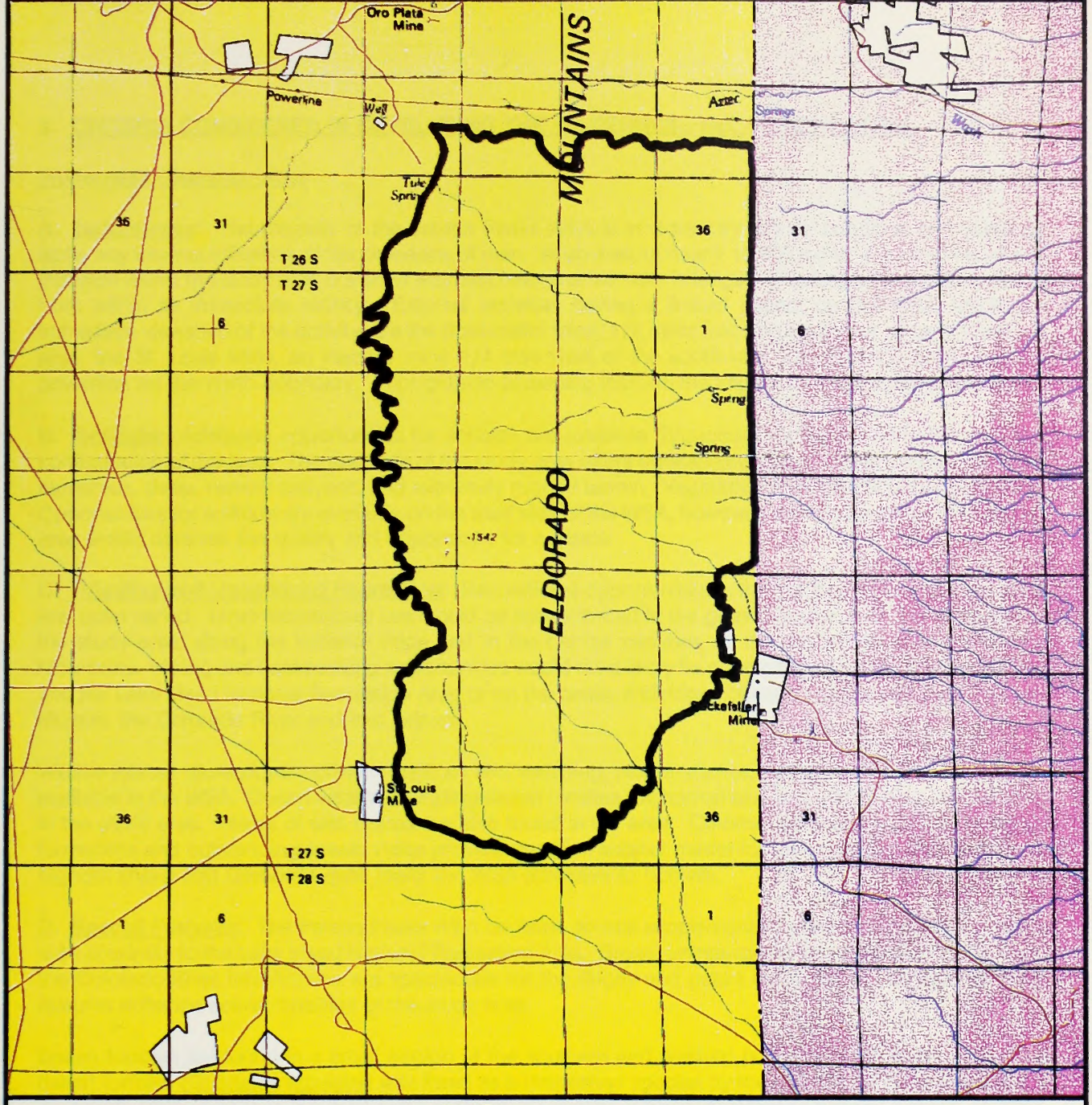
on the east slope, although relatively deep, are very short and offer limited wilderness experiences. Due to the rugged character of the small portion of the study area possessing the highest wilderness values, the area most hiking and primitive recreational use would be centered on the narrow ridge or in one canyon along the northern portion of the study area and extending onto the broad open bajada of the LMNRA. The western face is distinctly lacking in wilderness values due to the relatively steep slopes dropping quickly into the bajada.

The El Dorado mining district is adjacent to the northern portion of the WSA. Designation of the WSA as wilderness could significantly impact future development of mineral resources and exploration within an area with proven mineral resource potential. BLM concurred with the State of Nevada that the highest and best use for this area is mineral development. There has been a recent resurgence of interest in development of mining claims around the St. Louis mine on the southwest portion of the study area. Development of the Rockefeller mine on the southeast side of the study area and expansion of mineral development at the Aztec mine near the northeast boundary of the study area would significantly impair wilderness values in the northeast, southwest, and southeast portions of the WSA and detract from solitude and wilderness experience over a relatively large area. The combined affects of these external activities would be a significant impact to wilderness.

Much of the eastern portion of the WSA and the broad open bajada on the southern flanks of the WSA affords easy and unrestricted, off-road access to the core of the WSA from the Rockefeller Mine and the powerline road to the north. Although delineation of the boundary would be relatively easy on the west and north edge of the study area, identification of a recognizable boundary on the south and implementation of a vehicle closure would be nearly impossible due to a distinct lack of clearly identifiable natural features to be used in developing a manageable boundary.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	14,994
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	14,994
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	14,994
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	14,994
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

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MILES

Ireteba Peaks Proposal

NV-050-438
March 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The majority of the Ireteba Peaks WSA is in extremely natural condition and generally lacks any internal influence of the presence of man. In an area of nearly 15,000 acres, the only man-made intrusion within the study area is a short way less than one-half mile in length. This feature is primarily visible from within its immediate vicinity. External activities having a limited impact on the WSA, within the immediate viewshed of the activity, are the Rockefeller Mine, 1/2 miles from the southeast edge of the study area, the St. Louis Mine, an inactive mine 1/4 mile west of the southwest corner of the WSA, and the powerline on the north boundary. Topographic screening lessens the impact of these external activities.

B. Solitude: Adequate opportunities for solitude are available throughout the WSA due to the size and configuration of the area. The east side of the study area offers outstanding opportunities for solitude in the numerous, deep, narrow canyons, and extremely rugged terrain. Vegetative screening is generally limited. Opportunities for solitude are available on the west side of the WSA, however, activities external to the study area would diminish the quality and opportunity for solitude.

C. Primitive and Unconfined Recreation: Recreational opportunities in the Ireteba Peaks WSA are good and quite varied. Most recreational use would be concentrated in the granite boulders on the north end of the study area, along the knifelike ridge and in the narrow canyons on the eastern flank of the Ireteba Mountains. Hiking and backpacking opportunities would most likely be concentrated in the canyons leading into the Lake Mead National Recreation Area or on the peaks and ridges offering spectacular views of Lake Mojave, the Colorado River and into Arizona.

Wildlife related recreational activities such as bird watching, nature studies, photography, and hunting are available in the WSA. Desert wildlife, including desert tortoise, bighorn sheep and wild burros, can be seen in the study area. Herds of wild burros are also found in the area. Colorful landscapes, diverse geologic formations and outstanding scenic vistas provide excellent subject matter for photography. Populations of bighorn sheep and Gambel's quail make the WSA attractive to hunters.

D. Special Features: The Ireteba Peaks WSA contains several supplemental values, not the least of which is its proximity to the Lake Mead National Recreation Area. Broad, uninterrupted vistas across the NRA and the Colorado River into Arizona are spectacular for the ridges and peaks in the WSA. Unique geologic features enhance scenic qualities of the study area.

Desert tortoise are found in a small portion of the southern and western portions of the study area. The desert tortoise (Gopherus agassizii) was listed as a threatened species by the U.S. Fish and Wildlife Service on April 2, 1990. Eighteen hundred acres of the study area have been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by BLM. It calls for the categorization of habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently listed as threatened on April 2, 1990.

Ecologically, the area supports populations of Gambel's quail, bighorn sheep and wild burros. Two sensitive species (Penstemon bicolor ssp. bicolor and Penstemon bicolor ssp. roseus) have been identified in the study area. These two penstemons are currently listed in the "Federal Threatened and Endangered Plant Register" as a Category 2 Watch) listing.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of Ireteba Peaks WSA would add 14,994 acres of the Creosote Bush Ecosystem to the National Wilderness Preservation System. Presently, only one wilderness area is in the system within this ecosystem. The one area representing this ecosystem is quite large. However, adding another area to the system would be desirable and improve the diversity of the representation of this ecosystem. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
American Desert Province				
Creosote Bush	0	0	20	549,834

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: Ireteba Peaks WAS is within a five hour drive of three major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	27	2,876,234	135	4,958,751
Arizona				
Phoenix	90	4,156,455	13	79,322

C. Balancing the geographic distribution of wilderness areas: Designation of the Ireteba Peaks WSA would contribute to the geographic distribution of areas within the National Wilderness Preservation System in Nevada. Jarbidge Wilderness Area (113,177 acres), in northeast Nevada, was the only designated wilderness in Nevada until designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of the Ireteba Peaks WSA, located in southeast Nevada, would provide the public a wilderness opportunity in another part of the state.

Manageability

Ireteba Peaks study area is capable of being managed as wilderness however, there would be some manageability concerns associated with OHV management, along the northern edge of the study area, and access for mineral development on the southern end. Much of the study area lacks physical barriers for off-road travel and the potential for this form of recreational activity is high, particularly in the southern and eastern portion of the study area.

The Ireteba Peaks WSA is contiguous along its eastern boundary to the National Park Service Lake Mead National Recreation Area (NRA). The NRA Final Environmental Impact Statement-General Management Plan released in July, 1986 identified these lands as meeting the criteria of the Wilderness Act of 1964. The Management Zoning areas identified in the General Management Plan places these lands within the Environmental Protection Subzone and the Resource Utilization Subzone (mineral leasing permitted). A wilderness plan will be prepared for the NRA following completion of the General Management Plan.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling); (2) evaluation of the geologic setting; and (3) past and present mining activities.

Approximately six percent (900 acres) of the WSA is considered to have moderate favorability for the occurrence of metallic minerals; the remaining portion is considered to have low favorability. Ireteba Peaks WSA is classified as having low favorability for non-metallic minerals and moderate favorability for the occurrence of uranium. There are no known deposits of these resources in the study area. The entire WSA has a low favorability for the occurrence of sand and gravel (GEM, 1983). No material sites occur within the study area at present.

The El Dorado Mining District is near the north end of the WSA and the Searchlight Mining District is adjacent to the southern end. The area to the north of the WSA was actively mined in the late 1800's up to 1942. Significant amounts of gold, silver, and copper were produced within the mining district in the first half of the century. There are no mining claims or oil and gas leases located within the WSA.

No known oil and gas or geothermal deposits occur within the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Partial Wilderness
Wilderness Values	Naturalness and any outstanding opportunities for solitude that exist within 4,800 acres of the northern and southern portions of the WSA would be diminished and, in some instances lost due to the sights, sounds and surface disturbances created by increased motorized recreational use, projected mineral exploration and utility construction and maintenance adversely impacting wilderness values. Wilderness values would be retained within the remaining 10,194 acres of the WSA. The desert tortoise population and two identified sensitive plant species are not expected to be adversely affected by nondesignation of the WSA.	Designation would preserve naturalness, outstanding opportunities for solitude and the special features of sensitive plants and desert tortoise that exist within 14,989 of the WSA's 14,994 acres. Approximately 5 acres within the WSA would be physically disturbed by projected unauthorized vehicle use.	Naturalness, outstanding opportunities for solitude and the sensitive plant species would be retained within the 10,179 acres recommended for wilderness. Wilderness values would be lost on the 4,839 acres not recommended for wilderness as continued and increased cross country motorized vehicle use, projected mineral exploration and construction of utilities would adversely impact the area. The desert tortoise population is not expected to be adversely affected by nondesignation of part of its habitat.
Exploration for and Development of Non-Energy Mineral Resources	Mineral resources within the WSA would be available for exploration and development. Exploration for precious metals is projected to occur within the WSA. There are no projected adverse impacts on the exploration for and development of mineral resources.	Exploration and development of mineral resources would be foregone on all unclaimed lands within the WSA. Mineral exploration activity projected to occur on existing claims if the area were not designated would not take place due to the lack of valid claims. Development of precious metal resources is not projected to take place.	Exploration and development of mineral resources would be foregone on all unclaimed lands within the recommended wilderness area. Mineral exploration is not projected to occur with or without wilderness designation. Exploration for precious metals is projected within the area not recommended for wilderness. There are no projected adverse impacts on the exploration for mineral resources within this area. Development of precious metal resources is not projected to take place within either the recommended wilderness or nonwilderness areas.
Development of Utilities	The development of utilities could continue as a result of the entire WSA being recommended for uses other than wilderness. No adverse impacts to this use are expected to occur.	Under the All Wilderness Alternative, the WSA would be unavailable for the development of utilities. This action would require routing of utilities through other corridor areas.	The development of utilities could continue as a result of the area desired for utility rights-of-ways not being recommended as wilderness. No adverse impacts to this use are expected.

Table 4 Continued
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness	Partial Wilderness
Motorized Recreational Use	Motorized recreational use would benefit as the entire WSA remains open to vehicles and new access routes, resulting from projected mineral exploration and utility developments, make the study area more accessible. No adverse impacts to this use are expected to occur.	Motorized recreational use of 100 visits would be displaced annually from the WSA. The impacts of shifting this use to other public lands would be negligible.	Motorized recreational use would be eliminated on the 10,179 acres recommended for wilderness designation and approximately 15 visits would be displaced annually. The impacts of shifting this use to other public lands would be negligible.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA Specific Comments

Two public hearings were held during the public review period on the Draft EIS. The first was In Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. One of the oral comments supported the preferred alternative (no wilderness) for the study area. The other comments did not mention specifically mention the WSA, but, general opposed wilderness from the position of restricting personal rights and unknown mineral potential.

Of the 35 written comments, five commentors supported the preferred alternative not to designate the area wilderness, two of those also identified the option for a modified partial wilderness alternative for the east portion of the study area not accessible to off-road vehicles, and two supported a modified partial wilderness alternative that would include the east side of the WSA (9,570 acres) and the upper portion of the drainage system into the Lake Mead National Recreation Area proposed wilderness area. The subjects of the comments opposed to wilderness designation centered upon unknown wilderness potential and historic off-road vehicle use of the area.

No comments were received from Clark County.

The Governor's consensus review of the recommendation for this study area was included in a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS and the recommendation is to release the entire WSA for uses other than wilderness. Comments from other state agencies also concurred with the recommendation.

There were no comments received from Federal agencies specifically directed towards this study area and none took a position on the recommendation for any WSA. The Environmental Protection Agency referred to mineral potential in all WSAs without rendering a statement or position on wilderness designation. The National Park Service mentioned unknown cultural resources as a reason for recommending the area for wilderness designation. the U.S. Fish and Wildlife Service identified wilderness designation as a method of protecting the threatened desert tortoise. Bureau of Mines comments were not specific.

EVERGREEN ABC WILDERNESS STUDY AREA

1. THE STUDY AREA - 2,694 acres

The Evergreen ABC WSA (NV-050-01R-16 A,B,C) is In Lincoln County, Nevada, approximately 85 miles north of Las Vegas. Located a few miles south of Alamo, Nevada and the Pahranagat Wildlife Refuge, the WSA Is sandwiched between the Desert National Wildlife Range to the west and U.S. Highway 93 on the east. Evergreen ABC Is composed of three small sub-areas separated by private lands. Sub-area A Is 2,194 acres, sub-area B is 289 acres and sub-area C Is 211 acres. A combined total of 2,694 acres (Table 1). Sub-part A Is approximately seven miles long and up to one mile In width; B Is a little over a mile long and one-half mile wide; C is two miles long by one half mile wide. All the sub-areas are long and narrow In form.

The WSA is contiguous to the Desert National Wildlife Range along its west side. Section A's northern boundary is defined by a major drainage which intersects a road. The area's eastern boundary follows the road south for approximately 3 miles until it intersects a powerline right-of-way and then Is identified as the west right-of-way boundary of the powerline. Section A Is bordered to the south by a parcel of private land.

Section B's northern and eastern boundaries are defined by private property. The southern portion of Section B Is contiguous with the Desert National Wildlife Range.

Private property defines Section C's northern border. The eastern border follows a road which Intersects the Desert National Wildlife Range at the WSA's southern boundary.

The WSA consists primarily of a broad, easterly sloping bajada with numerous small draws and washes carving their way to the east from the study area's western border. Vegetation consists of low-growing desert shrubs, mainly creosote, saltbush, yucca and scattered Joshua trees.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Nevada Contiguous Lands Final Wilderness Recommendations Environmental Impact Statement released in January, 1990. Two alternatives were analyzed In the EIS: an All Wilderness Alternative and a No Wilderness Alternative which Is the recommendation In this report.

2. RECOMMENDATION AND RATIONALE - **0 acres recommended for wilderness**
2,694 acres recommended for nonwilderness

The recommendation for this WSA is to release all 2,694 acres for uses other than wilderness (Map 1). All wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation Is not the All Wilderness Alternative, the recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The lack of the wilderness values, the area's small size and the reduction of conflicts with potential utility developments were the key considerations in the recommendation.

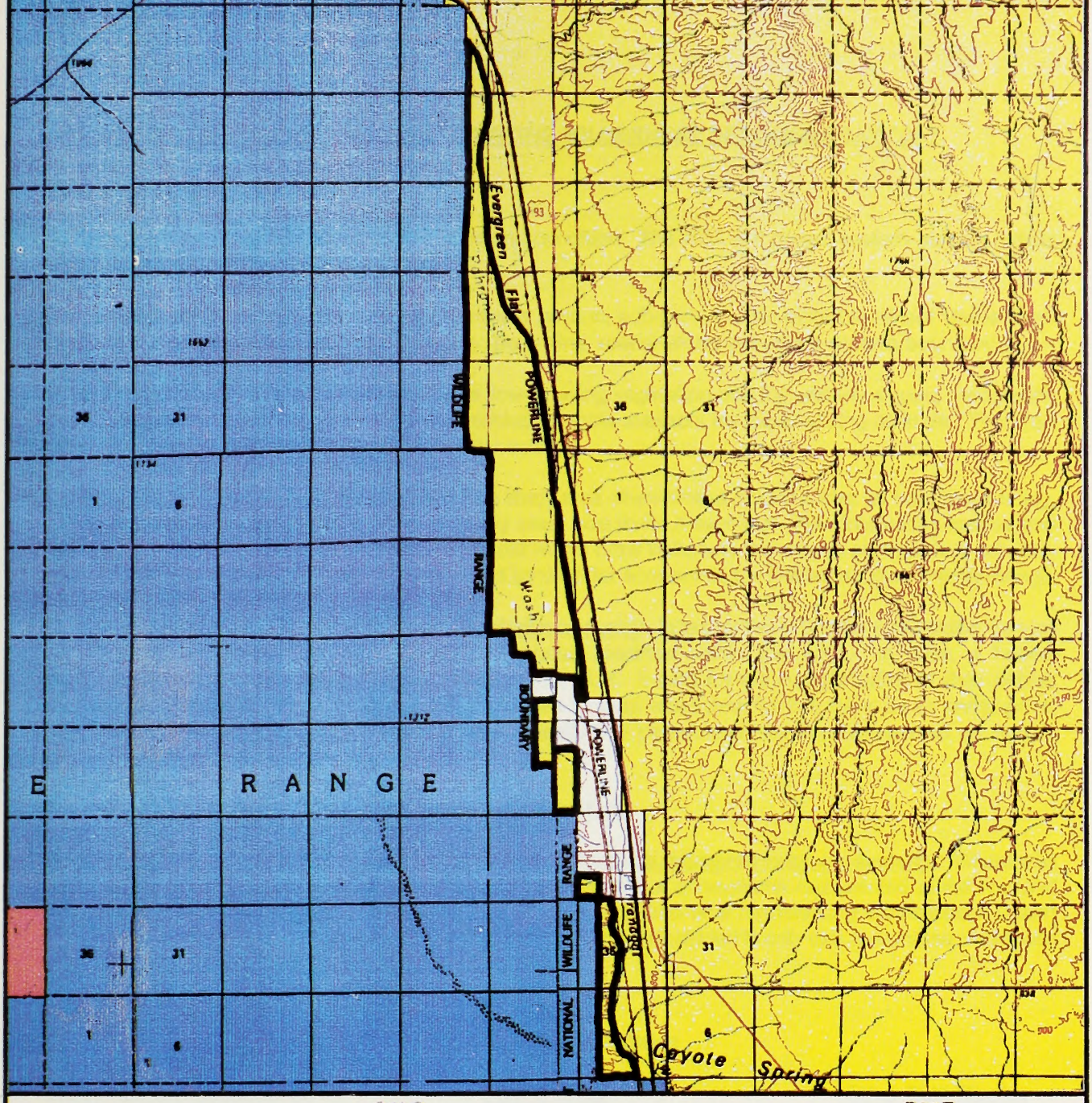
The WSA generally appears natural. Outstanding opportunities for solitude and primitive recreation are lacking due to the topographic and physical configuration of the WSA. The area's small size limits opportunities for solitude as there are few if any secluded locales. Visitors would frequently encounter one another due to the area's restrictive size and lack of topographic features. Outstanding opportunities for primitive types of recreation are unavailable as interesting destinations and focal points of interest are absent from the study area.

The no wilderness recommendation for the WSA emphasizes making the area available for utility development. Urban expansion and growth of Las Vegas Valley has sparked the need for utility expansion. Resource value for potential development of utilities outweighs the area's limited wilderness values.

Over the long-term, naturalness values within the WSA could be diminished by increased motorized recreational activity and development of potential utilities. Desert tortoise (Gopherus agassizli), a special feature identified in the area, would not receive the added protection afforded from wilderness designation.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	2,694
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	2,694
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	2,694
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	2,694
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS – NONE

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Evergreen Proposal

NV-050-IR-16 A,B,C
March 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is primarily in a natural condition. The WSA is a broad, easterly sloping bajada with numerous small draws and washes.

Two small stock reservoirs are within the northern portion, sub-part A. The most prominent visible man-made features are outside the WSA (highway, powerline, roads) along the area's eastern boundary.

B. Solitude: The WSA's extremely small size, low-growing vegetation and flat easterly sloping topography provides minimal screening and virtually no secluded spots available for experiencing solitude. The WSA does not possess outstanding opportunities for solitude.

C. Primitive and Unconfined Recreation: The study area offers limited opportunities for horseback riding, hiking and nature study as the WSA's extremely small size limits movement. Few interesting locales and interesting features are located within the WSA that would draw visitors to the area to participate in primitive recreational experiences. At best, the area would be used for access into the Desert National Wildlife Range.

D. Special Features: The desert tortoise (Gopherus agassizil), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. In 1988, a habitat management plan for the tortoise was adopted by the BLM. It calls for the categorization of their habitat by management goals. On August 4, 1989, the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Evergreen WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS) by including an additional area representing the American Desert Province/Creosote Bush ecosystem. This ecosystem is currently included in only one designated wilderness area. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote bush	0	0	20	549,834

B. 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 one major population center, Las Vegas, Nevada. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of Las Vegas.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: The Evergreen ABC WSA would contribute to the geographic distribution of areas within the NWPS in Nevada. Designation of Forest Service Wilderness In 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of Evergreen WSA would contribute to the geographic distribution of areas within the NWPS in southeastern Nevada by providing the public with wilderness opportunities In an area of the state presently limited In its offering of wilderness opportunities.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character),

The entire study area is not capable of being managed as wilderness. Approximately 30 acres consisting of a material site right-of-way was issued In perpetuity to the Nevada Department of Transportation. Full utilization of the right-of-way is expected to occur. Extraction of sand and gravel from the site would negatively impact natural values in the WSA. There would be management concerns dealing with the WSA's small size and ORV accessibility.

Energy and Mineral Resource Values

The energy and mineral potential of the WSA has been rated by using the following information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report, a federally contracted mineral survey to identify energy and mineral resources incorporating literature search with field verification and extensive sampling), (2) evaluation of the geologic setting, and (3) past and present mining activities.

As a result of this information, the following conclusions were reached: No known metallic or nonmetallic mineral deposits exist within the WSA as the geologic conditions are not favorable for the accumulation of these minerals. As of the date of this report, no mine, prospects, or mining claims have been identified within the WSA. The exploration for any potential locatable minerals Is not projected for the study area. Sand and gravel deposits may occur in the alluvial deposits, but no commercial value is anticipated.

The study area does have moderate potential for the occurrence of oil and gas because of its position with respect to the Overthrust Belt and sedimentary basin concept. To date, no wells have been drilled, nor has geophysical exploration been conducted within the WSA. Exploration for, or development of, potential energy resources Is not projected to occur within the study area. Presently no oil and gas or geothermal leases exist within the WSA.

In summary, quantities of various mineral or energy resources are unknown, but the potential for occurrence for oil and gas is moderate throughout the WSA.

Impacts on Resources

The comparative Impact table (Table 4) summarizes the effects on pertinent resources for all alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Summary of WSA-Specific Comments

In 1986, the area was reinstated In the wilderness study process as a result of an April 1985 decIsIon In Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983. As a result of the court case, the area was reinventoried to document wilderness characteristics.

One public comment was received pertaining to the decision of the original inventory of the WSA. The comment disagreed with the decision that the area be approved as a Wilderness Study Area. Comments cited that the area lacked opportunities for solitude and primitive recreation.

Two public hearings were held during the public review period on the Draft Nevada Contiguous Lands Wilderness EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. None of the oral comments supported the All Wilderness Alternative and 1 supported the Proposed Action (no wilderness).

Of 36 written comments, three supported the All Wilderness recommendation and five supported No Wilderness. Subjects of the comments were the proxImity of the proposed wilderness to the Desert National Wildlife Range, possible buffer zones for the Range, desert tortoise, race courses, oil and gas potential and potential powerline intrusions.

Two public hearings were held during the public review period on the Draft Nevada Contiguous Lands Wilderness EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. None of the oral comments supported the All Wilderness Alternative and 1 supported the Proposed Action (no wilderness).

Of 36 written comments, three supported the All Wilderness recommendation and five supported No Wilderness. Subjects of the comments were the proximity of the proposed wilderness to the Desert National Wildlife Range, possible buffer zones for the Range, desert tortoise, race courses, oil and gas potential and potential powerline intrusions.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document (Draft Nevada Contiguous Lands Wilderness EIS)."

During Public Hearings oral testimony was given by a Lincoln County representative. Lincoln county supports BLM's No Wilderness (Proposed Action) recommendation.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Wilderness values within the WSA would be impaired under the Proposed Action. The projected development of utilities, increased cross country vehicle use and extraction of sand and gravel would physically disturb approximately 322 acres within the entire WSA. The natural perception of the entire WSA would be impaired by the construction of utilities (towers, lines, roads) across the landscape. The less than outstanding opportunities for solitude and primitive recreation would be further diminished by the audio and visual distractions from the aforementioned activities occurring in the WSA.	Designating the WSA as wilderness would preserve values of naturalness and would enhance protection of desert tortoise. Extraction of sand and gravel is projected to physically disturb an estimated 30 acres. The visual perception of naturalness would be impaired on the entire WSA. Opportunities for solitude and primitive recreation within the entire WSA would be diminished during periods of active sand and gravel operations due to audio and visual distractions.
Levels of Motorized Recreational Use	Motorized recreational use could continue within the WSA under the Proposed Action, benefiting this activity. However, potential and discretionary management actions may restrict this use as a result of categorization of the area's tortoise habitat.	Motorized recreational use of 35 visits would be foregone annually from the WSA. The impacts of shifting this use to other public lands would be negligible.
Development of Utilities	The proposed action would allow the development of five transmission lines in the WSA, however, four buried utility lines would not be developed because of unacceptable impacts on desert tortoise in Category I habitat.	Under the All Wilderness Alternative, utilities could not be developed within the WSA.
Existing Material Site Rights-of-Way	No impact to use of existing material site right-of-way subject to mitigation for the desert tortoise.	No impact to use of existing material site right-of-way subject to mitigation for the desert tortoise.
Threatened and Endangered Species/Desert Tortoise	322 acres of Category I desert tortoise habitat would be lost due to utility development, sand and gravel extraction and motorized recreational use.	30 acres of Category I habitat would be lost due to the extraction of sand and gravel from an existing material site.

NELLIS ABC WILDERNESS STUDY AREA

1. THE STUDY AREA - 5,718 acres

The Nellis ABC WSA (NV-050-04R-15) is located at the northern end of Las Vegas Valley. The study area is divided into three small sub-areas separated by roads. For the purpose of this report, all of the sections will be considered as one (Table 1). Sub-area A encompasses 1,971 acres, B has 2,713 and C has 1,024 acres for a combined total of 5,718 acres. The WSA was originally inventoried as part of a 13,400 acre parcel. The study area comprises the natural portion of the original parcel which was contiguous to the Fish and Wildlife Service Desert National Game Range area recommended for wilderness.

The area is bound on the west by private land; to the east by the Nellis Small Arms Range; to the north by the Desert National Game Range; and to the south by man-made features (earthen dikes).

Nellis ABC consists of a flat bajada sloping gently south from the Sheep Range. It is highly eroded, creating a deeply rutted but uniform terrain. Vegetation consists of creosote and other desert shrubs, with some yucca appearing along the northern boundary.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Nevada Contiguous Lands Final Wilderness Recommendations Environmental Impact Statement released January 22, 1990. There were two alternatives analyzed in the EIS: an All Wilderness Alternative and a No Wilderness Alternative (Proposed Action) which is the recommendation in this report.

2. RECOMMENDATION AND RATIONALE - 0 acres recommended for wilderness
5,718 acres recommended for nonwilderness

The recommendation for this WSA is to release 5,718 acres for uses other than wilderness (Map 1). All wilderness is considered the environmentally preferable alternative as it would result in the least change from the natural environment over the long-term. Although the recommendation is not the All Wilderness Alternative, the recommendation for this WSA would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

Lack of the wilderness values, the area's small size and the reduction of conflicts with utility and rail line developments were key considerations in the recommendation.

Nellis ABC WSA generally appears natural, but outstanding opportunities for solitude and primitive recreation are lacking. The area's small size limits opportunities for solitude as there are few if any secluded locales. Visitors would frequently encounter one another due to the area's restrictive size and lack of topographic or vegetative screening. Outstanding opportunities for primitive types of recreation are unavailable as interesting destinations and focal points of interest are absent from the study area.

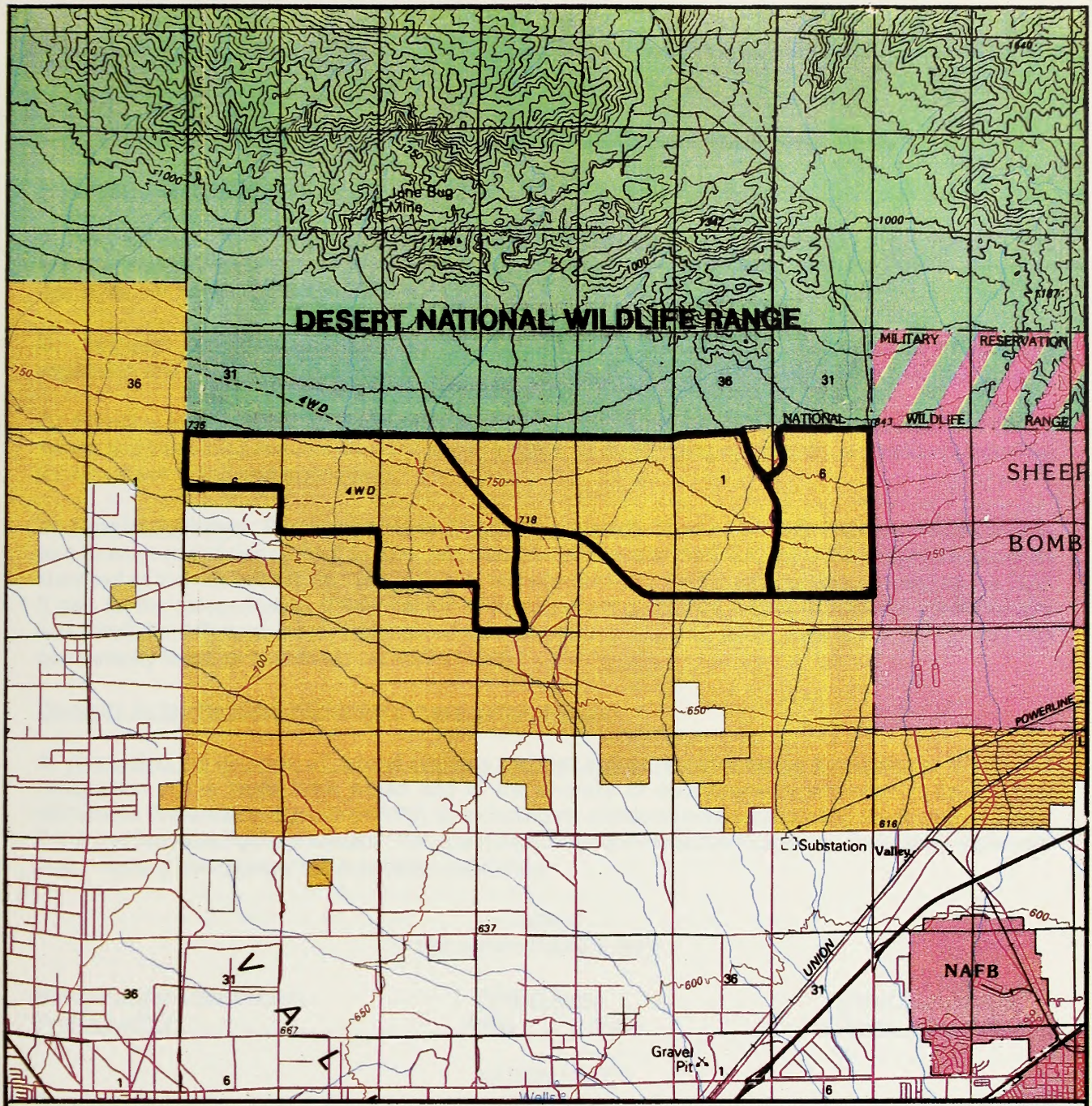
The no wilderness recommendation for the WSA would also emphasize making the area available for utility and rail line development. The expansion and growth of Las Vegas Valley has sparked the need for utility expansion. In addition, the Department of Energy has identified a route through the WSA for development of a rail line to the potential Yucca Mountain repository. The values of both these potential developments outweigh the WSA's wilderness values.

Over the long-term naturalness values within the WSA would be diminished by the increase in motorized recreational activity and the development of potential utilities and a rail line. Desert tortoise (Gopherus agassizii), a special feature identified in the area, would not receive added protection afforded from

wilderness designation.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	5,718
Split Estate (BLM surface only)	0
Inholdings (State, Private)	0
Total	5,718
Within the Recommended Wilderness Boundary	
BLM (Within WSA)	0
BLM (Outside WSA)	0
Split Estate (Within WSA)	0
Split Estate (Outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings (State,Private)	0
Within the Area Not Recommended For Wilderness	
BLM	5,718
Split Estate	0
Total BLM Lands Not Recommended For Wilderness	5,718
Inholdings (State, Private)	0



RECOMMENDED FOR WILDERNESS – NONE

RECOMMENDED FOR NONWILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS – NONE

SPLIT ESTATE -NONE

STATE – NONE

PRIVATE – NONE

N

1 0 1 2 3 4 5

MILES

Nellis Proposal

NV-050-4R-15 A,B,C
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: The WSA is in a natural condition. The WSA consists of a flat bajada sloping gently south from the Sheep Range. It is highly eroded, creating a deeply rutted but uniform terrain. Off-road vehicle use is the primary intrusive feature.

B. Solitude: The WSA provides less than outstanding opportunities for solitude. The low-growing vegetation and open landscape provide minimal screening for visitors and there are few secluded locales.

C. Primitive and Unconfined Recreation: The study area's small size, irregular configuration and lack of variety and interesting features does not permit a visitor an outstanding opportunity of limited opportunities for horseback riding and sightseeing.

D. Special Features: The desert tortoise (Gopherus agassizii), listed by the U.S. Fish and Wildlife Service as a threatened species on April 2, 1990, has been identified within the WSA. All of the study area has been identified as tortoise habitat. In 1988, a habitat management plan for the tortoise was adopted by the BLM. It calls for the categorization of their habitat by management goals. On August 4, 1989 the desert tortoise was listed, for 240 days, as an endangered species under emergency listing rules and subsequently was permanently listed as threatened on April 2, 1990.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of the Nellis WSA would add to the diversity of ecosystems represented in the National Wilderness Preservation System (NWPS) by including an additional area representing the American Desert Province/Creosote Bush ecosystem. This ecosystem is currently included in only one designated wilderness area. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province				
Creosote Bush	1	343,753	121	4,405,403
	NEVADA			
Creosote bush	0	0	20	793,507

B. 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 two major population centers. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within five hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Los Angeles	27	2,876,234	135	4,958,751

C. Balancing the geographic distribution of wilderness areas: The Nellis ABC WSA would contribute to the geographic distribution of areas within the National Wilderness Preservation System in Nevada. Designation of Forest Service Wilderness in 1989, in Nevada, created a wide distribution of designated wilderness areas within the State. Designation of Nellis WSAs would contribute to the geographic distribution of areas within the NWPS in southeastern Nevada by providing the public with wilderness opportunities in an area of the state presently limited in its offering of wilderness areas.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

Nellis ABC is capable of being managed as wilderness, but there will be some manageability concerns associated with the one oil and gas lease. However, any rights associated with the lease are not expected to be exercised. There would be management concerns dealing with the WSA's small size and ORV accessibility.

Energy and Mineral Resource Values

Energy and mineral potential of the WSA has been rated by using the following pieces of information: (1) the Geology, Energy and Minerals Report (The 1983 GEM Report was a federally contracted mineral survey to identify energy and mineral resources and incorporating literature search with field verification and extensive sampling.), (2) evaluation of the geologic setting and (3) past and present mining activities.

As a result of this information, the following conclusions were reached: The entire WSA (5,718 acres) was rated as having moderate potential for nonmetallic minerals (sand and gravel). There are no mining claims, prospects or mines located within the study area.

Although an oil and gas lease almost covers one section within the WSA, it was rated has having low potential. There is moderate potential for geothermal resources throughout the study area.

In summary, quantities of various mineral and energy resources are unknown but the potential for geothermal is moderate throughout the WSA as identified in the Environmental Impact Statement.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for all alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Social and economic considerations were not deemed to be significant issues for analysis.

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action (No Wilderness)	All Wilderness
Wilderness Values	Wilderness values within the WSA would be impacted under the Proposed Action. The projected development of utilities, rail lines, associated access routes, and increased cross country vehicle use would physically disturb an estimated 258 acres within the WSA. The natural perception of the entire WSA would be impaired by the construction of utilities (towers, lines, roads) and rail lines across the landscape. The less than outstanding opportunities for solitude and primitive recreation would be lost due to the audio and visual distractions from the aforementioned activities occurring in the WSA.	Designating the WSA as wilderness would preserve wilderness values of naturalness and would enhance the protection of desert tortoise.
Motorized Recreational Use	Motorized recreational use would benefit from nondesignation as the entire study area would remain open to vehicles and new access routes would be developed in association with projected utilities construction. No adverse impacts to this use is expected to occur.	Motorized recreational use of 120 visits would be foregone annually from the WSA. Impacts of shifting this use to other public lands would be negligible.
Development of Utilities	The development of utilities would be possible.	Under the All Wilderness Alternative, utilities could not be developed within the WSA.
Development of a Rail Line	Development of a rail line could occur.	Under the All Wilderness Alternative, a rail line could not be developed within the WSA.
Threatened and Endangered Species/Desert Tortoise	258 acres of habitat would be lost by development activities. The remaining habitat would be seriously fragmented.	Wilderness designation would enhance the protection of desert tortoise by precluding activities such as the development of utilities, a rail line and associated access roads within the WSA.

Summary of WSA Specific Comments

In 1986, the area was reinstated in the wilderness study process as a result of an April 1985 decision in Sierra Club vs Watt concerning certain lands that were deleted from wilderness review in 1982 and 1983. As a result of the court case, the area was reinventoried to document wilderness characteristics.

Six public comments were received pertaining to the decision of the original inventory of the WSA. All six comments disagreed with the decision that the area be approved as a Wilderness Study Area. The comments cited that the area lacked opportunities for solitude and primitive recreation. Originally 13,400 acres were inventoried, of which 5,718 acres were found to be in a natural condition. This acreage was divided in three parcels which make-up Nellis ABC.

Two public hearings were held during the public review period on the Draft EIS. The first was in Las Vegas, Nevada, on August 3, 1988. Oral statements were presented by 22 people. Six oral statements were presented at the second hearing at Reno, Nevada on August 4, 1988. One of the oral comments supported the Proposed Action (No Wilderness) for the study area. The other comments did not mention the WSA.

Of the 36 written comments, six supported the Proposed Action and none proposed All Wilderness. The subjects of the comments were potential rail rights-of-way, race courses and mineral resources.

In a letter from the Clearinghouse of the State of Nevada, dated September 7, 1988, the Director of the Clearinghouse said, "...the State concurs with the recommendation presented in the document." The document referred to is the Draft Nevada Contiguous Lands Wilderness EIS.

No comments were received from Clark County or the cities of Las Vegas and North Las Vegas.

RESTING SPRINGS WILDERNESS STUDY AREA

1. THE STUDY AREA - 3,850 acres

Resting Spring Range WSA, NV-050-460, is approximately 15 miles west of Pahrump and nearly 60 miles west of Las Vegas, along the California-Nevada border, in Nye County, Nevada. Access is via Ash Meadows Road several miles to the east. Except for the western boundary, which is the Nevada-California border, the boundaries of the WSA are poorly defined. Boundaries meander along the base of the foothills of the Resting Spring Range, set back from the effects of the Ash Meadows and Stewart Valley Roads. The 3,850 acre WSA is divided into two unequal parts by a maintained dirt road which branches off the Ash Meadows Road. The northern portion is 1,050 acres and the southern portion is 2,800 acres.

Resting Springs WSA is contiguous to the California Desert Conservation Area's (CDCA), Resting Spring Range WSA #145 which covers 89,772 acres in California. During the 1980 Wilderness Inventory it was determined that the Nevada WSA did not meet wilderness criteria for size, solitude and primitive recreation, except when considered in conjunction with the California WSA. California BLM has recommended that the CDCA Resting Springs WSA be designated nonwilderness.

The Nevada WSA contains the foothills and lower drainages of the narrow, north-south trending Resting Springs Range located to the south in the California WSA. Elevations, within Nevada, range from 2,400 feet on the north end to 3,900 feet near the California line. Most of the WSA is composed of sedimentary rocks, primarily limestone. Volcanic ash beds occur in small areas near the boundaries. Vegetation within the WSA is typical of the arid portions of the Mohave Desert Biome with creosote bush, blackbrush, shadscale and other low desert shrubs and cacti.

Resting Springs WSA was studied under Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA), and was included in the Esmeralda-Southern Nye Proposed Resource Management Plan and Final Environmental Impact Statement(EIS). The Final Wilderness EIS was filed October 11, 1985. Two alternatives were analyzed in the EIS: No Wilderness, the recommendation of this report, and All Wilderness.

2. RECOMMENDATION AND RATIONALE - 0 acres recommended for wilderness
3,850 acres recommended for nonwilderness

The recommendation for this WSA is to release all 3,850 acres for uses other than wilderness. The recommendation is shown on the Resting Springs WSA Map (Map 1). All Wilderness is the environmentally preferable alternative as its implementation would result in the least change from the natural environment over the long-term. The recommendation, while not the environmentally preferred, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

Wilderness designation is not recommended for 3,850 acres of public land within the Resting Springs WSA because of its low quality wilderness values a lack of special features, its easy accessibility, potential for conflicts with other actual or potential uses, and the overwhelming public support for nonwilderness designation of this area.

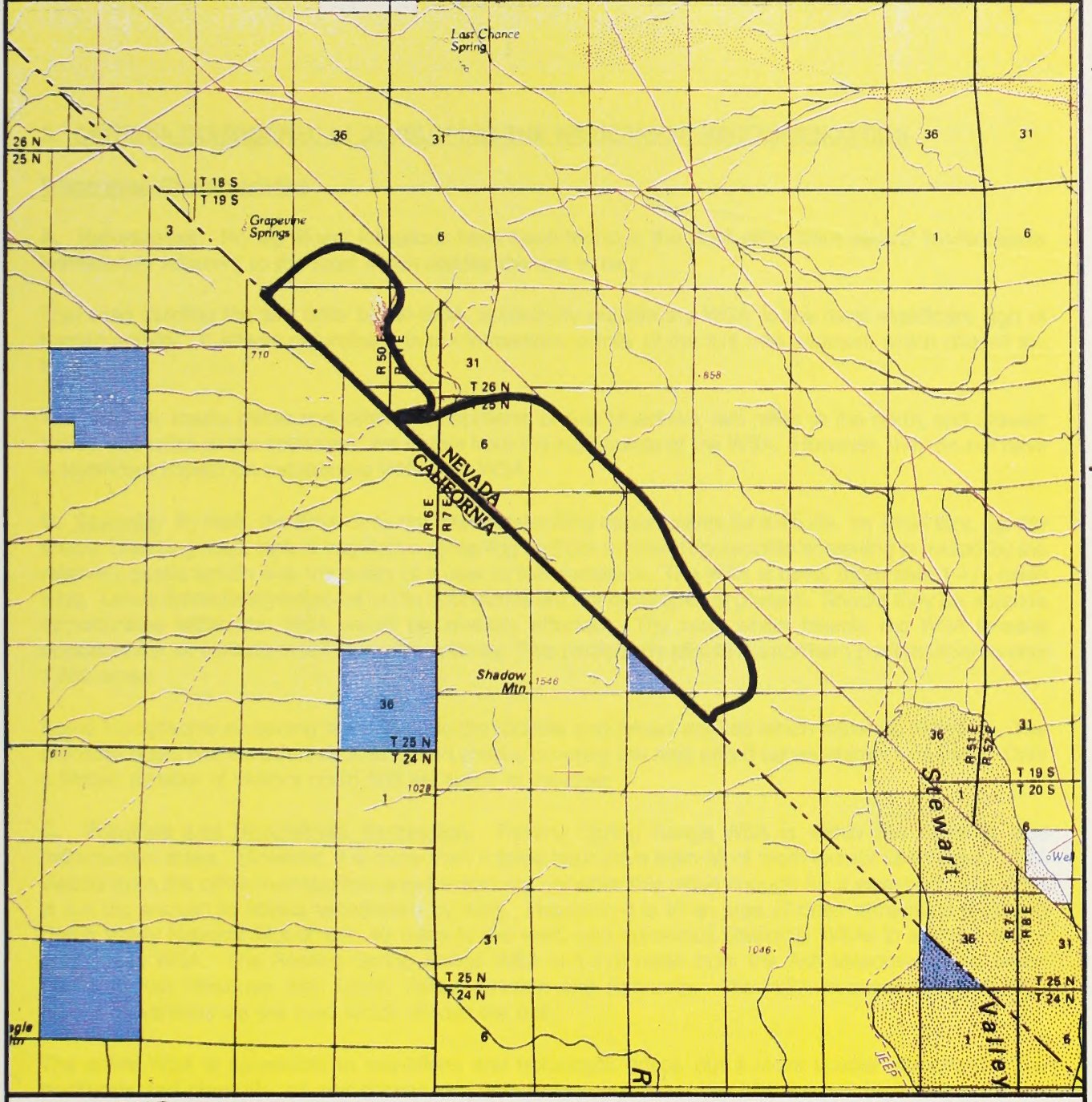
Designating the Resting Springs WSA wilderness would add an area in relatively pristine condition but lacking diverse natural and cultural values. By itself, the WSA does not offer outstanding opportunities for solitude. Its small size, narrow shape, bisecting road, lack of vegetative screening and minimal topographic screening provided by relatively gentle terrain limit the ability of a user to find seclusion.

By itself, this WSA is too small (3,850 acres) to offer outstanding opportunities for solitude. Its long narrow shape, divided in two by the intrusion road, is the worst possible configuration for providing opportunities for solitude. The WSA is never more than 1-1/4 miles wide. The lands immediately adjacent to the boundaries are not developed now. Should they be, solitude opportunities within the WSA would be severely affected. The road which bisects the WSA lessens the opportunities for solitude in the immediate vicinity. This particularly affects the northern portion which is only 1,050 acres.

Conflicts with other resource uses of the lands recommended for designation are limited. Grazing management would continue in the same manner and degree and mineral exploration and development could continue. There are no proposed range or wildlife development projects for the area.

Table 1
Land Status and Acreage Summary of the Study Area

Within Wilderness Study Area	
BLM (surface and subsurface)	3,850
Split Estate (BLM surface only)	0
Inholdings (State, private)	0
Total	3,850
Within the Recommended Wilderness Boundary	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	0
Split Estate (outside WSA)	0
Total BLM Land Recommended for Wilderness	0
Inholdings	0
Within the Area Recommended for Nonwilderness	
BLM	3,850
Split Estate	0
Total BLM land Not Recommended for Wilderness	3,850
Inholdings (state, private)	0



RECOMMENDED FOR WILDERNESS - NONE

RECOMMENDED FOR NONWILDERNESS-

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE

SPLIT ESTATE -NONE

STATE - NONE

PRIVATE - NONE

N

1 0 1 2 3 4 5

MILES

Resting Springs Proposal

NV-050-460
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: No significant intrusions have been found in the WSA other than several bladed spots immediately adjacent to the road which divides the unit in two.

That road dividing the two units of the WSA, technically outside the WSA, is the most significant sign of human activity. It affects naturalness in the immediate vicinity of the 3/4 mile segment which divides the WSA.

The ranches, roads, mines and other developments of Ash Meadows, two miles to the north, and Stewart Valley, two miles to the southeast, are visible from the high points of the WSA. However, they do not have a significant impact on naturalness within the WSA.

B. Solitude: By itself, the WSA does not offer outstanding opportunities for solitude. Its small size, narrow shape, bisecting road, lack of vegetative screening and the minimal topographic screening provided by the relatively gentle terrain limit the ability of a user to find seclusion. The WSA is never more than 1-1/4 miles wide. Lands immediately adjacent to the boundaries are not developed at present. Should they be, solitude opportunities within the WSA would be severely affected. The road which bisects the WSA lessens opportunities for solitude in the immediate vicinity. This particularly affects the northern portion which is only 1,050 acres.

Some topographic screening is available in the foothills and broad washes which make up the WSA. The creosote bush, blackbrush and other desert shrubs covering the area afford no vegetative screening. Only a limited number of visitors could find seclusion in the area.

C. Primitive and Unconfined Recreation: Resting Spring Range WSA is within 250 miles of nine metropolitan areas. However, it is more than a three hour drive from all of them except Las Vegas. Most visitors from the other metropolitan areas would not consider this close enough for a weekend. The WSA is not big enough to attract vacationers by itself. However, it is in an area of other attractions including Death Valley National Monument, 40 miles to the west, and numerous California WSAs in addition to the contiguous WSA. The Resting Spring Range WSA is 1-1/2 miles from the Ash Meadows Road which connects Ash Meadows with Death Valley Junction and Pahrump. The WSA is accessible with high clearance vehicles via the road which divides the unit.

The entire WSA is accessible to day-hikers and horseback riders, but it lacks special attractions. The landforms and plant life are not diverse or particularly scenic, and the hills are not high enough to be challenging. The most desirable destination for a dayhike is the climb up Shadow Mountain to the south in the California WSA. The area is not suited for backpacking because of its small size and narrow configuration. The visitor would have some opportunity to see wild horses.

By itself, the Resting Spring Range WSA does not offer outstanding opportunities for primitive recreation. It is too small, its configuration is restrictive, and it lacks diverse and scenic attractions.

D. Special Features: There are no identified special features in the WSA.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: The predominant ecosystem in the Resting Springs WSA is in the American Desert Province/creosote bush ecosystem as identified in the Bailey-Kuchler classification system.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
	NATION WIDE			
American Desert Province/ Creosote Bush	1	343,753	117	4,264,059
	NEVADA			
Creosote Bush	0	0	13	408,490

B. Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers: The Resting Springs WSA is within a five hour drive of Las Vegas and the Los Angeles/Long Beach SMSAs. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within 5 hours drive of the population centers.

Table 3
Wilderness Opportunities for Residents of Major Population Centers

Population Centers	NWPS Areas	NWPS Acres	Other BLM Studies Areas	Other BLM Studies Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497
California				
Fresno	37	4,101,852	28	460,790
Los Angeles/Long Beach	28	2,919,234	135	4,958,751

C. Balancing the geographic distribution of wilderness areas: Resting Springs WSA would be an insignificant contribution to the geographic distribution of areas within the National Wilderness Preservation System in Nevada.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

The small northern unit is not manageable as wilderness and neither is much of the southern unit because much of the terrain is too accessible. Drawing the boundary back to the steepest foothills of Shadow Mountain would eliminate much of the problem and create a better defined boundary. However, it would reduce the size of the WSA to where it would not be suitable for designation without designating the adjacent CDCA Resting Spring Range WSA.

Large, driveable washes penetrate all parts of the WSA. At least 80 percent of the small northern unit is

affected. Most of these washes drain towards the well-traveled, nearby, Ash Meadows Road. Use of these washes seems to be minimal at present but, is anticipated to increase over time as the Pahrump area grows. Since there are no natural barriers to ORV use, extensive artificial barriers or regular patrols would eventually be necessary to retain wilderness values.

With the exception of the southwest boundary, which follows the California/Nevada state boundary line, boundaries are impossible to locate on the ground. The north east and southern boundaries do not follow any physical or manmade features and cannot be identified on the ground easily.

Post-FLPMA mining claims cover the entire northern unit and several hundred acres of the north end of the southern unit.

Energy and Mineral Resource Values

Resting Spring WSA is largely composed of Precambrian and Cambrian marine sediments which have been displaced by normal faults, usually less than one mile in length. The Furnace Creek fault zone, over 18 miles long, terminates southward at the southwestern flank of Shadow Mountain. Another major normal fault passes through Stewart Valley and bounds the Resting Spring Range on its eastern flank. Quaternary alluvial fan deposits cover much of the lower slopes. Miocene tufaceous lake beds occur north of the WSA and in small areas inside the north boundary.

Zeolites have been produced from the altered tuffs deposited in the alkaline lake beds just north of the WSA. Anaconda Mining Company is currently prospecting on those claims. The nearest mining district is the Johnnie District 15 miles to the northeast of the WSA where gold was mined from veins in the lower Cambrian Wood Canyon formation. The Nopah silver-lead-zinc mine and the Baxter silver-lead prospect several miles to the south of the WSA are the only other known prospects in the region.

The entire WSA is classified as having a low favorability for metallic and nonmetallic mineral resources due to the geology of the area.

The WSA has no favorability for uranium based on a lack of source rocks. It also has no favorability for oil and gas for the same reason. No oil and gas or thermal leases or applications are in the WSA. The WSA has a low favorability for geothermal resources.

A U.S. Geological Survey and Bureau of Mines mineral assessment has not been completed for this study area.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the entire area as wilderness.

Local Social and Economic Considerations

Many residents of Esmeralda and Nye Counties philosophically disagree with the wilderness concept, because they feel that it would interfere with their ability to continue to use public lands as they see fit. Their particular concern focuses on the opportunity to prospect, develop mines, can continue to maintain their way of life without limitations or responsibility. Wilderness designation would preclude this in some areas and impact their "way of life".

Table 4
Comparative Summary of the Impacts by Alternative

Issue Topics	Proposed Action No Wilderness	All Wilderness
Wilderness Values	The limited wilderness values of naturalness and opportunities for solitude and primitive and unconfined recreation would be lost in the WSA. However, the values lost do not meet the minimum wilderness criteria. No special features were found to exist in the WSA.	Natural features and limited opportunities for solitude and primitive types of recreation that exist on about 1,400 acres would be retained. The less than outstanding opportunities for solitude and primitive recreation and natural values on the remaining 2,459 acres would be diminished or lost due to uncontrollable motorized vehicle use. No special features were found.
Motorized Recreational Vehicle Use	Motorized recreational vehicle use would benefit as a result of the WSA remaining open to vehicle use. No impacts to this use would occur.	Motorized recreational vehicle use of 79 visits would be displaced. The impact of shifting this use to other public lands nearby would be negligible.
Exploration for and Development of Energy and Mineral Resources	Although mineral and energy resources would be available for exploration and development, neither is expected to occur. There would be no impacts on the exploration or development of energy or mineral resources.	Exploration and development of energy and mineral resources would be foregone. As no exploration or development of these resources is projected to occur, no impacts would occur.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Meetings were held with the Amargosa and Pahrump Planning Boards early in the process. Three public hearings were held during the Resource Management Plan process with 49 people in attendance.

Nine comments were received on the Resting Spring Range WSA during the initial wilderness inventory in 1979. Six agreed with further study of the area and three disagreed. Six specific comments on this WSA and 2,327 general comments stating the unit met wilderness criteria were received during the intensive inventory in 1980. The general comments were in response to a mailing by a coalition of Nevada conservation groups seeking support for a number of areas. A few of the specific comments discussed wilderness values, but the remainder mentioned inadequate size, lack of outstanding opportunities or competing resource values.

One specific comment was received from Atlantic Richfield/Anaconda during the issue identification stage for this RMP. Atlantic Richfield, who has commented at every stage of the wilderness study, is opposed to wilderness designation. In addition, three general comments were opposed to any wilderness in the Esmeralda-So. Nye RMP area.

The Governor of Nevada recommended that the area not be designated wilderness.

COUGAR CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA - 15,968 acres

The Cougar Canyon WSA (UT-040-123, NV-050-166) is in northwestern Washington County, Utah, and northeastern Lincoln County, Nevada. The WSA includes 10,568 acres of public land in Utah and 5,400 acres in Nevada (Tunnel Spring WSA). No State, private, or split estate lands are included (Table 1). In Utah, the study area is bordered on the north and northeast by the Dixie National Forest. In Nevada, the WSA is adjacent to public lands and Beaver Dam State Park on the southwest.

The WSA consists of steep, mountainous canyons, long ridges, and rough drainages. Various kinds of volcanic rocks predominate. The area is at the head of Beaver Dam Wash, and elevations range from 5,000 to 6,700 feet. Seven miles of perennial streams, six undeveloped springs, and one undeveloped spring are in the WSA. Vegetation is mostly pinyon-juniper and sagebrush. The climate is semiarid, with cold winters and warm summers.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and is included in the Utah Statewide Final Wilderness Environmental Impact Statement (EIS). Three alternatives were analyzed in the EIS: a partial wilderness alternative, which is the recommendation in this report; a no wilderness alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE - 6,408 acres recommended for wilderness
9,560 acres recommended for nonwilderness

The recommendation for this WSA is to designate 6,408 acres as wilderness and release 9,560 acres for uses other than wilderness (Map 1). The All Wilderness Alternative is the environmentally preferable alternative as it would result in the least change in the natural environment over the long term. The recommendation, while not the all wilderness alternative, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The recommendation differs from the proposed action listed in the Draft EIS. Public support for some wilderness designation of this WSA received during review of the Draft EIS prompted BLM to re-evaluate this area. This led to the development of the partial wilderness alternative which is now the proposed action in the Final EIS and the recommendation of this report.

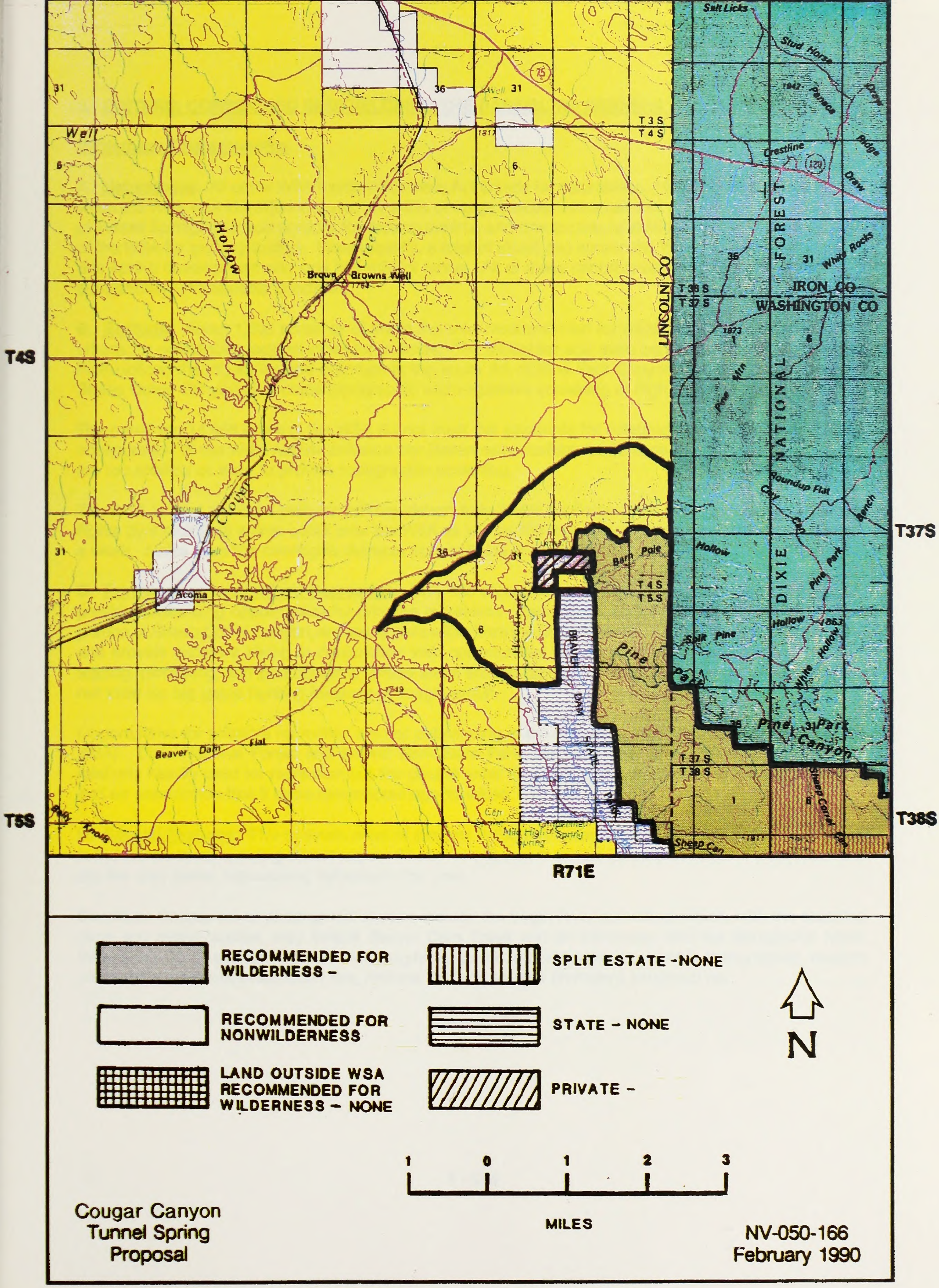
The area recommended for wilderness designation includes all of area with outstanding opportunities for solitude (1,300 acres) and primitive recreation (400 acres) and all of the highest visual qualities (5,400 acres). Cougars and a variety of raptors frequent the area. Rainbow trout, which are rare elsewhere in the vicinity, inhabit the streams. No conflicts exist with other uses.

The area recommended is mostly the northeastern portion of the WSA and includes about 4,228 acres in Washington County, Utah, and 2,180 acres in Lincoln County, Nevada. The boundary is along section and sub-section lines that enclose the portion with the highest wilderness values.

In the northwestern part of the WSA, not recommended for wilderness designation, there are no outstanding opportunities for primitive recreation, visual aspects are common, and diversity of terrain and vegetation is limited. The southern portion of the WSA lacks diversity and outstanding opportunities for primitive recreation.

Table 1
Land Status and Acreage Summary of the Study Area

	NV	UT	Total
Within Wilderness Study Area			
BLM (surface and subsurface)	5,400	10,568	15,968
Split Estate (BLM surface only)	0	0	0
Inholdings	0	0	0
Total	5,400	10,568	15,968
Within the Recommended Wilderness Boundary			
BLM (within WSA)	2,180	4,228	6,408
BLM (outside WSA)	0	0	0
Split Estate (within WSA)	0	0	0
Split Estate (outside WSA)	0	0	0
Total BLM Land Recommended for Wilderness	2,180	4,228	6,408
Inholdings	0	0	0
Within the Area Not Recommended for Wilderness			
BLM (surface and subsurface)	3,220	6,340	9,560
Split Estate (BLM surface only)	0	0	0
Total BLM Land Not Recommended for Wilderness	3,220	6,340	9,560
Inholdings	0	0	0


Salt Licks
Stud Horse
Paneca
Draw
Ridge
Draw
Crestline
120
75
31
36
31
T 3 S
T 4 S
Well
6
1
6
Hollow
Creek
Brown
Browns Well
LINCOLN CO
FOREST
NATIONAL
DIXIE
36
31
White Rocks
IRON CO
WASHINGTON CO
T 36 S
T 37 S
1873
Pine Mtn
T4S
Roundup Flat
Bench
T37S
Hollow
Barn Pole
T 4 S
T 5 S
Acoma
1704
36
31
1
6
BEAVER DAM STATE PARK
Pine Park
Split Pine
Hollow
1863
White Hollow
Pine Park Canyon
Beaver Dam Flat
Knolls
T 37 S
T 38 S
Sheep Corral Can
Sheep Can
Mile High Spring
T5S
T38S
R71E
RECOMMENDED FOR WILDERNESS -
RECOMMENDED FOR NONWILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS - NONE
SPLIT ESTATE -NONE
STATE - NONE
PRIVATE -
N
1
0
1
2
3
MILES
Cougar Canyon
Tunnel Spring
Proposal
NV-050-166
February 1990

3. CRITERIA CONSIDERED IN DEVELOPING THE PARTIAL WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness: All of the WSA meets Wilderness Act criteria for naturalness. Human Intrusion that existed when the WSA was identified included six miles of range fences, one small tree and shrub planting in 1971 at Tunnel Springs (Nevada portion) for erosion control, and one exclosure at Middle Ridge in the south end of the WSA for grazing studies. More recently, a total of about one acre in the WSA has been disturbed by one spring development and one half mile of fence. All of these disturbances have been reclaimed to a substantially unnoticeable condition.

B. Solitude: About 1,300 acres, all of are in the area recommended for wilderness designation, meet the criteria for outstanding opportunities for solitude. The tributaries and main canyons of the Pine Park-Split Pine Hollow, the tributaries and outcrops in the south rim of Pine Park Canyon, and the lower portion of Sheep Corral Canyon all provide topographic and vegetative screening of high quality.

The remaining 14,668 acres of the WSA do not meet the standards for outstanding solitude. The size and configuration of the WSA neither enhance nor lessen opportunities for solitude and many of the canyons are too shallow or wide to provide topographic screening.

The WSA is near the flight path for military aircraft from Nellis Air Force Base near Las Vegas. Subsonic flights by 4 aircraft at a time occur over the WSA as low as 100 feet above ground level, two or three times a week. Noise from the overflights detracts from solitude in the WSA.

C. Primitive and Unconfined Recreation: Only 400 acres, in the northern and eastern parts of the WSA, provide outstanding opportunities for primitive recreation. These areas, Pine Park Canyon and the eastern portion of Sheep Corral Canyon, are easily accessible from the Dixie National Forest Pine Park Campground and provide excellent hiking in conjunction with opportunities for scenic viewing, fishing, bird watching, wading, picnicking, and photography. These areas are too rugged for horseback riding however, and are not ideal for big game hunting because of rough terrain.

Opportunities for primitive recreation are not outstanding in the remaining 15,568 acres (97 percent of the WSA). Dixie National Forest and Beaver Dam State Park, east and west of the WSA respectively, are relatively heavily used for recreation but few people enter the WSA, perhaps because of the rugged terrain and an assumption that it lacks recreational opportunities.

D. Special Features: Five to seven miles of streams in the WSA support trout fisheries, which are unusual in BLM lands in surrounding desert region. These fisheries are in perennial waters in Beaver Dam Wash and are the only native reproducing fisheries in the area.

Candidate threatened or endangered species include the Virgin River spinedace which, with the speckled dace and desert sucker, may inhabit Beaver Dam Creek and its tributaries; and the ferruginous hawk, Swainson's hawk, southern spotted owl, long-billed curlew, mountain plover, western snowy plover, western yellow-billed cuckoo, white-faced ibis, Arizona Bell's vireo, and Merriam's kangaroo rat.

Diversity in the National Wilderness Preservation System

A. Assessing the diversity of natural systems and features as represented by ecosystems: Wilderness designation of this WSA would add 15,968 acres of the Juniper-Pinyon Woodland ecosystem to the National Wilderness Preservation System (NWPS). This ecosystem is already well represented in the NWPS and numerous other study areas also contain representations of this ecosystem. Diversity of natural ecosystems within the NWPS would not increase as a result of wilderness designation of the Cougar Canyon WSA. Table 2 summarizes the ecosystem information.

Table 2
Ecosystem Representation

Bailey-Kuchler Classification Province/PNV	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
NATION WIDE				
Intermountain Sagebrush/ Juniper-Pinyon Woodland	13	362,556	77	2,250,026
UTAH				
Intermountain Sagebrush/ Juniper-Pinyon Woodland	1	2,600	13	240,965
NEVADA				
Intermountain Sagebrush/ Juniper-Pinyon Woodland	8	268,000	45	1,564,740

B. Assessing 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 Las Vegas, Nevada. Table 3 shows the number and acreage of designated wilderness areas and of other BLM study areas within five hours drive of Las Vegas.

Table 3
Wilderness Opportunities for Residents of a Major Population Center

Population Centers	NWPS Areas		Other BLM Studies	
	Areas	Acres	Areas	Acres
Nevada				
Las Vegas	79	4,863,433	262	9,517,497

C. Balancing the geographic distribution of wilderness areas: The 1989 designation of Forest Service wilderness created a wide distribution of wilderness areas within the state, and the addition of this WSA would not significantly contribute to the geographical distribution of wilderness within the National Wilderness Preservation System (NWPS) in Nevada. However, the wilderness values inherent in this WSA justify the addition of a portion into the NWPS.

Manageability (the area must be capable of being effectively managed to preserve its wilderness character).

Cougar Canyon WSA can reasonably be managed as wilderness to preserve values present. The WSA is rugged, relatively remote, and currently has only low to moderate recreational use (500 annual visitor days, of which 125 are vehicular). No ways penetrate the WSA, vegetation is too sparse to provide woodland products, and mineral-related conflicts are unlikely. Livestock grazing could continue in accordance with the applicable BLM land use plans. Wilderness designation would strengthen current management efforts to protect the Beaver Dam watershed and provide wildlife habitat. Military overflights may continue, depending on Air Force needs and decisions. If the flights continue, the resulting distraction could not be mitigated by BLM administrative actions.

The 9,560 acre portion not recommended for wilderness designation would continue to be managed under the applicable BLM plans. No change in management is anticipated if the area is released from wilderness study status. Current plans propose watershed and wildlife habitat improvements, keeping the area open for off road vehicle use, and maintaining 1,088 acres as public water reserves.

Energy and Mineral Resource Values

The WSA is composed of volcanic rocks which are thought to be relatively thick. Because significant mineral resources are rarely found in volcanic rocks and because of the absence of mineral production and past interest in the area, there is little likelihood that any mineral resources exist in the WSA or that mineral-related activity will occur.

Impacts on Resources

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Table 4
Comparative Summary of Impacts by Alternative

Issue Topics	Proposed Action (Partial Wilderness)	No Wilderness	All Wilderness
Wilderness Values	No loss of wilderness values. Values would be preserved in the area designated. A temporary reduction in less than 1% of the area would occur, mostly in the area not designated. Wildlife would benefit from spring development. Military overflights would continue to detract from solitude.	Same as proposed action.	Same as proposed action.
Wildlife Habitat and Populations	Wildlife would benefit due to improved solitude and spring development.	Rangeland development on 8 acres would not adversely impact wildlife.	Same as proposed action.
Livestock Management	Negligible adverse impacts.	No effect.	Same as proposed action.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the draft EIS, a total of 57 inputs specifically addressing this WSA were received, including were oral statements received at 17 public hearings on the EIS. In general, 59 commentors supported wilderness designation for part or all of the WSA, 10 were opposed, and 5 commentors addressed the relative merits of the EIS, but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features in the WSA and the protection of wildlife and wildlife habitat that wilderness designation would offer. The majority of those commenting were from other states. Those opposing wilderness did not have a consensus opinion. The majority were from rural Utah.

One Federal agency and the State of Utah commented on the draft EIS. Neither favored a particular alternative.

The Washington County Commission (Utah) opposes wilderness designation for this WSA.

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