

Willow Beach. The National Park Service would buy out the concessioner and operate the area as a day use access point, with most remaining facilities being relocated and operated at reduced capacity. Such facilities include parking, ranger station, NPS housing and maintenance, restaurant/store, and concession housing and maintenance.

Boulder Beach. The existing earth dikes that protect the developments in the Boulder Beach area would be regraded and reinforced with gabions to protect the area to the level of the probable maximum flood.

Las Vegas Wash. The concession dry boat storage and concession maintenance area would be relocated out of the probable maximum floodplain. Although the launch ramp is in the flood hazard zone, this is the only feasible location. In the event of a flood, a warning system at the ramp would advise incoming boaters to leave.

Overton Beach. Camping would be relocated out of the floodplain.

Temple Bar. The height of diversion dikes would be increased and the channels deepened to contain the probable maximum flood.

A complete discussion of actions that would be taken under alternative B to protect the flood-hazard areas from the effects of the probable maximum flood may be found in the "Alternative Development Concept Actions" section.

It was estimated that 410 people would be in all probable maximum floodplains in the daytime and none would be there at night. This represents 0.4 percent of the people expected to be in the area on a summer weekend day (96,000), and is 92 percent fewer people during the day and 100 percent fewer at night than would be expected under existing conditions.

At Katherine approximately 605 people would be protected from the probable maximum flood by relocating NPS maintenance facilities out of the Katherine Landing floodplain and prohibiting the use of North and South Telephone Cove primitive use area. The removal of the 15 long-term and 33 short-term trailer village sites would reduce the number of people in the probable maximum floodplain by 50 during the day and 100 at night. All the remaining developments at Katherine, except the dry boat storage area, would be protected by structural measures. Structural protection is expected to mitigate the hazard for 410 average summer weekend day users of the probable maximum floodplain. The five people expected to be at the dry boat storage area on an average summer weekend day would be protected by the warning system. All people in the probable maximum floodplain at night would be protected by structures.

Buy out and removal of concession facilities at Cottonwood Cove under alternative B would result in a reduction of 1,455 people in the probable maximum floodplain as compared to existing conditions. The remaining projected 280 occupants of the floodplain would receive no protection from a flood except for the warning system and evacuation plan.

At Willow Beach the relocation of the restaurant, store, campground, ranger station, NPS maintenance and concession housing, and concession maintenance out of the probable maximum floodplain, plus the complete removal of the motel and trailer village, would result in approximately 440 fewer people in the probable maximum floodplain on an average summer weekend day. Because no structural measures would be taken at Willow Beach, the remaining 1,476 people in the floodplain would only be protected by the warning system.

At Boulder Beach approximately 112 additional occupants of the campground and trailer village would mean that an additional 112 people would be at risk in the event of a probable maximum flood as compared with existing conditions. All of the expected 1,371 people (includes the 112 added) in the floodplain would be protected by structural measures and a warning system.

At Las Vegas Wash the situation would be the same as existing conditions, with only the launch ramp in the floodplain. About 40 people could be expected in the launch ramp area during the day, and any hazard they would be subject to would be mitigated by a warning system.

Relocation of the wash campground at Overton Beach out of the probable maximum floodplain would provide maximum levels of protection to approximately 275 daytime visitors and 550 nighttime users on an average summer weekend day. The 40 daytime users of the swim beach would receive no protection from a warning system.

All of the expected 1,167 daytime occupants of the probable maximum floodplain at Temple Bar would be protected by structural measures and a warning system.

Conclusion: After all flood mitigation actions were taken for alternative B, about 415 people in the daytime would remain in the probable maximum floodplain, where the hazard would be mitigated only by warning systems. That is a 92 percent reduction compared to existing conditions. At night no people would be in the areas only protected by warning systems. All other people in the probable maximum floodplain would be protected by structures like dikes and channels. For the 100-year flood there would be 200 people during the day and none at night; only a warning system would provide protection. That is an 84 percent and 100 percent reduction compared to existing conditions.

IMPACT ON PROPERTY IN FLOODPLAINS

Many areas in the recreation area are subject to flash flooding. Flooding is most severe at Willow Beach, followed by Cottonwood Cove, Katherine Landing, and Temple Bar. The hazard at Las Vegas Wash and Overton Beach is much less severe because most visitor facilities are out of the floodplain. At Boulder Beach, all development is on a broad alluvial fan, with protection provided by earth dikes. Callville and Echo bays are the only areas where all facilities are out of the flash floodplain. A more thorough discussion of floodplains may be found in the "Affected Environment" section at the beginning of this volume. The DCP graphics

for each developed area show the extent of the 100-year and probable maximum floods.

Table 21 shows development in the floodplain under each alternative. Alternative B would mitigate the flood hazard up to the level of the probable maximum flood through structural measures such as levees and channels and nonstructural measures such as relocation of facilities out of the floodplain and installation of warning systems. However, the property shown in the flood-hazard zone under alternative B would remain susceptible to flood damage after implementation of flood mitigation measures proposed in alternative B. The cost of replacing structures left unprotected in the 100-year floodplain would be approximately \$1.6 million; for replacing those in the probable maximum floodplain, approximately \$4.2 million. These costs do not include utilities, furnishings, equipment, vehicles, flood-control devices, debris removal, search and rescue, or expenses of victims.

Conclusion: The costs to replace facilities damaged by the 100-year flood would be approximately 2.5 percent of the costs under existing conditions. The cost to replace facilities damaged by the probable maximum flood would be about 20 percent of the costs under existing conditions.

IMPACT ON RESERVOIR WATER QUALITY

Impacts would be the same as for the proposed action.

IMPACT ON DESERT SPRING ECOLOGICAL COMMUNITIES

These impacts would be the same as for the proposed action.

IMPACT ON SOILS

Soils of the area are extremely variable. Climate, vegetation, parent material, elevation, slope, and aspect all affect their development. They are characterized by a wide range of physical and chemical properties. Texture, permeability, depth, stoniness, organic content, alkalinity, and other properties are highly diverse and change quickly within short distances.

Under alternative B existing developments would be retained, major new areas would be developed, and the number of access points to the reservoirs would be increased. The off-road vehicle recommendations under the proposed action would be implemented. Lakeside roadways would not be extended from access points.

Under this alternative, off-road vehicle drivers would have the greatest number of approved roads to gain access to the reservoir, but once there they would not be able to get to more private areas over approved roadways. This would result in a continuation of the present situation because as visitation increased, drivers would blaze new routes to more

secluded areas. Individuals wishing to hold off-road maneuvers in the desert would probably continue to do so, with soil damage continuing at about the same rate as under the no-action alternative. Research on the rehabilitation of off-road vehicle soil damage and implementation of a rehabilitation program would be initiated as in the proposed action.

The intent of this alternative would be the same as the proposed action in that mineral leasing would be restricted to the resource utilization subzone. The difference between the proposed action and alternative B would be in the amount of acreage contained in the resource utilization subzone. Under this alternative, 320,550 acres would remain open to mineral leasing consideration to achieve the primary objective of this alternative (emphasizing resource utilization without compromising NPS recreational management responsibilities). Alternative B would also increase the amount of land where current prospecting permit applications have been filed, from 11,640 acres under the proposed action to 13,900 acres under alternative B. Existing leases, mining claims, and private mineral rights would be unaffected. Under this alternative, up to 22,100 acres of the NRA could be subject to mineral development on 8,238 acres of existing leases and 13,900 acres of pending permits (if approved).

Exploration activities associated with prospecting permits and oil and gas leases could result in damage to soils through excavation, erosion, and compaction with additional damage expected from associated excavation and removal for road construction and similar earthwork. Soil nutrients that have developed over long periods of time would be reduced in these disturbed soils by exposure to erosion and accelerated weathering, while soil compaction and abnormally high soil temperatures could also occur. In addition, removal of vegetation and stockpiling of topsoil have been demonstrated to significantly reduce soil microorganisms, which are essential for nutrient cycling and soil development. The reclamation potential of the disturbed area would be reduced unless proper care was taken to mitigate soil damage. Because of the diversity of soils in the recreation area, site-specific soils data would be necessary for detailed impact assessment and reclamation planning prior to mining approval.

Mineral leasing is not expected to significantly affect soils in any area of the park at the present time. Some damage can be expected from sporadic exploration activities; however, the amount of acreage affected would be expected to be less than 300 acres over the next 10 years if the present mineral development trends continued in the area.

Conclusion: The construction of roadways and facilities under this alternative would destroy or severely damage about 238 acres of lithosols and red desert soils and cause minor disruptions in drainage patterns, which would temporarily increase the potential for erosion. The rate of damage and erosion from off-road vehicles would continue at its present level of 30 to 40 acres per year and would only be marginally offset by restoration efforts. Damage to soils from mineral leasing would not be expected to be significant over the next decade, assuming mineral development activity followed current trends.

IMPACT ON SIGNIFICANT NATURAL FEATURES

These impacts would be the same as for the proposed action.

IMPACT ON THREATENED, ENDANGERED, OR CANDIDATE SPECIES

The endangered bonytail chub, Gila elegans, peregrine falcon, Falco peregrinus; and bald eagle, Haliaeetus leucocephalus, are the only federally listed animal species that are known to occur in the NRA. There are no threatened or endangered plant species, or critical habitat in Lake Mead NRA.

There are several federal candidate plants and wildlife that do, or could, inhabit or visit the recreation area. Some of these species are also listed by the states of Arizona and Nevada as comparable species of concern. Table 19 identifies the status and legal classification of all threatened, endangered, or candidate species.

The intent of this alternative would be the same as the proposed action in that mineral leasing would be restricted to the resource utilization subzone. The difference between the proposed action and alternative B would be in the amount of acreage contained in the resource utilization subzone. Under this alternative 320,550 acres would remain open to mineral leasing consideration to achieve the primary objective of this alternative (emphasizing resource utilization without compromising NPS recreational management responsibilities). Alternative B would also increase the amount of land where current prospecting permit applications have been filed, from 11,640 acres under the proposed action to 13,900 acres. Existing leases, mining claims, and private mineral rights would be unaffected. Under this alternative, up to 22,100 acres of the NRA could be subject to mineral development on 8,238 acres of existing leases and 13,900 acres of pending permits (if approved).

Alternative B would place 878,450 acres or 58 percent of the NRA in the natural zone. Known habitat or potential habitat for threatened, endangered, or candidate plants and wildlife would be further protected by placing these areas in either the environmental protection subzone or the outstanding natural feature subzone of the natural zone. Areas open to mineral leasing would be 320,550 acres or 22 percent of the NRA in the resource utilization subzone.

About 22,100 acres of the NRA have the highest potential for mineral development--8,238 acres of existing leases and 13,900 acres of pending prospecting permits (if approved). None of the leases and pending permits are in areas where they could potentially affect any threatened or endangered wildlife. Two existing leases and one pending prospecting permit are located within 5 miles of known locations of candidate plant species. Additional surveys on these leases or permits could reveal additional populations. Potential threats to these plants include physical destruction of individuals or their habitat and illegal collection. When specific mineral development proposals were received in these areas, surveys would be conducted and protective stipulations applied to the

plan of operation, but it is not certain that all potential impacts would be avoided.

Developments under alternative B that could affect threatened or endangered plants and wildlife species include the Fire Mountain developed area and improved access points in the Cottonwood East vicinity and at Detrital Bay. None of the developments would be in areas identified as habitat for these species, but some would be close to identified habitat areas. Any effects on candidate threatened or endangered species would be due to increased visitation in habitat areas near new developments. Peregrine falcons would not be affected.

Areas used by the endangered bald eagle and peregrine falcon are high cliffs well above water. These areas are remote and lightly used only during winter; they are not generally used for nesting. The cliffs are not satisfactory for rock climbing, and direct disturbance on the cliffs would not occur even with an increase of people. Boating use along shoreline areas could affect feeding activities. Although boating use would likely increase as a result of new development at Fire Mountain and at the Detrital Bay access point, it would still remain very low especially during winter and would likely have minimal effect on these birds.

Visitation is now very light in the Cottonwood East vicinity, where the proposed access point improvements could affect the endangered bonytail chub recovery cove. The endangered species recovery team for the bonytail chub would be consulted before locating the access point so as to preclude impacts on this fish. Closing the cove or nearby areas to visitor use would be another mitigating measure applied if needed.

The effects of new development on candidate threatened or endangered plants and wildlife would be further mitigated during the period before construction (about 10 years). Species, when warranted, would be closely monitored as visitation increased. Management recommendations based on this monitoring would allow the areas to be developed with minimal effects on these species.

Conclusion: Impacts on threatened or endangered species resulting from alternative B would not occur. To assure that this assessment is correct, studies will be initiated to evaluate visitors' impacts on the species of concern.

IMPACT ON VEGETATION

Approximately 71 percent of the NRA is dominated by the creosotebush community. This community type is widespread throughout the desert southwest and is the representative low elevation vegetation type in the Mohave Desert. Vegetation typical of higher elevations includes blackbrush, sagebrush, and pinyon/juniper. These vegetation types are common throughout the intermountain region.

Precipitation rates in low elevation communities are generally less than 5 inches annually, while higher elevations receive 5 to 15 inches. Because

of these low precipitation rates, revegetation rates on disturbed sites may be as long as 50 to 75 years.

The intent of alternative B would be the same as the proposed action in that mineral leasing would be restricted to the resource utilization subzone. The difference between the proposed action and alternative B would be in the amount of acreage contained in the resource utilization subzone. Under alternative B, 320,550 acres would remain open to mineral leasing consideration to achieve the primary objective of this alternative. Alternative B would also increase the amount of land where current prospecting permit applications have been filed from the 11,640 acres available under the proposed action to 13,900 acres under alternative B. Existing leases, mining claims, and private mineral rights would be unaffected.

Under this alternative, up to 22,100 acres of the NRA could be subjected to mineral development on 8,238 acres of existing leases and 13,900 acres of pending prospecting permits (if approved).

Impacts to vegetation under this alternative would be greatest if an ore deposit were discovered and production of a mine initiated. Over a hundred acres of vegetation could potentially be destroyed through development of mine surface facilities, access roads, and mine tailings. However, given the history of Lake Mead NRA mineral leasing, this level of development is unlikely. Exploration activities on mineral and oil and gas leases would disturb only a small amount of native vegetation.

Conclusion: None of the impacts to vegetation under this alternative would be significant.

IMPACT ON BIGHORN SHEEP

These impacts would be the same as for the proposed action.

IMPACT ON VISITOR CROWDING/CONGESTION

Existing conditions at the developed areas are extremely crowded and congested on weekends during the summer. Holiday weekends are the worst. Memorial Day weekend has had visitation of 254,000. Annual visitation is around 6.5 million and expected to increase to around 9 million by the year 2000. Currently it is not unusual for visitors at several of the larger developed areas to wait up to an hour to launch their boats and twice that long on a holiday weekend. Several of the popular campgrounds and motels are full during the summer. At several developed areas confusing circulation systems frustrate first-time visitors from easily finding their way around. Illegal parking along road shoulders is a common problem that results when existing parking areas fill.

Alternative B would accommodate increasing visitor use and solve existing crowding/congestion problems by expanding and improving existing developed areas, improving existing access points to the lakeshore, and

providing new developed areas. (For a full discussion of these actions, refer to the "Alternative Development Concept Actions" section.) These actions include many diverse proposals intended to accommodate increasing visitation or solve crowding/congestion. To understand the magnitude of these proposals, the increases in parking, overnight accommodations, and launch ramps are used as examples. Alternative B includes an increase of 1,880 parking spaces (19,660 spaces exist), or an increase of 10 percent. There are 1,755 overnight accommodation units (a unit is either one campsite, one motel room, or one RV site). Alternative B would increase them by 90 units, or an increase of 5 percent. There are 73 launch ramp lanes, and alternative B would add 16, an increase of 22 percent.

Over the life of the plan, visitation is expected to increase by about 68 percent, and visitor facility proposals under alternative B call for capacities to increase 5 to 40 percent beyond existing levels. This disparity between expected use and proposed facility levels indicates that crowding/congestion could increase beyond existing levels. However, it might not get any worse than existing levels, and it might actually be reduced because of proposals that would reduce crowding/congestion but that cannot be quantified. For example, circulation improvements would facilitate vehicle and pedestrian movements in several developed areas.

Conclusion: The facility improvements and expansions proposed under alternative B would tend to hold crowding/congestion near existing levels or result in increased crowding and congestion, even as visitation increased.

IMPACT ON VACATION CABIN SITE RESIDENTS

Lake Mead NRA has three lakefront areas in which sites may be leased for privately owned vacation cabins. These areas are Katherine Landing, which has 39 cabin sites; Stewarts Point, which has 60 cabin sites, and Temple Bar, which has 36 cabin sites. Cabin site occupancy is for personal, not commercial, use. Department of the Interior regulations (43 CFR 21) prohibit granting new leases for new cabin site occupancy within the recreation area. Implementation would affect eight cabin sites at Katherine Landing. Cabin sites at Temple Bar and Stewarts Point would not be affected. Extensions of leases up to five years would continue to be granted until the need for public use of the cabin site areas dictated termination. The determination of public need would be made two years in advance of the common expiration date.

At Katherine Landing eight cabins would be removed and replaced with public facilities, including a 20-table picnic area, four-lane launch ramp, and 325-vehicle parking area. The launch ramp would allow visitors access to a floating facility in the north end of the Katherine zone. Eight cabin site residents would be removed from their permanent or seasonal homes in this area. The social impact resulting from removal of these eight cabin sites would be most felt by the residents that would no longer be able to live or vacation close to the lake. These people would have to relocate to other areas within the recreation area or to communities outside the area. This would be a traumatic event to many

of these occupants, who have spent as many as 30 years in their cabins. Throughout the years, many have invested their time, energy, and creativity in landscaping and home improvements that they hoped to enjoy for the rest of their lives. Any financial compensation they would receive could not alleviate the loss that many would feel in leaving their vacation homes. There could be some economic impact to some of the occupants because the government is not required to relocate renters and lessees. The number of cabin sites adversely affected is eight out of 135 for the entire NRA or 6 percent of the total number of cabin sites.

Conclusion: Cabin site residents at Katherine Landing, Temple Bar, and Stewarts Point would not be affected by this alternative. Cabin site residents adversely affected by the proposal would be those eight cabin sites at Katherine Landing which would be removed and replaced with public facilities.

IMPACT ON TRAILER VILLAGE RESIDENTS

Most of the developed areas around the lakes have concessioner-operated trailer villages for long- and short-term visitors.

The existing number of long-term, short-term, and RV sites available at each area and the proposed alternative B actions are presented below.

<u>Area</u>	<u>Existing Number of Sites (Long/Short/RV)</u>	<u>Alternative B Actions</u>
Katherine Landing	104/39/0	Relocate 15 long-term and all 33 short-term sites
Cottonwood Cove	223/75/0	Remove all from flood-hazard zone
Fire Mountain	0/0/0	Add 50 RV sites
Willow Beach	60/18/0	Remove all from flood-hazard zone
Boulder Beach	215/75/0	Add 75 short-term sites
Las Vegas Wash	0/0/0	Same as no action
Callville Bay	94/6/0	Same as no action
Boxcar Cove	0/0/0	Same as no action
Echo Bay	69/58/0	Same as no action
Overton Beach	19/13/0	Same as no action
Temple Bar	103/13/0	Same as no action
Totals	887/297/0	

The only trailer village residents who would be affected under this alternative would be those relocated because of flood hazard. They include 15 long-term and 33 short-term residents who would be relocated within the Katherine area; all 223 long-term and 75 short-term residents at Cottonwood Cove; and all 60 long-term and 18 short-term residents at

Willow Beach. The residents at Cottonwood Cove and Willow Beach would be most adversely affected, because they would be relocated out of the developed areas entirely. These residents would be safer from flood hazard (discussed under another impact topic); however, there could be social impacts resulting from relocation because these residents would no longer be able to live or vacation close to the lake. This could be a traumatic event to many of these occupants, who have spent as many as 30 years in their trailers. Throughout the years, many have invested their time, energy, and creativity in landscaping and home improvements that they hoped to enjoy for the rest of their lives. There could be some economic impact to some of the occupants because the government is not required to relocate renters and lessees.

Conclusion: Implementation of this alternative would result in temporary disruption of the lives of some long- and short-term residents at Katherine Landing. Long- and short-term residents at Willow Beach and Cottonwood Cove would be most adversely affected by removal of the trailer villages at these locations. Such removal amounts to a loss of 32 percent of all NRA long-term sites and 31 percent of all NRA short-term sites.

IMPACT ON LEVEL OF CONCESSION SERVICES

Table 33 summarizes the level of services to be provided by the concessioner in alternative B.

Conclusion: The level of concession services compared to existing conditions would decrease in five of the nine categories under this alternative. The decrease would range from 9 percent in gas station pumps to 32 percent in the number of long-term trailer spaces. One category--gas docks--would not change. Increases would range from 4 percent in restaurant seats to 61 percent in the number of moorings.

Table 33: Impact on Level of Concession Services, Alternative B

	Trailer Village Long-Term/ Short-term Sites	Motel Units	Restaurant Seats	Store Square Feet	Marina Slips/Moorings	Rental Boats # Houseboats/ # Other	Dry Boat Storage Spaces	Gas Station # Pumps	Gas Dock # Boat Capacity
Katherine Zone									
Katherine Landing	104/39	52	117	3,600	764/0	75/41	210	2	14
Lower Mohave East	0	0	0	1,000	0	0/0	0	0	4
Cottonwood Zone									
Cottonwood Cove	0	0	0	0	0	0/0	0	0	0
Fire Mountain	0/50	25	50	3,000	200/0	0/0	120	0	0
Willow Beach Zone									
Willow Beach	0	0	100	1,000	182/16	0/40	120	0	0
Boulder Basin Zone									
Boulder Beach	215/150	44	314	5,500	875/0	0/39	275	0	0
Las Vegas Wash	0	0	54	3,300	595/3	0/35	100	0	3
Callville Bay	94/6	0	36	500	755/0	15/33	111	2	0
Boxcar Cove	--	--	--	--	--	--	--	--	--
Echo Bay Zone									
Echo Bay	69/58	52	120	9,000	321/0	70/18	97	4	0
Overton Beach Zone									
Overton Beach	19/13	0	0	0	0/140	0/6	40	0	3
Virgin/Temple Zone									
Temple Bar	103/13	22	76	1,500	980/0	45/15	200	2	0
Totals: Alternative B	604/329	195	867	28,400	4,672/159	205/227	1,273	10	24
Existing Conditions	887/297	218	834	25,600	3,317/99	170/258	1,328	11	24
Net change	-283/+32	-23	+33	+2,800	+1,355/+60	+35/-31	-55	-1	0
Percent change	-32/+11	-11	+4	+11	+41/+61	+21/-12	-4	-9	0

IMPACT ON MINERAL LEASING OPPORTUNITY

The intent of alternative B would be the same as the proposed action in that mineral leasing would be restricted to the resource utilization subzone. The difference between the proposed action and alternative B would be in the amount of acreage. Under alternative B, 320,550 acres of the NRA would remain open to consideration for mineral leasing (an increase in the size of the resource utilization subzone of 171,580 acres over the proposed action). Most of the lands added to leasing consideration would be north of Lake Mead in the Overton Arm, Gold Butte, and Grand Wash areas and near Lake Mohave in the Malpais Flattop Mesa area south of Willow Beach.

Mineral development could take place on the 8,238 acres covered by existing leases within the NRA. Of the 32,600 acres of pending prospecting permits and leases, approximately 13,900 acres would remain available for exploration. The remaining 18,700 acres would be withdrawn from further mineral leasing consideration. Most of the pending applications that would be affected by this withdrawal are for uranium in the Shivwits Plateau zone of the NRA. Existing mining claims and private mineral rights would be unaffected.

The immediate impacts of this alternative on mineral leasing opportunities would be similar to the impacts described under the proposed action--the Shivwits Plateau zone would remain unavailable for further mineral leasing consideration. None of the 17,590 acres of pending permits would be approved, thus preventing any further uranium exploration on the Shivwits Plateau.

The major difference between this alternative and the proposed action is that approximately 60 percent more land would be available for mineral leasing consideration under alternative B.

The highly speculative nature of the mineral resources within the NRA indicates that the long-term gains obtained from preserving the recreational values of the park far outweigh the uncertain, relatively short-term economic gains from mineral development.

Conclusion: This alternative would not have a significant effect on the opportunity to develop a mineral resource within the NRA.

IMPACT ON WILDERNESS LANDS

Alternative B emphasizes maximum use of the resources of the NRA and a broader range of choices and experiences for visitors.

To allow more resource use and to also preserve scenic vistas, this alternative would protect a 1.5-mile-wide corridor of land back from the shoreline of both lakes. This would be different from the proposed action, which seeks to preserve scenic vistas through protection of entire natural features. Alternative B would have the largest special use zone and resource utilization subzone (320,550 acres) of all the alternatives.

Many areas possessing wilderness values would be in the resource utilization subzone and would be subject to mineral leasing. Areas containing significant natural resource values would be in the natural zone. Many of these areas also possess wilderness values.

Although no lands are proposed for wilderness designation, the Wilderness Suitability map in the "Affected Environment" section indicates those lands that meet or potentially meet the criteria of the Wilderness Act of 1964. The following units are keyed by number to that map and include most of the lands in the recreation area that possess primitive characteristics. Boundary lines of the units follow topographic features, access roads, and recreational area boundary lines, section lines, and a line marking a 300-foot horizontal setback from the high waterlines of Lakes Mohave and Mead.

Units 1 and 2 (total, 40,605 acres) center on the Newberry Mountains, which rise to an elevation of 5,600 feet and offer a cool refuge from the heat of the surrounding desert lowlands. Davis Dam, the Mohave power plant, Katherine Landing, and Bullhead City are developments visible from the southern and eastern portions of this unit. The resource utilization subzone would include 3,755 acres.

Unit 3, Nellis Wash (15,870 acres), includes portions of the isolated Newberry Mountains along the western side of the recreation area. Fingerlike drainages and alluvial fans extend eastward from the mountains toward Lake Mohave. Some mining has occurred previously within the unit. All of the lands within this unit would be placed in the resource utilization subzone.

Unit 4, Cottonwood Valley, potentially meets the criteria of the Wilderness Act in spite of outstanding mineral reservations. This 15,295-acre gently sloping outwash provides solitude in a primitive setting to the north of the major development at Katherine Landing. The resource utilization subzone would include 9,592 acres.

Unit 5, the Black Mountains capped by 2,000-foot Mount Davis, provides a scenic background for Lake Mohave. Approximately 17,970 acres are included in this unit. Scattered washes and side canyons transect the Black Mountains from east to west as they wend their way to the Colorado River. The resource utilization subzone would include 10,925 acres.

Unit 6, Opal Mountain (17,635 acres), contains a portion of the Eldorado Mountains, gently rolling hills, and outwashes extending to Lake Mohave. Rugged mountains, secluded valleys, and flat alluvial fans provide opportunities for seclusion in a setting of scenic splendor. The resource utilization subzone would include 12,735 acres.

Units 7, 8, 10, 11, and 12, Fire Mountain and Black Canyon, contain some of the most spectacular and rugged terrain within the recreation area. They consist of steep, barren rocky crags, which begin at an elevation of 645 feet and terminate at an elevation of approximately 2,200 feet. These units consist of 70,470 acres and combine to form the "Black Canyon" of Lake Mohave, which is noted for its hot springs and cool Colorado River. This area is a popular spot for visitors to see sharp and

abrupt canyon walls and a myriad of geology. Units 11 and 12 only potentially meet the criteria of the Wilderness Act because the Bureau of Reclamation has identified these areas as potential locations for reclamation facilities ranging from Hoover Dam modifications to new transmission line corridors. The resource utilization subzone in these units would include 18,571 acres.

Unit 9, Eldorado Mountains, contains approximately 29,665 acres of this picturesque and rugged mountain range. The unit is a maze of peaks and side canyons with vertical cliffs extending to the edge of the Colorado River. The resource utilization subzone would include 8,705 acres.

Unit 13, Kingman Wash, contains approximately 40,835 acres. The undulating Black Mountains typify the topography of the region. Access to the unit is provided on all sides by existing road corridors. The resource utilization subzone would include 9,970 acres.

Unit 14, Bonelli Landing, comprises 13,875 acres of mainly alluvial fans and separates the hilly mountainous area of unit 13 from the gypsum beds of unit 21. This unit contains historic mining diggings and some archeological remains in the form of petroglyphs. Access to this unit is by the road to Bonelli Landing and Temple Bar. The resource utilization subzone would include 1,500 acres.

Units 15, 16, and 17, Pinto Valley, comprise approximately 38,340 acres of rugged hills and highly scenic valleys. These units contain Guardian Peak, which is one of the highest peaks within the area and is used as a navigational aid. The northern side of Boulder Canyon is formed by these units, where steep cliffs or barren rock extend into the cool blue waters of Lake Mead in a dramatic fashion. Pinto Valley is much-photographed because of the red sandstone outcroppings that merge with the green desert vegetation and the grays, browns, and yellows of the desert floor. None of these lands would be open to mineral leasing.

Unit 18, Cathedral Wash, contains 18,820 acres. Mountainous terrain representing the northeast extremities of the Black Mountains dominates the area and contrasts with the flat surface of Lake Mead. None of these lands would be open to mineral leasing.

Unit 19, Overton (24,040 acres), consists of flat to "badland-like" lands sloping westward from mountainous terrain to a road corridor east of the recreation area boundary. The unit forms the scenic background for lake users and for shoreline users on the west side of Overton Arm. These flat outwashes lack the spectacular contrasts found in other units and portray a typical desert landscape. This unit has retained its primitive characteristics and affords an opportunity for seclusion and an unconfined type of recreation. The resource utilization subzone would include 13,650 acres open to mineral leasing.

Unit 21--White Hills, unit 22--Temple Bar, and unit 23--Gregg's Hideout, all in the White Hills, offer isolation, scenic views, and historic attractions. This rolling hill country includes some evidence of earlier

mining activities and trails. These activities did not scar the area excessively, and many scars have healed to the point of not being noticeable. Access to the area is possible by car on existing roads, by hiking from developed areas such as Temple Bar, or by boat from Lake Mead. These three units contain approximately 52,130 acres; the resource utilization subzone would include 32,086 of this total acreage.

Units 20 and 24-32 are known as Twin Springs, Scanlon Wash, Hiller Mountains, Hell's Kitchen, Indian Hills, Cockscomb, Grand Wash Cliffs, Iceberg Ridge, South Cove, and Pearce Ferry. The units (total, 135,688 acres) contain rugged mountain ranges that provide a scenic background for the Virgin Basin section of Lake Mead. Gently sloping outwash fans extend from the mountains to plunge abruptly into the reservoir. The resource utilization subzone would include 71,445 acres.

Unit 33, Shivwits Plateau, contains approximately 83,980 acres. Diverse activities occur in this remote section of Lake Mead, ranging from hunting to grazing. Due to a higher altitude, the region is cooler, has more precipitation, and supports pinyon/juniper and ponderosa pine forests and a wider variety of wildlife than can be found in the rest of the recreation area. Kelly Point, Twin Point, and other points along the rim permit spectacular views of the Grand Canyon. Because most of the land within this unit is subject to mineral reservation, the unit only potentially meets the criteria of the Wilderness Act. Portions of the unit are narrow and splintered by roads. However, when considered along with the adjacent proposed wilderness in Grand Canyon National Park, it is apparent that these would form a significant contiguous wilderness unit. None of these lands would be open to mineral leasing.

Unit 34--Andrus Point, unit 35--Whitmore Point, and unit 36--Lava consists of approximately 58,430 acres in the northeast sector of the recreation area. Contained within these units are Parashant, Andrus, and Whitmore canyons; all are precipitous side canyons of significant grandeur that drain into the Grand Canyon. The entire area is undeveloped land retaining its primeval character, and it provides an opportunity for solitude or a primitive and unconfined type of recreation in a scenic setting of steep escarpments, colorful red walls, and deep canyons. Archeological sites of several Indian cultures, including the Virgin Anasazi and more recently the Paiutes, are also found here. Adjacent primitive areas of Grand Canyon National Park provide for a contiguous unit of primitive lands extending westward from the Pine Mountains across the Sanup and Shivwits plateaus to the Grand Wash Cliffs. None of these lands would be open to mineral leasing.

Conclusion: Designating 320,550 acres as open to mineral leasing within the NRA would affect 199,312 acres, or 37 percent, of those lands that meet the criteria of the Wilderness Act and 10,132 acres, or 8 percent, of those lands that potentially meet the criteria. Mining activities as a result of mineral leasing in those areas could unnaturally scar the landscape and alter the wilderness character of these lands, making wilderness values on at least part of these lands lost to any future possible designation. These are lands which primarily meet the roadless requirements of the Wilderness Act and are not lands possessing significant resource values.

Table 34: Summary of the Effects of Alternative B
on Lake Mead NRA Lands Meeting or
Potentially Meeting Wilderness Act Criteria

	<u>Acres Meeting the Criteria</u>		<u>Acres Affected by this Alternative</u>	
	<u>Wilderness</u>	<u>Potential Wilderness</u>	<u>Wilderness</u>	<u>Potential Wilderness</u>
1	7,650			
2	32,955		3,755	0
3	15,870		15,870	0
4	0	15,295	0	9,592
5	17,970	640	10,925	0
6	17,635	0	12,735	0
7	15,145		2,255	
8	25,605		16,316	0
9	29,665		8,705	0
10	2,045			
11	0	14,645		
12	0	13,030		
13	40,835		9,970	0
14	13,875		1,500	0
15	17,115			
16	6,680			
17	14,545			
18	18,820			
19	24,040		13,650	0
20	10,610		5,120	0
21	25,580		9,760	0
22	16,665		13,110	0
23	9,885	80	9,216	80
24	22,095		15,770	0
25	8,545		5,120	0
26	14,620		3,960	0
27	7,720			
28	14,020		11,025	0
29	13,895			
30	15,143	460	8,330	460
31	16,480		11,195	0
32	12,100		10,925	0
33	0	83,980		
34	14,905	0		
35	32,215	0		
36	10,710	600		
Totals	558,675	115,700	199,312	10,132
Percentage	100	100	37	8



CONSULTATION AND COORDINATION

CONSULTATION AND COORDINATION

SCOPING PROCESS AND ISSUES AND ALTERNATIVES RAISED

Meetings, public workshops, and surveys were an integral part of the scoping process. Their purpose was to identify all issues, alternatives, and impact topics that should be considered in planning and to keep the public informed throughout plan formulation. On April 7, 1982, a notice of intent to do an EIS for the Lake Mead GMP and to begin scoping for that planning process was issued in the Federal Register (vol. 47, no. 67, p. 14962).

Visitor Survey

From Memorial Day to Labor Day in 1978 and Easter week in 1979, questionnaires were distributed to people visiting Lake Mead National Recreation Area. The objectives of the survey were to determine the characteristics of visitors to Lake Mead, what activities visitors were currently engaged in at Lake Mead, and what additional services and facilities were needed at Lake Mead to serve the visitor. Results of this survey are contained in a Denver Service Center report (USDI 1982a).

Spring Newsletter

In the spring of 1982, a newsletter listing those GMP issues identified by the National Park Service was sent to those publics interested in Lake Mead National Recreation Area. From the response, the issues of most concern to the public were as follows:

Wilderness areas should be included in Lake Mead National Recreation Area.

Mining and mineral leasing is acceptable in the recreation area within limits.

Endangered species should be protected.

Visitor contact stations should be supported.

Black Canyon raft trips should be provided.

Areas should be closed when capacity is reached on holiday weekends.

Additional development is needed at Lake Mead NRA.

The tamarisk should be eradicated where it encroaches on beach space.

Planning Team's Analysis

During 1982 the planning team gathered extensive amounts of data. They spent time in the recreation area to familiarize themselves with the area and to identify sensitive resources, problems, planning issues, and alternative solutions. They contacted numerous agencies and individuals during this process. During 1983 and 1984 the analysis continued, while alternatives and their impacts were further specified.

Public Meetings

Four open-house meetings were conducted as part of the scoping process. At Bullhead City, Arizona, 16 people attended; 14 at Las Vegas, Nevada; five at Pasadena, California; and 16 plus a college class of 35 at Santa Ana, California. At each open house, the public was invited to read the graphics on display throughout the room, watch a narrated slide show on Lake Mead NRA planning issues (except Pasadena), and discuss their ideas and concerns with one or more of the National Park Service representatives. Although attendance at the meetings was lower than hoped for, those who came represented a variety of interests and opinions.

The most common issues of discussion at the openhouses were as follows:

Additional land access to the lake is needed for day users and visitors who do not own boats.

More launch ramps are needed around the lake to alleviate the congestion at developed areas.

Trash and sanitation problems at remote coves need to be solved.

Mining and mineral leasing is acceptable in Lake Mead NRA as long as it is not visible and extensive site clean-up requirements are enforced.

No additional, major developments are needed in the NRA.

Some of the additional comments were as follows:

The launch ramp procedure at Katherine Landing is inadequate for the numbers of people who use that facility.

Better land access to Telephone Cove and No Ski Cove is needed for day-use and beach-oriented activities.

Trash was considered a major problem on Lake Mohave.

Some coves need to be zoned for fishing to alleviate the conflicts between fishermen and skiers.

More roads need to be legalized for vehicle access to the lake.

Concern was expressed over any commercial raft trips that might increase use and environmental degradation in the Black Canyon.

Interest was expressed in helping the National Park Service clean up trash around the lake in exchange for a free camping space or other nominal privileges.

A greater National Park Service presence is needed (e.g., more ranger patrols).

Summer Newsletter

In the summer of 1982 a newsletter was sent to those interested in the General Management Plan (GMP) for Lake Mead National Recreation Area. This newsletter summarized the comments from the spring newsletter and public meetings. The newsletter again identified the issues for the plan and modified them in consideration of public comments.

Alternatives Workbook

In December 1982, 309 alternatives workbooks were distributed for the Lake Mead National Recreation Area GMP. An additional 91 workbooks were distributed at a question/answer session. Of the 122 responses, 58 percent were from the mailing, while 42 percent were from those distributed at the recreation area or session.

The return rate for the workbook was 30.5 percent (out of the 400 distributed.)

The parkwide comments were varied, with 31 persons responding to this comment sheet. Approximately half of those making comments selected a preferred parkwide alternative; of these, a majority preferred alternative C (became proposed action).

Of the 48 people who responded to the general development concepts, alternative C was preferred for all developed areas, with the exception of Katherine. This difference at Katherine is a reflection of the cabin site lessees who selected the no-action alternative as their preferred concept.

The following are summaries of reactions to the specific development proposals for each of the nine planning zones:

Katherine Zone, 41 responses

For flood mitigation, access and parking, and launch ramps, a majority of the respondents selected alternative C. However, for the remainder of the development proposals, the no-action alternative was selected. Respondents indicated that Arrowhead and Shoshone coves were preferred for improved access, while Tokyo Bay was selected as the preferred site for a new developed area.

Cottonwood Zone, 29 responses

Alternative C was the preferred alternative for a majority of the respondents for each of the developed proposals. Six-Mile Cove was selected as a location for improved access, with Fire Mountain as the site for new development.

Willow Beach Zone, 30 responses

The no-action alternative was selected by a majority of respondents for: flood mitigation, parking, launch ramp, courtesy dock, swim beach, trailer village, and all concession facilities and services. On the other hand, alternative A was preferred for the picnic area, campground, NPS boat dock and ranger station, and interpretation/information development proposals. Finally, alternative C was selected for the access, NPS maintenance, and NPS housing proposals. No locations were indicated for either improved access or new development.

Boulder Basin Zone, 28 responses

A majority of the respondents felt that alternative C was appropriate for the launch ramp, courtesy dock, swim beach, ranger station, interpretation/information, NPS boat dock, maintenance and housing, and picnic area proposals. The no-action alternative was preferred for the trailer village, gas station, and gas dock. Alternative A was selected for the remainder of the development proposals, which encompassed concessioner services and facilities, campground, flood mitigation, access, and parking. Improved access was indicated for Boxcar Cove, as well as improvements on Northshore and Lakeshore drives. Few respondents indicated a desired site for new development; of those who did, Boxcar Cove was the favorite.

Echo Bay Zone, 15 responses

Alternative A appeared to be the preference of a majority of the respondents for the development proposals in this zone. However, for cabin sites, trailer village, concession maintenance and housing, and gas station and dock, the no-action alternative appeared to be the preferred alternative. Alternative C was selected for the flood mitigation, launch ramp, and swim beach proposals. Again, few people responded to the improved access issue; of those who did, Stewarts Point was preferred. Rogers Spring was selected for improved interpretive programs. No preferences were indicated for a new developed area in this zone.

Overton Beach Zone, 15 responses

Alternative C was selected for the flood mitigation, access and parking, trailer village, motel, rental boat, gas station, and gas dock proposals. No majority opinions were indicated for improved access or new development areas.

Virgin/Temple Zone, 18 responses

With the exception of flood mitigation, alternative A was preferred for the development proposals. Alternative C was preferred for flood mitigation. Detrital Bay was selected as the site for both improved access and new development.

Gregg Basin/Grand Wash Zone, 17 responses

A majority of respondents felt that the no-action alternative was preferred for this zone. The exceptions were for the access and parking, launch ramp, courtesy dock, swim beach, and picnic area proposals, where alternative C was preferred. Pearce Ferry was selected as an improved access site. Only two people responded to the new developed area issue; they both selected Pearce Ferry.

Shivwits Plateau Area, 10 responses

The no-action alternative was selected by a majority of respondents for all development proposals.

Additional Public Input

In response to public inquiries about the alternatives workbook, an informal question/answer session was held in Las Vegas during January 1983. The primary objectives of this session were: to distribute workbooks to those who had not received them in the mail; to answer questions about the workbooks; and to provide additional information to explain and clarify issues. There were 115 people in attendance.

The following are some of the comments, related to the alternatives workbook, which were made during the course of the meeting:

More road access to the shore for fishing is needed.

The possibilities of concessioner-managed launch ramps and launching fees were raised.

Breakwaters for slips are needed.

Additional roads would be a burden to staffing capabilities.

Need for hobie cat and sailboard launch and use areas.

The number and impacts of houseboats were raised.

Consultation with Agencies During Preparation of the Proposed Plan

On May 3, 1982, a meeting was held for all interested federal, state, and local government agencies; 16 people attended this meeting and included representatives from: Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Reclamation, Arizona Department of Game and

Fish, Nevada Department of Wildlife, and Clark County Planning Department.

The agencies were primarily interested in how the planning process would proceed, what the public response was to date, and how and when the National Park Service wanted the agencies involved in the process.

The Arizona Department of Game and Fish was specifically concerned with tamarisk control and wanted to be involved in habitat manipulations related to such controls. They also requested information on federally listed endangered and threatened species for the national recreation area. The BLM expressed interest in the wilderness plan and the results of the visitor survey and carrying capacity studies. Other agencies expressed appreciation for the opportunity to comment at this early stage of the planning process.

Agencies were also contacted for information on numerous occasions. Refer to appendixes B and C for U.S. Fish and Wildlife Service and Arizona and Nevada cultural resource consultations.

ISSUES, ALTERNATIVES, AND IMPACT TOPICS FROM SCOPING

Those Considered

Throughout the scoping process the only full alternatives developed were those suggested by the planning team in the alternatives workbook. They have been modified but are essentially the same as those presented previously in the "Alternatives Including the Proposed Action" section.

The issues addressed in those alternatives are summarized in the "Issues Addressed by the Plan" section at the beginning of this document. Almost all issues raised are addressed. The impact topics considered are described in the beginning of the "Environmental Consequences" section.

Those Not Further Considered

Closing Areas When Capacity is Reached on Holiday Weekends. Closing developed areas to further entry when they become overcrowded is not acceptable to most members of the public. This issue is also sensitive politically and is not a realistic solution today. However, this issue is generally addressed in the "Carrying Capacities" section.

Zoning Some Coves for Fishing. This issue is only addressed indirectly. Areas of concentrated use where use conflicts are the greatest are proposed as flat-wake zones. Directing zoning areas for only fishing would limit too many other legitimate uses.

Air Quality. Problems are in a regional airshed from major population centers and power plants. Even dust from dirt roads is not significant locally by comparison to regional problems. Proposals in any alternative, including projected visitation increases, would not alter existing air quality.

Cultural Resources. As described in the "Affected Environment" section, all known significant cultural resources have been identified. However, none of these will be affected by any alternatives. To ensure protection of currently unknown cultural resources, preconstruction or premineral leasing surveys will be conducted for all land that could be affected by specific construction or leasing proposals.

Land Protection Issues. The General Management Plan will only summarize decisions already made in the Land Protection Plan and will not propose any new actions. The Land Protection Plan had its own assessment. See the "Land Protection" section for a full description of the issues and management direction on boundary revisions, state and private lands, Santa Fe Pacific mineral rights, Arizona indemnity selection program, Hualapai Indian Reservation lands, Bureau of Reclamation withdrawal lands, easements and utility corridors, and special activities on nonfederal land.

Resource Management Issues. The General Management Plan will only summarize decisions already made in the Resources Management Plan and will not propose any new actions except for mining/mineral management and illegal use of vehicles off approved roads. The Resources Management Plan has its own assessment. See the "Resources Management" section for a full description of the issues and management directions on natural resources management--fishing, hunting, and trapping management, tamarisk control, exotic species control, air and water quality monitoring, fire management, threatened or endangered species management, grazing management, and needed research; cultural resources management-- cultural resource surveys, archeological site management, historic site management, contemporary native American concerns, collections management, and needed research.

Road Safety and Maintenance. Most through-highways and many access roads for developed areas within the recreation area are deteriorating and are chronic maintenance problems. Several roads commonly have more than 20 accidents per year and are consistent safety hazards. These problems need attention, but they are being solved in another planning process being done in conjunction with the Federal Highway Administration. Accordingly these issues will only be summarized and not solved in the GMP.

CONSULTATION AND COORDINATION ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

This section includes a brief summary of the comment period and the public meetings following the release of the DEIS in May 1985.

History of Public Comment

The DEIS was released to the public on May 17, 1985, with a comment deadline of July 31, 1985. A Notice of Availability of the DEIS was published in the Federal Register on May 14, 1985.

The public meetings were publicized in the local news media and were scheduled for June 12-24, 1985. A total of seven public meetings were held which were attended by 178 people. An additional three informal meetings were held following the formal public meetings which six people attended.

The purposes of the public meetings were to answer questions, to receive comments on the information and analyses contained in the DEIS, and to record the public preferences for the future of the recreation area. Representatives from the National Park Service briefly presented background information on the GMP and DEIS and the alternatives considered in the DEIS. This was followed by a public comment and question/answer period.

Public Meetings

St. George, Utah - June 12, 1985

9 Public in Attendance

Official Comments

Mesquite City Council would like to see a primitive access and launching area in the Gold Butte, Hell's Kitchen area or across from Overton Beach.

Unofficial Question

How many levels of wilderness are being proposed?

Will wilderness be proposed in final form again after GMP is done?

Is more wilderness proposed now in relation to the 1979 plan?

Are natural fires going to be let burn?

Do you have a resource plan for grazing burros and minerals?

Overton, Nevada - June 13, 1985

44 Public in Attendance

Official Comments

Moapa Valley Town Board (Lois Perkins)

What is going to happen to Overton Beach during the building process?

What facilities will be provided at Overton Beach?

Why can't we stay where we are at in the trailer village?

Is the new store to have piles or underpinning to hold it in place?

Want rangers to remain next to lake for safety purposes.

Should do all the earthwork in new trailer village then do the work in the old trailer village after moving the people to new area.

Protect the trailers during the summer while in storage.

Expensive to move the trailers - some of the people do not have the money to move.

Have an alternate in budget to move the dirt twice.

Garbage containers and restrooms at Stewarts Point.

Put improvements at Stewarts Point away from water intake which is used for water source.

If water comes up and inundates the trailers then they have to move and they will gamble that the water will not come up again - leave them in present place.

Boulder City, Nevada - June 17, 1985

41 Public in Attendance

Official Comments

Forever Living Resorts (Mr. Ham)

Growth potential (Table One) needs to be changed to reflect at Callville that 180 long-term and 60 short-term sites be added, 90 campsites be added and 5 acres of swim beach, 100 motel units, 50 picnic sites and 1,200 slips be added. At Cottonwood, the plan should reflect 300 long-term sites, 100 short-term sites, 100 campsites, 7 acres of swim beach all should be added.

Proposed action is a good one, but Alternative "A" should be considered strongly.

Shivwits should be in wilderness with no mining occurring.

Must preserve scenes into canyon.

Objects to landing strip and any additional facilities on the Shivwits.

Eliminate mining.

All pending applications for mining outside the lands shown on the plan would not be granted.

Correlate wilderness in the Wilson Range and Bowl of Fire with Bureau of Land Management.

Do not allow mining next to Highway 93 in the Wilson's.

Where is Alternative "C" - or the proposed action?

Why is the fishing going downhill - you should improve it?

Las Vegas, Nevada - June 18, 1985

28 Public in Attendance

Official Comments

Sierra Club - President Local Chapter

Concur on proposal, but would like to see Alternative "A" implemented.

Install chart like Table Two which has alternatives and impact parameters such as impact to sheep, water quality, soil erosion, acres of development, cost to National Park Service, and to Concessioner, etc.

Define terms of visitation which you will allow for the carrying capacity and optimum use.

Indicate current staff and budget and percent of budget and increase in personnel to serve the added development. Should equal projected visitation.

Sierra Club Member

Close Shivwits to mining.

Uranium production in United States has decreased world wide so the demand is not great.

Plants are closing and prices down on uranium.

Demand is low.

Sierra Club Member

Protect natural and scenic areas.

Demand is low.

Sierra Club Member

Protect natural and scenic areas.

Must reduce Resource Utilization Zone so as you hike you will not run into a zone of mining. Not just visible from road.

Oppose any development on Shivwits.

No facilities on Shivwits - use no action.

Talk with Bureau of Land Management on adjacent wilderness.

Use Alternative "A" for Resource Utilization Zone.

Preserve on U.S. 93 the visual view. Do not allow mining.

Do not allow existing applications for mining to be processed outside of plan limits.

Likes Alternative "A", but proposed action is an acceptable alternative.

Must protect natural and scenic and historical resources.

Shivwits must be put into wilderness. Do not put any other facilities on it.

Bowl of Fire and Mount Wilson should be in wilderness.

Close Shivwits to leasing and mining.

General Comments

Should address the overcrowding problem by limiting access to remote areas.

Are budget cuts going to affect lake patrols?

Can you use helicopters to manage Shivwits instead of fixed wing?

Are the cabin sites to be removed in any alternatives?

What is potential wilderness?

Are you going to upgrade your flashflood warning systems?

When will you trade or buy out Santa Fe inholdings?

How can Sierra Club assist you in getting funds for purchase of inholdings?

Phoenix, Arizona - June 19, 1985

6 Public in Attendance

Official Comments

Rex Maughan - Same comments as voiced by Mr. Ham of Forever Living Resorts.

George Byers - Santa Fe Pacific

Is willing to exchange their lands and was hoping the details of an exchange would be in the document.

Mineral potential is great in the area and was curious who you talked to about the mineralization of the area.

Black Mountains very high potential for minerals and was ignored.

Who did your study and what were his qualifications - no professional geologic input.

Other agencies do know a lot about the minerals - should consult.

Should address the Sierra Club lawsuit.

Do not develop anything on the Shivwits, it will only hurt the isolation.

Do not allow any mining on the Shivwits.

Proposed development is the same as Alternative "B" - full development. Why?

These lands at Shivwits are actually the Grand Canyon.

Support Alternative "A".

Need good flood control for area.

Need more parking at Temple Bar.

Do not remove any cabin sites at Temple Bar.

Most of the time no visitors at Temple Bar.

Bullhead City, Arizona - June 20, 1985

23 Public in Attendance

Official Comments

Is a larger swim beach going to be constructed at Telephone Cove?

Are the cabin sites at Katherine going to be retained?

Which eight cabin sites are going to be removed?

The cabin site point is too small for any use such as lauching, too deep for swimming, too small for camping.

Keep swim beach open.

Need toilets at Telephone Cove.

Do not like Alternative "A" because it calls for removal of cabin sites.

What would trigger the use of the cabin sites in the future.

Chamber of Commerce - need much more parking for restaurant.

Need much more parking for boaters also.

Use the big basin this side of Cottonwood for more people.

Many days the campground at Katherine is empty.

General Comments

Has there been a date set for us to move from the cabin sites?

Can we again after the 5 year period sell our interest in the cabin sites?

Can we transfer our interest in the cabin sites?

Where on Lake Mead and Lake Mohave are restrooms - should publicize so they can use them.

Are you selling or trading the lands at the cabin sites to the state?

Should develop the Nevada side of the lake.

Flood control needed.

Is the concessioner going to be able to use the cabin site area for development?

Pasadena, California - June 24, 1985

17 Public in Attendance

Official Comments

Extend leases for 10 to 25 years on all cabin sites.

At Temple Bar crowding only occurs on holidays.

Katherine Trailer Village Residence

Need additional launching ramp at Katherine - possibly between Katherine and Cottonwood.

Make Telephone Cove a swim beach.

Extend cabin site leases--7-10 years.

Like proposed action the best.

Which eight cabin sites will be removed?

General Comments

Are condominiums and motels going to be allowed to be built in the cabin site area at Temple Bar?

Can we get more than 5 years on a lease?

What happens to the lease on a cabin site when you die?

Why does the concessioner get a long lease period and the cabin sitters with a substantial amount of money invested only get a short lease?

Informal Meetings

Mining Interests - June 26, 1985

Three Firms Represented

British American Mining Corp.

Energy Fuels

Uranerz USA, Inc.

Are all of the previous lease applications going to have to be redone when the process is reopened or do they stay in the same priority as they were before the moratorium?

Is the Resource Utilization Zone what was left after everything else was recorded?

Does a mineral survey need to be done before it possibly goes into wilderness zoning?

The fact should be known that the Shivwitz Area has a very high potential for mineralization and for the finding of valuable sources of uranium.

Mining interests are not here to destroy the land and will agree to major reclamation projects after mineral extraction occurs.

What is the possibility of going in and mining one, two, or three breccia pipes as a trail on the Shivwitz.

Before the National Park Service makes a final decision on the mining that can take place on the Shivwitz they should know all of the possible mineralization which has occurred there and armed with the best knowledge of the area, then make a decision. Don't base your decision on a literature search alone.

Hualapai Indian Tribal Council - June 28, 1985, Peach Springs, Arizona

Many sacred grounds and burials are or have been disturbed in the past in the areas adjacent to the Colorado River.

Would like to begin planning for a development at Diamond Creek and at a site on the west boundary overlooking the river. This site does have easy access to Meadview area from the western boundary.

They are going to try to become more self supporting by opening up developed areas on the river and also by working with mining operators looking for uranium. Their funds are also being cut back from Bureau of Indian Affairs.

Sierra Club, Mark Bird - July 15, 1985, Boulder City, Nevada

Presented and discussed written comments on the GMP/DEIS.

LIST OF AGENCIES AND ORGANIZATIONS TO WHOM COPIES OF THE
STATEMENT WERE SENT OR DISTRIBUTED

Federal Agencies

Advisory Council on Historic Preservation
Department of Agriculture
 Forest Service
 Soil Conservation Service
Department of Defense
 Department of the Army
 Corps of Engineers
 U.S. Air Force
 Coast Guard
Department of Energy
 Federal Energy Regulatory Commission
Department of the Interior
 Bureau of Land Management
 Bureau of Mines
 Bureau of Reclamation
 Fish and Wildlife Service
 National Fish Hatchery
 Region 2
 Geological Survey
 Grand Canyon National Park
 Mining & Minerals Service
 National Park Service
Department of Transportation
 Federal Highways Administration
Environmental Protection Agency
Federal Emergency Management Agency
Western Archeological and Conservation Center Library

State, Local, and Other Agencies

Arizona Dept. of Transportation
Arizona Department of Fish and Game
Arizona Governor
Arizona Office of Economic Planning and Development (clearinghouse)
Arizona Office of Tourism
Arizona State Historic Preservation Office
Boulder City Mayor
Bullhead City Library
Bunkerville Town Board
City of Las Vegas
Clark County Board of Commissioners
Clark County Department of Comprehensive Planning
Coachella Valley Water District
Colorado River Board of California
Department of Boating and Waterways (California)

Lake Havasu City
Lake Havasu State Park
Las Vegas Convention/Visitors Authority
Las Vegas Mayor
Mesquite Town Board
Moapa Valley Town Board
Mohave County Planning and Zoning
Nevada Department of Transportation
Nevada Department of Wildlife
Nevada Division of Forestry
Nevada Division of State Parks
Nevada Governor
Nevada Magazine
Nevada State Clearinghouse Program
Nevada State Historic Preservation Office
Nevada State Planning Coordinator
Phoenix Public Library
San Diego Public Library
Searchlight Town Advisory Board
Tonto National Forest
Upper Colorado River Commission
Utah Department of Natural Resources
Valley of Fire State Park

Tribes and Local Governments

Chemehuevi Tribe
Colorado River Indian Tribes
Fort Mojave Indian Tribe
Hualapai Tribal Council
Kaibab Band of Paiute Indians
Pahrump Valley Paiute
Paiute Indian Tribe of Utah

Non-Government Organizations

AORCC
Arizona Center for Law
Arizona Daily Sun
Arizona Natural Heritage Program
Arizona Republic
Audubon Society, Red Rock Chapter
Boulder City News
Chambers of Commerce:
 Boulder City
 Henderson
 Kingman
 Las Vegas
 Virgin Valley
Citizens Utility Co.

Desert Dispatch
 Eagle Standard
 Katherine Cabin Sites Association
 Kingman Daily Miner
 Lake Havasu City Herald
 Las Vegas Review Journal
 Las Vegas Sun
 Las Vegas Tribal Council
 Meadview Civic Association, Inc.
 Moapa Business Council
 Mohave Valley News
 National Parks & Conservation Assoc.
 National Wildlife Federation
 Nevada Appeal
 Nevada State Journal/Gazette
 Radio and TV Stations

Community Cable	KFSE	KORK
KAAA	KLAS	KRAM
KBAS	KLAV	KRRI
KCLS	KLUC	KTNV
KDWN	KL VX	KVBC
KELK	KNPR	KVEG
KELY	KOLO	KVVU
KENO	KONE	
KFMS		

San Diego Union
 Sierra Club, Las Vegas Chapter
 Sierra Club, Legal Defense Fund
 Sierra Club, South Chapter
 Southern California Edison
 Temple Bar Leaseholders Association
 University of
 Arizona
 Nevada, Las Vegas
 New Mexico
 Northern Colorado
 Southern California
 Valley Herald and Lake Mead Monitor
 Washington County News

Individuals

Approximately 280 individuals.

COMMENTS AND RESPONSES

A total of 36 written comments were received on the draft EIS. Of these, eight were from federal agencies, four were from state agencies, two were from local agencies, eight were from companies and organizations, and 14 were from individuals. All written comments have been included in the final EIS.

Responses were made only to substantive comments on the draft EIS. Comments were considered to be substantive when they questioned, with reasonable basis, the accuracy of information in the draft EIS; questioned, with reasonable basis, the adequacy of the environmental analysis; presented reasonable alternatives other than those presented in the draft EIS; or caused changes or revisions in the proposed action. No attempt was made to address comments stating a position or an opinion.

COMMENTS

RESPONSES



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P. O. BOX 2711
LOS ANGELES, CALIFORNIA 90055-2725

July 19, 1985

REPORT OF

Office of the Chief
Environmental Resources Branch

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers:

We have reviewed the Draft Environmental Impact Statement (EIS) for the Draft General Management Plan and Alternatives for the Lake Mead National Recreation Area, as requested in a letter from your office.

The proposed plan does not conflict with existing or authorized plans of the Corps of Engineers. A separate letter has been sent from our Construction-Operations Division which summarizes the permit requirements and procedures of our Regulatory Program as they would apply to the proposed Management Plan. We have no additional comments on the EIS.

Thank you for the opportunity to review and comment on this document.

Sincerely,

Robert S. Doe
Robert S. Doe
Acting Chief, Planning Division

1

1 Comment noted, no response required.

COMMENTS



Department of Energy
Western Area Power Administration
Boulder City Area Office
P O. Box 200
Boulder City, NV 89005

JUL 12 1985

Refer To: G1010

Mr. Jerry D. Wagers,
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers:

Thank you for the opportunity to review volumes 1 and 2 of the draft Environmental Impact Statement for the management of Lake Mead National Recreation Area.

Western's comment is as follows:

We noticed that the documents do not address utility corridors. As you are aware there are at least two existing transmission line corridors crossing the Colorado River below Hoover Dam. With the rapid development in the western part of the Las Vegas Valley it may be necessary that Western find future transmission paths out of Mead Substation adjacent to the recreation area. Therefore, we suggest that a discussion regarding utility corridors be included in the EIS.

Corridors could be located in the fringe areas on the west side north of Boulder City; on the east side of the LMNRA, e.g., Spring Canyon Project; or other areas. We would work with your office to locate the necessary corridors.

Sincerely,

G. J. Giles
Assistant Area Manager
for Management Services

RESPONSES

1

The National Park Service has contacted the Western Area Power Administration and will work with the Bureau of Reclamation and Department of Energy on corridors necessary for projects identified in this document. These include the possible development of the Spring Canyon pumped-back storage project, which will require a corridor from the Spring Canyon site south to the Mead-Liberty transmission corridor. This 200-foot-wide corridor will cross approximately 7 miles of NRA lands. A proposed inland intertie, which passes through the NRA on its way from Oregon to Arizona, will require a 6-mile-long corridor running next to the NRA boundary in the Las Vegas Wash area adjacent to the city of Henderson. Neither of these corridors will affect wilderness areas.

Three additional utility corridors cross the NRA area below Hoover Dam. Once these corridors are full, future transmission lines or other utilities originating and terminating outside the NRA will have to be routed around the NRA and cross the river south of the NRA boundary.

COMMENTS

RESPONSES

IN REPLY REFER TO:



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
NEVADA STATE OFFICE

340 Booth Street
P.O. Box 12400
Reno, Nevada 89520

1793
(NV-920.3)

JUL 29 1985

MEMORANDUM

To: Jerry D. Wagers, Superintendent, Lake Mead National Recreation Areas, Boulder City

From: State Director, Nevada

Subject: Lake Mead Draft General Management Plan

Attached are our comments on the Draft Lake Mead Environmental Impact Statement. As BLM maintains certain regulatory responsibilities as to mineral development, we keyed our comments in this area.

Generally, the mineral analysis needs to be reviewed and updated with information generated since 1980. The conclusions that elimination of mineral leasing in 88% of the National Recreational Area would not affect the current or future mineral and fossil fuel production locally or nationally does not appear to be adequately supported in the analysis.

If you have any questions or need more information regarding this matter, please contact Tom Leshendok, Deputy State Director, Mineral Resources, at (702) 784-5676.

1 Enclosure:
Encl. 1 - Review of Lake Mead Draft General Management Plan

COMMENTS

Review of Lake Mead
Draft Management Plan - Minerals

General

National Park Service (NPS) continuously states that there is very little likelihood of finding sufficient mineral to make a lease possible, anywhere within the National Recreation Area (NRA).

- 1 This plan makes no mention of the fact that any leasing of minerals, through rentals and/or royalty payments, provides revenue to the Federal Government.

Appendix G: Evaluation of Mineral Resources

- 2 The evaluation of mineral resources needs to be updated. A verbal discussion with the author, Mr. Robert D. O'Brien on July 18, 1985, disclosed that he had only done on-the-ground reconnaissance of the area north of Cottonwood Cove, south of Temple Bar; and a helicopter reconnaissance of the Shiwit's Plateau area prior to current uranium discoveries. He has not examined 80 percent of the NRA, in even a reconnaissance capacity. Most of his report is based on Longwell et al., 1965, Geology and Mineral Deposits of Clark County, Nevada, which in itself presents very little information on the Lake Mead NRA.

Reports by others that do go into more detail on the Lake Mead NRA were apparently unknown to Mr. O'Brien, which is unfortunate and would have given better depth to his report and would have saved several misstatements and omissions. Five of these reports are listed below.

Hewett, D.F. et al. 1936. Mineral Resources of the Region Around Boulder Dam
U.S.G.S. Bulletin 871.

Sanderg, C.A. 1984. Petroleum Potential of Wilderness Lands in Nevada. U.S.
Geological Survey Circular 902-H.

Scarborough, R.B. 1981. Radioactive Occurrences and Uranium Production in
Arizona. Arizona Bureau of Geology and Mineral Technology Geological
Survey Branch.

Schrader, F.C. 1909. Mineral Deposits of the Cerbat Range, Black Mountains
and Grand Wash Cliffs, Mohave County, Arizona. U.S.G.S. Bulletin No. 397.

Wilson, E.D., Cunningham, J.B. and Butler, B.M. 1967. Arizona Lode Gold
Mines and Gold Mining. Arizona Bureau of Mines Bulletin No. 137.

- 3 Additionally, there have been two exploratory oil wells drilled in the vicinity of the NRA since 1980. The USGS has rated several nearby WSAs having low to medium potential for future petroleum production. The region including the Muddy Mountains and nearby related rocks, is considered to have the best potential, and the older sedimentary rocks in extreme southeast Nevada and the adjacent lands in Arizona have a low potential.

RESPONSES

- 1 The NPS organic act and the Lake Mead enabling legislation allow mineral leasing only where it will not adversely affect park resources or their administration. Only when the Park Service can determine that no adverse effects will occur can it grant consent to leasing. Generation of revenue is not a criteria in the decision. Thus far in the history of leasing at Lake Mead, no lease has ever been developed and no royalties have been generated on the nearly 300 leases that have been issued. The Park Service has reviewed nearly 700 lease applications during this period and is required to complete environmental compliance on each application or group of applications. The annual rental charge for leases at Lake Mead is small compared to the cost of reviewing applications.

- 2 In January 1983, Robert O'Brien, a mining engineer, submitted his report to the National Park Service concerning mineral potential in the recreation area. This report was prepared as a summary of known information and was a year old when the mineral portions of the GMP were written. The information was supplemented in 1985 by a senior staff geologist of Morrison-Knudsen (M-K) Engineers, Inc., of Boise, Idaho. Both papers were based on research of the U.S. Geological Survey (USGS), including CRIB listings; U.S. Bureau of Mines (USBM), including MILS listings; state geologic survey; state bureau of mines; and other publications.

Of the five named publications, only one was specifically mentioned in any of the NPS reports. This was the most recent report, Sandberg, C.A. 1983, USGS map I-1537, circular 902-H. The other reports are not specifically listed as being used, although some of the dates on these reports were from 1909, 1936, and 1967. Both contractors were trying to get the most up-to-date information available. The M-K report alone listed 63 different reports upon which its conclusions were based, as well as field data collection. In addition, the Park Service used the 1985 report, "Principal Deposits of Strategic and Critical Minerals in Nevada," USBM IC 9035, by N. T. Lowe, R. G. Raney, and J. R. Norberg, for supporting information.

The Park Service believes that it has adequately reviewed the literature and collected necessary field data upon which to base its management decisions.

- 3 Our analysis included two exploratory wells drilled by Mobile Oil Corporation in 1979 and 1980. These were the last wells we were aware of at that time. Both these holes were dry. Information provided to us recently in the M-K report indicates that three additional wells have been drilled in the area since 1980. All of these holes were reported to be dry.

The M-K report agrees with your conclusion that the majority of the NRA has low potential for future petroleum production. The area of greatest potential for oil and gas, lying north of the lake on the Nevada side, has been subject to extensive oil and gas leasing in the

COMMENTS

RESPONSES

4 Page XIX, Impact on Soils. The statement is made that under the proposed action only about 300 acres of soils would be affected by mining over the next 10 years. This is 1% of the total land under lease/permit application within the NRA. Under the no action alternative, the amount of disturbance is anticipated to be the same. Under the proposed action, statements such as "Up to 30,000 acres of the NRA could be subject to mineral development..." misleads the reader into thinking that up to 30,000 acres would/could be damaged by leasing, when in reality, only about 1% of this number is actually anticipated to be disturbed by mining over a 10-year period, an average of 30 acres per year. This is admitted to in the last sentence of the paragraph, the least likely sentence to be read or remembered. The actual acreage anticipated to be mined should be moved up in the paragraph, and references to 30,000 acres to be leased should be dropped down in the paragraph and qualified with a statement to the effect that only about 1% of this acreage would ever be subject to actual mining (at a rate of 5-10 acres, per mine underground shaft).

5 Page XX, Impact on Significant Natural Features. The majority of breccia pipes with mining potential are not visible from Whitmore Point. Any that are visible, could be mitigated on a case-by-case basis rather than have the entire area of an important potential uranium province closed to all mining.

6 Page XX, Impact on Vegetation. The report states that at worst, several hundred acres could potentially be destroyed through mining, and yet no mention is made of the analogous effects on the plant community of new flood prevention dikes, new campgrounds, new concessions, visitor centers, new view and access roads and other improvements. Revegetation can also be required after mining.

7 Page XXIII. The proposed Draft Management Plan (DMP) would eliminate 88 percent of the NRA to leasing of any mineral. The statement is made that the proposed action "...would not significantly affect the current or future mineral and fossil fuel production locally or nationally." Considering that a new uranium district has been discovered in the Shivwits Plateau area and one of the few active high grade uranium mines in the U.S. is located a short distance from the NRA, this is a misleading statement. A large potential for uranium, a limited mineral resource on a national scale, is present in the Shivwits Plateau area. Active mining and exploration by several companies is currently underway throughout the area. The potential benefits to local economies through jobs and infusion of monies into the local economies by these companies is significant. Although uranium is currently in a short term depressed market, on a long term basis care needs to be taken as to arbitrarily shutting off a significant domestic national resource.

8 Page 48. The Santa Fe Railroad owns the mineral rights to 55,000 acres (alternating sections) of the Shivwits Plateau area. The NPS should discuss the affect of the plan on these lands, especially if the intent is to declare these lands as closed to mining.

9 Page 67-68. The other actions for Lake Mead NRA, including the proposed DMP, were triggered by the tremendous increase in numbers of visitors putting heavy pressure on a selected number of areas within the NRA, primarily the boating, boat launching, swimming and near shoreline areas, and secondarily by off-road vehicle use in other areas. As admitted to frequently in the DMP, very little pressure from mining is expected for at least the next ten years. To preclude 90 percent of the NRA from mineral leasing is unfair to the public without adequate mineral analysis as to potential.

past. No drilling activities have ever been proposed for oil and gas leases which have been issued in this portion of the NRA. Since the draft EIS was released for public review, 6,400 acres of existing oil and gas leases in the Pinto Valley area were relinquished by the lessee, presumably due to lack of oil discoveries in adjacent areas. A total of 14 oil and gas wells drilled in the area adjacent to the NRA in the Muddy Mountains vicinity have been dry. Thus, although the area may be geologically favorable for oil and gas deposits, all previous exploration activities support the conclusion that preventing future oil and gas leasing in this area of the NRA will not have a significant impact on the petroleum industry.

4 The section referred to has been revised in the final EIS to clarify the issue.

5 Whitmore Point and the road leading to it provide spectacular views of both Whitmore and Parashant canyons, as well as the Grand Canyon country. Activities associated with mining anywhere in these canyons would be highly visible from this plateau, particularly the significant upgrading of existing roads and associated daily traffic from transporting unprocessed ore to the mill and transporting personnel and supplies to and from the mine site. Currently, views into the canyons are rarely interrupted by vehicles traveling the primitive roads. Mining in this area would greatly increase the number, frequency, and character of vehicles (pickup vs. large haul truck) traveling these roads. Mitigation of noise and dust is primarily done through water use, which is also in short supply. Therefore, mitigating the effects of noise and dust generated by truck traffic and the highly visible nature of a newly widened and constantly maintained road would not be feasible.

6 The text in this section has been changed to add similar effects of development.

7 The effect of the proposed action is to reduce the acreage open to leasing from the current 1,162,550 acres to 148,970 acres, a reduction of 87 percent. Although the Shivwits Plateau portion of the NRA will be closed to future exploration and leasing, the effect on the local and regional uranium development opportunities is minimal. Only a small portion of the total number of known breccia pipes in the Grand Canyon region are found in the NRA. It is unknown if any pipes in the NRA contain commercial grade uranium deposits; however, two of the pipes have been drilled in the past for uranium and no commercial grade deposits were found. Two other pipes will remain available for exploration in the NRA under all of the alternatives. One is on the unpatented Copper Mountain claim group, which is currently being explored. The other is on a mineral lease owned by Energy Fuels Corporation. NPS actions in the GMP have no effect on development opportunities on adjacent lands, and therefore, opportunity for exploration and development of uranium deposits locally has not been affected significantly.

8 The first paragraph on page 294 of the draft EIS discusses the effect of the proposed action on nonfederal mineral rights.

COMMENTS

- 10** Page 193. Shivwits Plateau, is the "...most isolated and least visited..." area in Lake Mead NRA. "It is actively grazed and visitors are generally limited to hunters..." This region has the highest potential for mineral leasing and the lowest visitation and use. To close this area to mining seems short sighted.
- 11** Page 200. "Uranium occurs in a series of breccia pipes, diatremes, silica plugs, kimberlite pipes, and marks throughout the Grand Canyon region...." A nearly totally erroneous statement. Uranium has not been located in any diatremes, silica plugs, or kimberlite pipes (there are no kimberlite pipes in the Grand Canyon region.)
- 12** Page 200-203. When referring to uranium bearing breccia pipes, the report states that: "Most of these geologic features have been explored for their copper, silver and gold content." The report should have stated that the breccia pipes, that are accessible by foot, have been examined when recognized. Breccia pipes are very difficult, geologically, to spot. Very sophisticated technology and highly trained geologists, with extensive experience in breccia pipe occurrences, are needed to locate breccia pipes, complimented by careful geochemical, geophysical and radiometric surveys. Only during the past several years has either the expertise or equipment been available to locate these breccia pipes. Several have been located by helicopter survey and other airborne techniques.
- For example, prior to the current exploration efforts there were four known uranium bearing breccia pipes in Parashant Canyon. Now there are 11 known uranium bearing breccia pipes in Parashant Canyon, two with major potential for uranium mining.
- 13** Page 203. "Uranium is only suspected as a companion mineral with the copper...." In 1981, prior to the recent finds in the Shivwits Plateau - Parashant Canyon area of uranium bearing breccia pipes, Robert Scarborough authored Radioactive Occurrences and Uranium Production in Arizona. Published by the State of Arizona Bureau of Geology and Mineral Technology. The excerpts following show how misleading the above statement is:
- "The Copper Mountain mine contains uranium and base metal mineralization in fractures around periphery of pipe-like collapse structure. Workings are in Supai Fm., above an unconformable contact with Redwall limestone. The grade in the ore has been estimated at .13 - 14.1% U₃O₈.
- The Chapel Mine, located in NE1/4, Section 25 of T. 33 N., R. 10 W., in Parashant Canyon produced 1.08 tons of ore at .23% U₃O₈, 4.02% Cu, three analysis showed U₃O₈ levels of .34%, .31%, and .31%. Autunite, uranophane and copper minerals in Supai Sandstone and/or Hermit shale. A breccia pipe structure. Produced in 1954.
- The Copper House mine, #1 and 2, in Andrus Canyon just outside recreation area boundary. Sections 1 & 2, T. 32 N., R. 11 W. Several analysis for U₃O₈ show .18% to .165%; and .01% V₂O₅ and 3.99% Cu.
- Copper House Colition #2, Sections 1 and 2 of T. 32 N., R. 11 W., near Copper House #1. Analysis .048% U₃O₈, .02% U₂O₅, 4.57% Cu."
- These mines were explored (and mined in one case) for copper, not uranium. Recent exploration efforts have shown uranium values in excess of .5 percent, in several cases.

RESPONSES

- 9** NPS management decisions concerning zoning are based on protection of natural and cultural resource values and recreational needs, not on mineral resource values or occurrences. As a result, the areas open or closed to mineral leasing are not located according to known mineral potential or lack of potential. However, in analyzing the impacts of the proposed action, we have considered the mineral potential of the area. The NPS understands that the zoning proposal will result in exclusion of some medium and high mineral potential sites from mineral leasing, but this restriction is minimal compared to other available federal acreage of similar medium or high mineral potential which remains open to such mineral exploration and development outside the park. The proposed management zoning will provide necessary protection for park values within the NRA without greatly affecting the total availability of medium to high mineral potential sites in the region or the nation as a whole. See the revised discussion on minerals in the "Affected Environment" section of volume II.
- 10** Management zoning decisions for the Shivwits Plateau were based on resource values, not on current uses such as grazing or low visitation levels. The Park Service is charged with protecting the resources of the area and this mandate is not tied to particular visitation levels.
- 11** This comment has been revised in the final EIS.
- 12** Statements referring to uranium occurrence in breccia pipes have been clarified in the final EIS. In reference to the number of known breccia pipes in Parashant Canyon, as early as 1977 there were nine known pipes, four of which occur outside the NRA in Parashant Canyon. The National Park Service authorized exploration of breccia pipes in Parashant Canyon in the late 1960s and 1970s. No uranium exploration proposals have been received in recent years, with the exception of the recent drilling proposals on the Copper Mountain mine pipe, which were approved. No past exploration efforts in the NRA have resulted in development of uranium deposits.
- The Park Service has not approved any recent exploration within the NRA, except for the Copper Mountain pipe, so it is not clear what "current exploration efforts" is referring to. No information available to the Park Service indicates that two pipes in the NRA have "major potential for uranium mining."
- 13** The Copper Mountain mine pipe was not considered in our discussions because it is under claim and remains available for development under all the alternatives.
- 14** The reference to the "Chapel Mine" in NE1/4, Sec. 25, T33N, R10W is evidently referring to the Parashant pipe in the SE1/4, Sec. 25, which was formerly known as the "Chapel House." To our knowledge, this property has never been operated as a mine and, with total production being 1.08 tons of ore, can only be considered a prospect at best. The Cotter Corporation drilled five holes in 1968 in the Parashant pipe. Although anomalous radioactivity was present and some copper mineralization occurred at the surface and at depth, no commercial grade uranium mineralization was indicated.

COMMENTS

15 The summary paragraph on Minerals, Page 203, is both correct and very misleading at the same time. The first sentence, "The results of the mineral resources evaluation indicates that there are no minerals within the recreation areas of significant quantity or quality to affect the nation's supply of any given commodity." In regards to the Shivwits Plateau/Parashant Canyon area, this could be considered as a misleading statement. It is only during the past few years that the potential for uranium production from this area has been recognized. The major exploration efforts and large sums of money being spent by mining companies in this area for uranium exploration, during a time of severely depressed uranium prices, is a self-evident example of the importance of this area to the United States uranium industry. This region is just beginning to be explored for uranium breccia pipes, and has every indication of becoming one of the largest uranium producing regions in the United States, as the involved mining companies have pointed out, during this authors examination of the area.

16 Gold is another commodity that has only recently been realized, due to current and foreseeable high prices, to have potential for bulk mining of large low-grade deposits. The altered volcanic rock areas north and west of Cottonwood Cove, on the west side of Lake Mohave may have potential for this type of deposit as well as the extension of the Black Mountains on the north side of Lake Mead. British American Mining Corporation's current exploration activities near Nelson also points out that industry sees the area as having potential. Although with the large number of bulk, low-grade gold deposits discovered during the past few years, Lake Mead may not be a major factor on the national scale but would certainly be significant on a regional scale. The statement that, "there are no known mineral reserves in the recreation area, and possible mineral resources are classified as geologically

speculative, the lowest possible category of importance", is quite misleading. An explanation of what "reserves" are and what "resources" are, should be included. Reserves are known quality, quantity and value, currently mineable. Reserves are tied very strongly to price and price can fluctuate wildly in a short period of time, depending on a whole gamut of factors from politics to weather. The term "reserves" should be stricken from this entire report, unless speaking of a known mineral deposit. A reserve is a known economical resource and this term is preferred by Economic Geologists (The Appraisal of Mineral Resources, 1981). "Speculative", as used in this report, has been given a different meaning than that which appears in a standard dictionary. This misuse appears to bias the meaning toward a connection with those individuals known as speculators, hence less than desirable. Because this word should be used only in its properly defined role, we recommend striking it from the report except where its use is required to clarify a geologic concept.

18 The mineral deposits of the Lake Mead NRA should be viewed as mineral resources. Yesterdays resources are today's ore deposits (reserves). When gold was \$35.00 per ounce, about 13 years back, most of today's active gold mines were considered as nothing more than uneconomic, nearly valueless occurrences; an uneconomic resource by today's definition. Lake Mead has both occurrences and resources of gold, silver, lead, iron, uranium and others. Siderite is an iron carbonate, mined for its iron content in some countries. Large dikes, some nearly a mile long, occur in the Bearing Peak area of Lake Mead. These dikes also contain low grade gold values of .01 - .02 ounces gold per ton. These have been mined on a small scale and have shafts scattered along them. The dikes are mentioned in no geologic reports nor are the small mines mentioned in any reports or shown on any maps. This example should be considered a mineral occurrence and a possible resource (iron, and gold). The gold deposits north of Cottonwood Cove, those near Gold Butte and in Gold Basin on the Arizona side, should all be classified as mineral resource areas currently uneconomic to mine, until proven otherwise, but with significant potential.

RESPONSES

15 As early as 1968 the Park Service approved uranium exploration drilling by the Cotter Corporation on three breccia pipes in Parashant Canyon. Again in the mid-1970s, the Park Service approved uranium exploration drilling by the Exxon Company on approved leases on the Shivwits Plateau. All previous drilling efforts indicated that commercial grade uranium was not present in sufficient quantities to warrant development.

16 The known mineralized areas referred to west of Lake Mojave are encumbered by patented mining claims in most cases. A large area of resource utilization subzone also surrounds these areas in the proposed action, and thus remains available for leasing consideration.

17 This section of the report has been rewritten in the final EIS to clarify the issue.

18 As discussed in the legislation establishing the NRA (PL 88-639), the first responsibility of the National Park Service is to protect the scenic, historic, scientific, and recreational resources of the area. Although these mineral resources have been restrictively zoned, they will still be available in the event of a national emergency.

COMMENTS

The uranium deposits of the Shivwits Plateau area are now considered economic resources (potential supply) but they will not attain known economic resources (reserves) status until current exploration projects are concluded. A price rise for uranium could quickly change the economic resources to known economic resources (reserves) and a price drop could influence them in the opposite direction.

19 Page 210, Proposed Wilderness, Unit 30 - Shivwits Plateau. The area is considerably broken up by mineral reserves to private industry and numerous roads. It has the highest potential for new uranium production in the United States. It is composed of rolling grasslands and juniper/pinyon pine and some ponderosa pine forests. It is similar to the high plateau country of most of northern Arizona and much of southeast Nevada and Utah.

Units 34, 35 and 36. This area, where canyons break away from the Shivwits Plateau is not totally undeveloped. Roads exist in the bottoms of the canyons and some old mines are also present. These canyons are typical of the Grand Canyon region and do have scenic impact. The point of consideration is that these canyons are the sight of the most significant uranium finds in recent years. They have strong potential for major uranium production. Would a multiple use concept, with careful stipulation of the mines that develop, be a more reasonable use and a higher value for the land? Currently, these lands are in a primitive state frequented by hunters, cattlemen and prospectors. Changing them to wilderness status would deny their use to everyone, but the smallest minority of the most wealthy or strongest backpacker that can carry his/her own water.

20 Page 285, 2nd paragraph. "Under the proposed action, up to 30,000 acres would be subjected to mineral development..." This can be a misleading statement. The average, modern, small underground mine involves less than 5 acres of disturbance. Other than the Parashant Canyon/Shivwits Plateau uranium area, most mining activity in Lake Mead would be the small mine type. The larger mines that might be needed on the uranium discoveries would be on the order of five to ten acres, not over this. Currently, in the Parashant Canyon area, there are reportedly two mines possible on good breccia pipes. Barring additional discoveries, there would be 20 acres maximum disturbance plus the roads to them of 21,000 acres under application. This paragraph and several other very similar to it, should be reworded objectively and clearly.

It should be noted that the DMP admits that none of the 30,000 acres under mineral lease/prospecting permit applications "...are in areas where they could potentially affect any threatened or endangered animal species." Only two leases and one prospecting permit are within five miles of any threatened or endangered plant species.

21 Page 294-303, Impact on Mineral Leasing Opportunity. Page 294, "The areas having the highest potential for mineral resources within the Shivwits zone are in mineralized breccia pipes of which approximately 10 are known to exist in the area." Eleven mineralized breccia pipes have been found in Parashant Canyon alone. The total number of pipes is considerably greater and the likelihood of many more being discovered is 100 percent.

22 "Reports by the U.S. Geological Survey of reserves and resources in the Parashant-Whitmore Canyon structures are highly speculative..." (U.S. Dept. of the Interior, 1977). These reports should be referenced, at least, to title and number. Any U.S. Geological Survey publications listing reserves/resources of this time period (1977) are out dated. All of the current exploration has commenced since 1980. Current estimates would change those numbers generated in the 1977 report substantially, and as exploration continues, will continue to change those numbers rapidly with time.

RESPONSES

19 The map and description included in the section on wilderness suitability indicates those lands which meet or potentially meet the criteria of the Wilderness Act of 1964. The lands described and mapped on the Shivwits Plateau potentially meet the criteria of the Wilderness Act.

20 The projection in the draft EIS that approximately 30,000 acres of the NRA may be subjected to potential mineral development activities has been revised and clarified, since eight leases have been terminated or relinquished since the draft EIS was released for public review.

21 The Park Service recognizes the high potential for uranium deposits to be found in and adjacent to the recreation area and has used this information in their analysis. We agree that many other breccia pipes probably occur in the Shivwits area, but the statement in the draft EIS refers to the number of pipes known within the recreation area. There has been no authorized exploration in recent years in the Shivwits portion of the NRA, and given the difficulties of locating breccia pipes as you have elaborated on earlier, the total number of pipes within the NRA could not have changed.

22 The 1977 USDI reference was inadvertently excluded from the bibliography and has been added. The reference is to the "Environmental Assessment: Management Options for Exxon Uranium Leases," prepared by the Park Service in July 1977. No exploration has been authorized by the Park Service within the Shivwits portion of the NRA since release of that report (with the exception of the recently approved exploration on the Copper Mountain pipe), so the numbers could not have changed. No evidence has been provided that "current estimates would change those numbers."

COMMENTS

- 23** Page 295, "Under the current price structure for uranium, it is unlikely that any of the uranium resources contained in the known breccia pipes would be developed... a price of \$60/pound would be necessary...." Energy Fuels is attributed to have made this statement. To be currently mineable, at today's prices (1985), a grade of .5% uranium is needed. Reportedly at least two new pipes have been discovered that meet or exceed this value. The three factors affecting uranium price structuring should be left out. If they are included, then detailed analysis of why gold prices are higher should be included as well as other commodities. The paragraph on the "worldwide oil glut" should be reviewed and referenced. Care needs to be taken as to use of subjective statements.
- 24**
- 25** Several statements have been made about the "speculative" nature of the uranium breccia pipes as to grade, whether there is even any uranium in them, they are too low grade to mine, etc. The next to the last paragraph on this page states, "Although the extremely high grade of ore found in the breccia pipes might make these deposits more attractive than more conventional mines,...." What is a more conventional mine? Here the report admits these breccia pipes are high grade uranium deposits. This is contradictory to all the other comments about the low quality and speculative nature of the breccia pipes.
- 26** Page 296. Most of this page deals with the O'Brien report, which is reviewed elsewhere in this document.
- 27** Page 301. The 5th paragraph down, which begins "Irreversible and irretrievable loss of vegetation..." needs to be reviewed in light of modern day mining, milling and reclamation practices. They state that several hundred acres of vegetation could be destroyed by mine development. Surface facilities at a modern mine, such as might be developed in the Shivwits Plateau/Parashant Canyon area, would occupy a maximum of 10 acres and probably less. Waste rock/tailings can usually be deposited in underground mined out areas to enhance wall rock stability. A road to and from the mine would be necessary, but in most cases up-grading of existing roads would be 80 percent or more of the road building done. New road usually is restricted to a short joinder road from the mine to an existing road. The Lake Mead NRA is so riddled with roads that major new road construction may not be needed. This paragraph in the plan exaggerates the amount of surface disturbance involved in working an underground mine.
- 28** Page 302. The report states, "Removal of the Shivwits Plateau from any further mineral leasing consideration would favor long-term provision of recreational benefits over short-term economic and energy supply gains." Mining would not destroy the Shivwits Plateau for recreational use. Individual underground mines on the plateau would use about 10 acres each.
- "The highly speculative nature of the mineral resources within the NRA indicates that the long-term gains obtained from preserving the recreational values of the park far outweigh the uncertain, relatively short-term gains from mineral development." Again, mining would not destroy the recreational values of the NRA. The uranium resource is not "highly speculative" as shown by the mining companies investing millions of dollars on exploration. This kind of exploration is only done when there is a good chance of discovering mineable ore. Additionally, no thought or consideration is given as to the benefits of mining, which includes employment, increased business for local towns, royalties to the Government for leasing and increasing the strength of the economy.
- In the following paragraph on page 302, one sentence is devoted to the fact that 500 acres of soil and vegetation would be destroyed for recreational development. This could be compared to mining disturbance and several analogies drawn.

RESPONSES

- 23** Statements referring to the economics of mining uranium have been removed from the final EIS.
- 24** Statements regarding uranium price structuring have been removed from the final EIS.
- 25** Statements referring to an extremely high grade of ore found in the breccia pipes are in reference to pipes with known commercial grade deposits that are currently being developed. The use of the term "extremely" has been removed from the sentence. The use of the phrase "conventional mine" in this paragraph refers to typical low-grade uranium deposits that are mined by underground or surface methods which result in deposition of tailings at the surface from concentration of the ore before transportation.
- 26** Statements regarding disturbance associated with a potential mining operation have been adjusted to reflect projections in the M-K report that disturbance caused by a medium-sized mine is the maximum expected.
- Lake Mead National Recreation Area, particularly the Shivwits Plateau, is not "riddled with roads," and the assumption that no new road construction would be needed is invalid.
- 27** It is the position of the National Park Service that mining on the Shivwits would impair the scenery and natural and cultural resources as described in the draft EIS.
- Despite the money and effort being expended on current exploration efforts by industry, nothing more than potential has been demonstrated on the Shivwits Plateau within the NRA. Therefore, the primary impact of closing the Shivwits to further leasing is on additional exploration opportunities within the NRA. Because the potential exploration is only a small piece of the total regional uranium exploration picture, closing the Shivwits to further mineral leasing is not anticipated to have a significant effect on local employment, generation of royalties for the government, or increasing the strength of the economy. To date, no breccia pipes have been identified within the NRA which contain commercial grade uranium deposits.
- 28** The mining and development impact discussions have been combined because they deal with similar impacts.

COMMENTS

RESPONSES

29

The next paragraph again shows the need to review modern mining techniques:

"In the event that mining did occur in the recreation area with concomitant destruction of several hundred acres of soil and vegetation, these recreational resources owned by the nation would be lost in exchange for the economic gain of shareholders of the mining company. Other industries might benefit from the development of the mineral resources. Over the long term--no less than 50 to 75 years--productive soils and vegetation might be restored in mined areas through reclamation."

Mining would not cause "...destruction of several hundred acres of soil and vegetation." No "...recreational resources owned by the nation..." would be lost. Many more people than just shareholders would gain from a domestic mining operation, the nation as a whole would benefit. There is no "might" about it, other industries would benefit from mining. Ninety-five percent of lands affected by mining could be completely restored in far less than 50 years.

30

Page 308-309, Impact on Desert Spring Ecological Communities. These pages are filled with guesswork and conjecture on the effects of mining. Only a hydrologist, with experience in mining and groundwater control, could evaluate potential problems with springs near breccia pipes and how they might be affected. All other effects mentioned could be handled by careful monitoring of any mining operation.

31

Page 310, last paragraph. "Development of the 10 known breccia pipes...." A misleading statement. Of the many breccia pipes discovered so far, only one or two may have provable reserves. Mining of 10 pipes would not occur, and is a gross exaggeration. Furthermore, 400-500 acres of soil would not be lost, as each mining operation would involve less than 10 acres, and nearly complete restoration of soils can be done by the companies once mining ceases.

32

Page 312, 1st paragraph. "Uranium development in the Shivwits area...would lead to significant degradation of the scenic vistas from Whitmore Point because most of the activity would take place in the immediate foreground of the views from the point." This is a misstatement and it appears that the writers of this DMP have never been to Whitmore Point. The only thing visible from the point is a road. The possible mining sights are in side canyons and not visible from the point. The conclusion that uranium development could significantly degrade the scenic vistas from Whitmore Point needs to be reviewed and considered for revision.

33

Page 314, next to last paragraph. "Blading of areas for location of access roads, drill pads, or mine facilities would result in local destruction of vegetation on approximately 50-100 acres for each surface mine,...." Another gross exaggeration. Drill pads are 1/4-acre for truck mounted rigs and less for air-carried rigs. Mine facilities are from 5-10 acres for each mine.

29

The paragraph has been clarified to indicate that it is referring to the potential effect of mineral development activities throughout the NRA, including all associated activities such as access road and utility corridor construction. Also, this section refers to short-term uses, and it is true that public recreational resources would be lost in the area of operation during the life of the operation. The reference in the draft EIS to shareholders of the mining company has been deleted, and the term "might" in the following sentence has been changed to "would" as suggested.

Lake Mead is an extremely arid environment with little organic soil development. Commercial seed sources for most of the common native species in the area have not been developed and little reclamation has been done in this environment. To restore a disturbed area to its previous pristine condition may require far more than 75 years.

30

The impact discussion referred to has been revised in the final EIS.

31

The statement regarding development of 10 breccia pipes has been revised in the final EIS. However, estimates from Energy Fuels Corporation indicate that approximately 62 acres were required for the Pidgeon Mine, not 10 acres as indicated in the comments. The statement referring to the direct loss of soils has also been revised.

32

Refer to comment 5.

33

Refer to comment 31.

COMMENTS



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

1707 N. 7th Street
P.O. Box 16763
Phoenix, Arizona 85011

Memorandum

To: Superintendent, Lake Mead National Recreation Area, NPS
From: State Director, Arizona
Subject: Lake Mead Draft General Management Plan and EIS

This memorandum provides our comments on the Draft General Management Plan and EIS (DEIS 85-29) for the Lake Mead National Recreation Area, dated April 1985. The notice of availability of the draft plan and EIS was published in the Federal Register on May 17, 1985, and copies of the plan and EIS were received by BLM in June. The Regional Director, Western Region, notified this office, by letter dated July 10, 1985, that the comment period was extended to July 31, 1985.

These comments include the consolidated review of the BLM Arizona Strip District, Phoenix District, and State Office. Additional comments are being provided by the BLM Nevada State Office. The following general and specific comments are provided:

General

The Draft General Management Plan commendably addresses flood plain hazards and increased recreational visitor use. However, as a management plan for mineral resources, the draft plan is seriously deficient. We fully recognize that a Minerals Management Plan for the Lake Mead National Recreation Area will be prepared following the completion of the General Management Plan. We have been assured, by both your office and the Regional Director, that this office will be provided an opportunity to provide input to the development of the Minerals Management Plan. However, the Minerals Management Plan only relates to those lands identified in the General Management Plan as open to consideration for mineral leasing. Mineral leasing will be prohibited in all management zones, except for the "resource utilization" subzone. This resource utilization subzone, under the Proposed Action Alternative of the General Management Plan, only encompasses 148,970 acres (10%) of the Lake Mead National Recreation Area. Some 1,152,550 acres (78%) of the NRA are currently available for mineral leasing.

1 Congress established the Lake Mead National Recreation Area for "the general purpose of public recreation, benefit and use, and in a manner that will preserve, develop and enhance...the recreation potential and in a manner that will preserve the scenic, historic, scientific and other important features of the area" (Public Law 88-639, October 8, 1964). Congress, in consideration of the scenic, historic, scientific, and other important features of the

RESPONSES

1 When the regulations in 43 CFR governing federal mineral leasing in NPS areas were revised in 1981, the excepted areas were not revised because major planning efforts were not complete and it was thought to be premature to exclude additional areas from leasing at that time. The Federal Register notice, dated December 22, 1980 (FR 84393), which accompanied the proposed regulations, indicated that the excepted areas for Lake Mead would be revised at "... an appropriate time in the planning sequence." The GMP is the major, long-term planning document for NPS units which establishes management zoning and guides management of the unit over the long term. The GMP evaluates existing knowledge of natural and cultural resources and proposes management actions as appropriate. Mineral leasing may be allowed, pursuant to Lake Mead's enabling legislation, only where it "... will not be inconsistent with either the recreational use or the primary use of that portion of the area heretofore withdrawn for reclamation purposes." The enabling act further states: "Lake Mead National Recreation Area shall be administered by the Secretary of Interior for general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop, and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area. . . ." Therefore, the NRA is zoned according to the need to protect resource values, not according to mineral occurrences. Mineral leasing is then permitted only in the resource utilization subzone where it will not conflict with preservation of resources.

COMMENTS

area, specifically provided for mineral leasing as a public benefit and use in the NRA. The clear intent of Congress was expressed by the mineral leasing regulations for the Lake Mead National Recreation Area which identified those specific areas to be excluded from mineral leasing (43 CFR 3109.2d and 3566.2-2). It is difficult to understand why only 319,925 acres of special areas were excluded from leasing by the regulations, and the Proposed Action of the management plan now identifies some 1,142,005 acres of special areas. The regulations also further define Congressional intent by stating that consent by the Regional Director of the NPS for issuance of a lease or permit will only be granted if the activity "will not have significant adverse effect upon the resources or administration of the area." The determination of "significant adverse effect" cannot be made until a specific proposal has been received and analyzed using the NEPA process. The NPS has established blanket management zones which prohibit mineral leasing and mining without benefit of analysis of site specific proposals.

2

3 The NPS has determined that the only method to mitigate the potential impacts from mineral leasing and development is to preclude leasing from 90% of the NRA. Management zones could have been identified which allowed for leasing with various degrees of restrictions and protective stipulations. Sensitive areas could be protected by "no surface occupancy" stipulations, seasonal closures to exploration, visual screening of operations, or specific reclamation stipulations. Protection of other resource values can be a high priority, but it does not have to totally exclude mineral leasing. The "no leasing" alternative is the easy solution to resource conflicts.

3

Specific

4 The maps presented throughout the General Management Plan are not of sufficient detail to determine the location and boundaries of management zones. Township and range lines would assist in determining the location of specific areas of interest. The maps and figures within the plan should also be numbered for easy reference.

5 Table 4 provides acreages of various management zones for the alternatives in the General Management Plan. The acreages presented for the Natural Environment subzone, Development zone, Resource Utilization subzone, and Reservoir subzone under Alternatives A and B are not consistent with the acreages presented on the management zone maps on pages 77 and 85.

6 The management zoning map for the Proposed Action indicates that no lands in the Shiwits Plateau area will be available for mineral leasing. This restriction to mineral leasing is of significant concern because of the potential for uranium mineralization in the area. Exploration is needed to further define this uranium potential. Some 11 prospecting permits, encompassing 16,640 acres, are currently pending completion of the General Management Plan. This seems to indicate that the minerals industry has great faith in the mineral potential of the area, yet it is proposed to be closed to leasing.

6

RESPONSES

2 The determination of "significant adverse effect" must be made at the lease issuance stage before the regional director can consent to lease issuance. Issuance of a lease or permit conveys the right to develop mineral deposits discovered. Once a specific proposal for development is received, stipulations can be added; however, it is then too late to determine that no level of mineral development activity is acceptable. It is more appropriate for the Park Service to plan ahead and identify resources where mineral activities categorically interfere with conservation of the resources.

3 The use of no surface occupancy on a large scale is unacceptable because it does not allow adequate and reasonable access to the minerals. Additionally, mining activities will still be visible during times of operation, regardless of reclamation methods. The National Park Service has chosen to use no surface occupancy only as a stipulation on leases, permits, and plans of operation where a sensitive resource in a particular area requires additional protection. Seasonal closures of areas to exploration only works well if no mineral deposits are discovered. If development activities were subsequently proposed, it would be difficult to mandate seasonal operation. Visual screening of operations only protects one aspect of the environment, visibility.

4 The maps in the GMP are necessarily general because of the nearly 1.5 million acres under consideration in the plan. Where specific development is proposed, detailed maps or drawings are included. The zoning boundaries of the resource utilization subzone will be defined in detail down to township, range, and section lines in the minerals management plan.

5 Corrections were made to the acreages noted on the maps on pages 77 and 85 in the draft EIS by pasting revised legends over the incorrect legends. Some copies may have been inadvertently overlooked in the process.

6 Refer to Nevada BLM responses 7, 15, and 27.

COMMENTS

Page 23: **7** Historic and archaeological sites are proposed to be protected by a restricted management zone of an entire section (640 acres) around each site. The plan should consider site specific buffer zones which would provide for adequate protection, based upon the significance of the site and the environment surrounding the site.

Pages 26-29: Table 6 provides a discussion of the rationale for the proposed management zone of specific areas within the NRA.
8 The common rationale for identification of Resource Utilization zones (Areas 7, 11, 15, 17, 22, 24, 32, 40, and 41) is whether the area is visible from the Lake. Large acreages of the NRA have apparently been excluded from mineral leasing based solely upon visual considerations. But discussions of visual resources in Volume II of the EIS (page 233) do not indicate site specific visual resource management classifications have been prepared for the NRA. Site specific visual resource values should be considered before excluding a use in an area.

Page 30: **9** The General Management Plan discusses the control of tamarisk in the area. Vegetation management in the form of salt cedar removal and cottonwood and willow introduction should also be explored.

There is a brief comment made in the plan regarding the control of burro populations in the area. A more complete discussion of the existing situation and the specific areas where efforts are being made to control the population should be provided.

Page 31: **10** The discussions indicate that both the gila monster and desert tortoise are listed as endangered by the State of Arizona. The desert tortoise is a group 3 listed species by the State, but the gila monster is not listed. Both species are Federal candidate species.

Page 33: **11** The General Management Plan refers to an Approved Roads map which will be revised. There is no indication in the plan as to the specific roads which will be included on the map. Some back country roads are shown on a map on page 35. It is unclear whether these are the only approved roads in the NRA.

There are no discussions of access needs across NPS lands to adjacent lands. This is especially a problem for access to public lands adjacent to the NRA in the Shivwits Plateau area. The Grassy Mountain area, south of Parashant Canyon, is of specific concern.

RESPONSES

7 These factors were considered in establishing this zone. That is why it is also stated on this page that other activities may occur within the zone as long as they are compatible with the larger zone surrounding the historic zone.

8 Although site-specific visual resource management classifications have not been prepared for the NRA, each of the management zoning areas was evaluated on its individual resource characteristics before zoning in a specific category. One of the most important of these factors was visibility of an activity from the lake. The primary reason for this was the need to preserve the scenic quality of the area as required by the legislation establishing Lake Mead NRA. While visibility from the lake is the common rationale for identification of the resource utilization zones mentioned, it is not the sole criteria, as suggested. For example, area 7 was also set aside as resource utilization because of management efficiency, areas 11 and 32 because of existing mining activity. In areas 22 and 24, visibility from major access roads was a factor. In areas 40 and 42, visibility from major developed areas was a determining factor.

9 Both vegetation management and control of burro populations have been discussed and analyzed in detail in the Resource Management Plan for the NRA. This document was publicly released in 1975 and is updated biennially.

10 These corrections have been made in the final document.

11 This section of the document has been revised and updated to more clearly explain current and future actions regarding the approved roads in the NRA.

COMMENTS

Page 37: **12** An Interagency Agreement between the NPS and BLM regarding mineral leasing is discussed. This agreement is not included in Appendix D (page 384) with other agreements.

13 It is indicated that oil and gas leases have been obtained for "speculative" purposes in the Lake Mead area. These lands may be considered to be of low potential, but judgments regarding the intent of leasing should be avoided. These leases in this specific area were leased in 1980, 1981, and 1982 for terms of 10 years. The lack of any specific drilling proposal, to date, does not preclude an interest in drilling during the remainder of the term of these leases.

Page 38: **14** Mineral leasing is currently excluded from some 45% of the NRA because of suitability or potential suitability for wilderness. It is unclear in the management plan whether those areas that are not eventually designated as wilderness will be open to leasing, or whether they will be placed into some resource protection zone. Comparison of maps (page 21 and page 205) would indicate that some areas would be in resource utilization zones and available for leasing.

Page 51: **15** The management plan indicates that management zoning for the Proposed Action would provide for protection of adjacent BLM lands. Several specific areas are identified. Other areas may need to be reevaluated. Several Resource Utilization zones may border on BLM Wilderness Study Areas. A specific example is a Resource Utilization zone adjacent to the Mt. Wilson WSA (2-001A).

Page 68: **16** The total acreage of excepted areas (319,925 acres) is not consistent with the acreage shown on page 71.

Page 111: **17** Throughout the draft management plan (pages 111, 141, 149, 161), references are made to screening existing and proposed NPS initiated developments from view by using vegetative plantings or creating naturally appearing land forms. Also, new housing for both NPS and concessionaire personnel are oriented for a view of the Lake, which means they can be seen from the Lake. Yet mineral development is excluded from the Lake. Mineral development should be provided the same opportunity for mitigation of possible visual impacts as other uses on the NRA. The plan even discusses removing a natural feature, a knoll at Echo Bay, which can be seen from the Lake. The knoll will be used as common rock fill in the concession housing area or proposed launch ramp parking. It is difficult to understand the NPS "mining" a natural feature visible from the lake for low value fill material, and not allowing leases or permits for potential high value minerals.

Page 184: **18** The Proposed Action for the Shivwits Plateau area includes the construction by the NPS of a dirt landing strip for improved administrative access. It would appear that limited mineral exploration could be provided for in the area, if the impacts from a landing strip are acceptable to the NPS.

RESPONSES

12 A statement has been included in appendix D of the final EIS regarding the proposed interagency agreement between the BLM and NPS on mineral leasing.

13 The word speculation has more than one meaning. The broad definition of the word is to assume a business risk in hope of gain. In this sense all mineral activity is speculative. The narrower meaning is to assume a business risk with the expectation of profiting from market fluctuations. This meaning implies an intent of the lessee to hold the lease and sell it without actual work. The way it is used in the GMP is as a higher risk associated with wildcat exploration drilling. This is the most marginal type of drilling, with wildcat drilling funds diminishing quickly in response to oil and gas industry downturns.

The GMP has also adopted the terminology of section 3031 (Mining Potential Classification System) of the "BLM Manual" to describe mineral potential more accurately.

14 It is the intent of the National Park Service that only the areas shown in the resource utilization subzone be open to consideration for mineral leasing within the NRA.

15 Unit 24 on the Management Zoning map is located between the BLM Mount Wilson Wilderness Study Unit (WSA 2-001A) and U.S. Highway 93 in Arizona. This unit is approximately 10 miles long but only averages 1½ miles wide, with one area being only ¼ mile wide. Three dirt roads to old mine sites entering the area total approximately 6 miles. Numerous flood control dikes protect highway 93 and approximately 3½ miles of old highway 95 (now abandoned but still open to public use) that loops into unit 24. Mining in this unit has occurred as recently as the late 1950s, and it is still an area of mineral interest. There are a number of short spur roads in the vicinity of the old mining activity and numerous articles of trash, such as junked cars, bedsprings, cans, and other items.

Because the area still shows so much disturbance from the past, it does not meet wilderness criteria. Although the most recent recommendation from BLM for the adjacent Mount Wilson WSA is for wilderness status, unit 24 would not be suitable for wilderness. Also because of the number of roads and other disturbances, such as flood control dikes and mining scars, the area would best be managed as a resource utilization unit rather than for natural area values. If mining is to occur in this unit, visual intrusion from highway 93 and other resource values that may be present will be protected through stipulation. These stipulations will also take into account the adjacent BLM wilderness areas.

16 The acreage figure on the map in the draft EIS has been revised in the final EIS.

17 Each of the lands within the recreation area has undergone a rigorous zoning process. During that process certain management zoning criteria were developed. These criteria are directly linked to the NRA's enabling legislation and were used in placing all lands in the appropriate management zones. The logic behind what is an acceptable land use in each of the different management zones is discussed in the text and tables of the section on management zoning in volume 1.

- 17** The enabling legislation from the area directs the National Park Service to administer the area ". . . for the general purposes of public recreation, benefit, and use in a manner that will preserve, develop, and enhance the recreation potential. . . ." The Park Service has enhanced the recreation potential of the area primarily in the development zone. This is the main zone in which the majority of visitors make contact with and gain access to the NRA. As such the amount of development and environmental manipulation necessary in this zone would not be acceptable in other areas of the NRA. Although much development for public access is permitted in this zone, efforts are still made to visually screen it from public view. Sometimes this is not always possible, as is the case with the two examples cited.
- 18** Management access must be provided to the Shivwits Plateau so it can be managed in the manner set by Congress in the enabling legislation and the guidelines set by the National Park Service, whether it be as a natural zone, a special use zone, or a development zone. This isolated area is susceptible to unwanted uses such as vandalism to historic structures and archeological sites, poaching of animals, and other activities.
- An airstrip is proposed to provide for proper supervision and delivery of adequate supplies in an economical method and timely manner. The proposed strip will be available for use only by the NPS airplane (a single engine with STOL equipment) and will not be large enough to allow larger twin-engine planes to land. To minimize the number of these flights, the superintendent will review each trip to determine the necessity and efficiency of aircraft use consistent with park goals. If the airplane is not the most efficient method of accomplishing the purpose of a trip, alternative access means will be used. We do not foresee the use of this airstrip by virtually any aircraft other than NPS planes. As we mentioned earlier, the flight pattern to and from the Shivwits Plateau for administrative purposes does not approach the Grand Canyon.
- We believe that adequate consideration has been given to the potential impacts to be generated from mineral exploration, particularly on the Shivwits Plateau, and that these impacts cannot be satisfactorily mitigated. See the Nevada BLM response 5, and Arizona BLM response 3.

COMMENTS

RESPONSES

Page 199: It would appear that the mineral assessment prepared for the Lake Mead National Recreation Area (O'Brien, 1982) was only a literature search. There is no geologist or mining engineer identified on the List of Preparers (page 414) for the management plan and EIS. There appears to have been no physical examination of the NRA for mineral deposits. The U.S. Geological Survey, Arizona Department of Mineral Resources, Arizona State Geologist, and Santa Fe Minerals (which has extensive mineral estate holdings in the NRA) should also have been consulted to determine if any additional information exists regarding the mineral resources. The Arizona Bureau of Geology and Mineral Technology identifies 8 metallic mineral districts within the Lake Mead National Recreation Area. The Bureau of Land Management has Geology-Energy-Minerals (GEM) Reports available on Wilderness Study Areas immediately adjacent to the NRA. These reports classify the mineral potential of the areas adjacent to these WSAs.

Page 200: There are no discussions in the minerals section of the 20 patented mining claims. The discussion of metallic minerals should include the 7 prospecting permit applications for base metals in Arizona, and the discussion of energy minerals should include the 11 pending applications for uranium. The fact that permit and lease applications have been received indicates that the minerals industry acknowledges a greater mineral potential for the area than is depicted by the EIS.

The discussions indicate that "most of these geologic features (breccia pipes) have been explored." The exploration for breccia pipes continues in areas adjacent to the NRA. Pending prospecting permit applications are an indication of this continued interest. Further exploration is needed to delineate future mineral deposits.

Page 201: The pending permit and lease applications should be identified on this map of the NRA. These include the 18 applications in Arizona in the Willow Beach zone, Grand Wash zone, Temple zone, and Shivwits Plateau zone.

Page 203: The EIS indicates that "uranium is only suspected as a companion mineral with the copper" in breccia pipes in the Shivwits Plateau area. In many of the breccia pipes to the immediate north of the area, the uranium is not a companion mineral but is the primary mineralization. It could be assumed that this is also the case for those unexplored breccia pipes in the subject area. The inferred reserve estimates (250 tons) by the USGS for this area may be somewhat outdated. The statements regarding uranium potential should be revised to indicate that "conditions exist that are highly favorable to uranium deposition. Only exploration by drilling can discern its actual presence or absence."

19 Refer to Nevada BLM response 2.

20 Refer to Nevada BLM responses 7, 8, 15, and 27.

21 The status of pending lease and permit applications changes too rapidly to report in this document. The location of applications has no bearing on management zoning decisions as discussed in Nevada BLM response 9. Those located in areas outside the final resource utilization subzone will be rejected while those inside will be processed on a case-by-case basis.

22 The statements regarding the relation of uranium and copper in breccia pipe mineralogy have been corrected. The terminology used to describe mineral potential has been changed to conform with section 3031 of the "BLM Manual." As such, NPS recognizes the high potential for uranium deposits within and adjacent to the NRA. See also Nevada BLM responses 7, 14, 15, and 21.

COMMENTS

RESPONSES

Pages 207-210: Discussions of individual wilderness study units within the NRA should identify those adjacent BLM Wilderness Study Areas. Unit 4 is adjacent to the Black Mtn. North WSA (2-009), Unit 5 is adjacent to the Mt. Davis (2-021) and Mockingbird (2-008) WSAs, Unit 7 is adjacent to the Van Deeman WSA (2-007), Unit 13 is adjacent to the Mt. Wilson WSA (2-001A), and Unit 28 is adjacent to the Grapevine Wash WSA (2-014). Unit 36 is adjacent to the designated Mt. Logan Wilderness Area (Arizona Wilderness Act of 1984).

Page 217: There are no discussions of peregrine falcon habitat in the NRA. The Black Mountains, which are adjacent to the NRA, have known peregrine falcon habitat.

Page 221: The gila monster is not a listed species by the State of Arizona but is a Federal candidate species.

Pages 233-237: The EIS discusses those "significant natural features" which were considered for protection in the management plan. These features are identified on the map on page 237. This map does not correspond to the Proposed Action map on page 21, which depicts significantly larger areas of mineral restrictions.

The Significant Natural Features map (page 237) does not accurately depict all known bighorn sheep habitat, especially in the Mt. Davis area.

Page 289: The EIS should discuss the impact to wildlife from the increased visitation to springs by recreation users.

Pages 294-296: The discussion of impacts to mineral leasing should clearly indicate that the Proposed Action represents an 89% reduction in the area available to mineral leasing and exploration. Breccia pipe uranium deposits are presently the most economic uranium deposits in the United States. The EIS indicates that it is unlikely these breccia pipes would be economically feasible to mine for many years. This conclusion does not recognize those activities at the Hacks Canyon, Pigeon, North Kanab, and Tusayan or Canyon mines in the area.

Page 296: Some 109,500 acres of potential wilderness lands are identified as impacted by the Proposed Action. This is not consistent with the acreages presented on page 299 (Conclusion).

Page 301: This page includes 3 paragraphs and 23 lines on the potential impacts caused by mineral activities on fewer than 300 acres in the NRA. MPS proposed activities on some 500 acres are discussed in 3 lines for essentially the same type of impact.

23 These changes have been incorporated in the document.

24 Additional information on the peregrine falcon has been added to the document.

25 This correction has been made in the document.

26 The significant natural features zones of these maps correspond. The area of mineral restriction is larger on the Management Zoning map because it encompasses several zones. The map also affects all known bighorn sheep habitat in the NRA known to the National Park Service.

27 These impacts are discussed under the topic, "Impact on Desert Spring Ecological Communities."

28 The text has been changed to clearly indicate that the proposed action represents an 87 percent reduction in the area available to mineral leasing consideration, as you requested.

29 The economic costs of mining in the Shivwits area would include transportation of ore to the Blanding mill, 100 miles each way over unpaved roads in addition to 200 miles of paved road. Sources of utilities are not readily available, nor is a water supply. These would significantly increase the cost of mining deposits in this area.

30 This correction has been made in the document.

31 Since the same type of impact was being discussed, discussions have been combined.

COMMENTS

RESPONSES

Page 302: The short term use for mineral exploration or development will not seriously nor significantly affect the long term recreational benefits from the Shiwits Plateau. With present day technology, most mining impacts can be mitigated to an acceptable level within 5 years of cessation of mining. Uranium and copper/gold/silver mining occurred in the Grand Canyon National Park at the Orphan Mine for over 50 years without significantly affecting the resources and administration of the Park.

Page 303: Statements on this page indicate that soil will be destroyed or lost from exploration or development activities. The soil structure or character may change and productivity may be reduced, but soil is not destroyed or lost. The proper handling of soil can eliminate or mitigate the impacts on the soil resource.

The third paragraph on page 303 inaccurately depicts the impacts of a mine in this area. Only large open pit, metallic mineral mines have the potential to impact "several hundred acres of vegetation." The Orphan Mine at the Grand Canyon occupied about 4 acres of surface and operated for more than 50 years. The recently proposed Tusayan or Canyon mine will impact less than 20 acres.

The last paragraph on page 303 indicates that the wilderness values of the NRA would be lost by any exploration or mining activities on potential wilderness area lands. This appears to be unfounded since areas of the NRA that currently meet wilderness criteria contain two past producing mines and a mining company railroad.

Page 309: The significance of impacts caused by uranium mining on specific springs in the Shiwits Plateau area would not be known until a groundwater study was completed in a site specific area. Water analyses of a specific spring would be required to indicate if water had passed through a breccia pipe. Current information is inconclusive regarding the relationship of any specific spring's productivity and water quality to any breccia pipe.

Also on page 309, a statement is made regarding the contamination of groundwater from "post-operational mine water, leachate from ore stockpiles, accidental spills, and discharges from fuel tanks." These impacts can be mitigated through stipulations (e.g., ore can be stockpiled on impervious material).

32 The Park Service must protect short-term and long-term recreational benefits, as well as other resource values. The Park Service is concerned with impacts occurring during mining and after cessation of activities. The Park Service does not necessarily agree with the conclusion that most impacts can be mitigated within five years, nor necessarily with statements about the operation of the Orphan Mine.

33 Statements regarding destruction of soils have been revised in the final EIS.

34 The statement has been revised; however, the Pidgeon Uranium Mine occupies approximately 62 acres, including access roads and utility corridors.

35 The language states that these values could be lost and this is a definite possibility.

36 The impact discussion referred to has been revised.

37 Some of these impacts might possibly be mitigated; however, the potential for these impacts still occurs as discussed in this section. The impacts of accidents are not possible to mitigate in advance.

COMMENTS

RESPONSES

Page 310: The "development of 10 known breccia pipes" under the no-action alternative is not consistent with other information provided in the draft management plan (page 294). Two breccia pipes are located on an existing mining claim and an existing lease, two pipes are located in the Grand Canyon National Park, and one pipe has been determined to not contain commercial grade uranium. This leaves 5 breccia pipes that would potentially be developed.

38

The total acreage impacted by development of a breccia pipe should also be reduced. Mining a breccia pipe does not require 40 to 50 acres of surface. The Orphan Mine in the Grand Canyon only encompasses 4 acres, and the recently proposed Tusayan or Canyon mine will impact less than 20 acres.

It is hoped these comments will be considered in the development of the final General Management Plan for the Lake Mead National Recreation Area. The exclusion of mineral leasing from some 90% of the NRA should be reconsidered prior to preparation of the Minerals Management Plan. Management zoning should be used to define various areas, with stipulations necessary to mitigate the impacts of mineral exploration and development.

Please contact this office for clarification of any of our concerns or comments. We look forward to providing input on development of the Minerals Management Plan and continued coordination on other land management issues.



38 Refer to Nevada BLM response 31.

COMMENTS

RESPONSES



United States Department of the Interior

BUREAU OF RECLAMATION
LOWER COLORADO REGIONAL OFFICE
P.O. BOX 427
BOULDER CITY, NEVADA 89005

IN REPLY
REFER TO: LC-159
120.1

AUG 2 1985

Memorandum

To: Mr. Jerry D. Wagers, Superintendent, Lake Mead National
Recreation Area, National Park Service, 601 Nevada,
Boulder City, Nevada 89005

JRW

From: Acting Regional Director

Subject: Draft Environmental Impact Statement (EIS) and Draft General
Management Plan (GMP) for the Lake Mead National Recreation Area,
Arizona-Nevada

We have reviewed the subject documents and have the following comments:

1

1 These changes have been made at the appropriate places in the document.

On page xii of the GMP (Proposed Action Summary), it states that the plan's development costs would be \$35,269,500 for concessioners, and \$34,762,500 for the National Park Service (NPS). A statement concerning how this financing would be effected would be helpful. Would the NPS obligation be funded by the Congress? How would the concessioners be induced to pay their share of the implementation costs? If all costs for the GMP are to be borne by the U.S. taxpayer, this should be brought out in the Summary.

The No-Action Alternative discussion in the GMP (page xiv) appears to be misleading as it implies that the existing recreation area management plan is "piecemeal" and done on a case-by-case basis. More discussion is needed concerning the existing management strategy. On page 47, reference is made to a comprehensive Land Acquisition Plan which was prepared and released to the public in July 1984.

On page 204 of the draft EIS, mention is made of a wilderness plan that will be prepared following completion of the GMP. When this wilderness plan is available, we would like to receive a copy for review.

Thank you for the opportunity to review the documents.

Robert A. B. Campbell

COMMENTS

RESPONSES



U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

POST OFFICE BOX 1876
ALBUQUERQUE, NEW MEXICO 87103

JUL 26 1985

Memorandum

To: Regional Director, Western Region, National Park Service,
San Francisco, California

From: Regional Director, Region 2 (SE)

Subject: Section 7 Consultation - Draft General Management Plan and
Alternatives (DEIS 85-29), Lake Mead National Recreation Area
(NRA)

This responds to your request of June 4, 1985, for informal Section 7 consultation on the effects of the proposed Lake Mead National Recreation Area General Management Plan (GMP) upon threatened and endangered species. Even though your letter indicated you were requesting a formal Section 7 consultation, a June 11, 1985, telephone conversation with Mr. Francis Jacot indicates the request is for an informal consultation. We have reviewed your documents and have the following comments.

1 The Endangered Species Act requires Federal agencies to determine if their proposed actions may affect listed species. If the agency determines that an action will or may affect a listed species, formal Section 7 consultation must be initiated. Formal consultation would be required even if the effects were judged to be insignificant or beneficial. It is a Federal agency's responsibility to prepare an assessment of their proposed action sufficient to make this determination of "will or may affect". The discussion of listed species in the subject document is inadequate to make a determination of "may affect."

For example, the GMP does not address the possible effects of increased visitation or the construction of new access at Cottonwood East upon listed species in the National Recreation Area. Before a determination of no effect can be made, any impacts and the specific measures to be used to prevent or eliminate these impacts should be addressed. If an effect still occurs, formal Section 7 consultation would be necessary.

1 Changes have been made in the affected environment and impact sections to better explain the nature of the impacts related to threatened or endangered species. The data on species listed in table 19 is the only information currently available. That is why special studies of the species that might be affected are proposed. The conclusion with current information is that there will not be an impact on any of the species listed in table 19. But, because of the remote probability of an effect on these species, special studies will be implemented. Once information from the special studies is available and more specific development proposals are formulated for Fire Mountain and improved access points in the Cottonwood East and Detrital Bay areas, a more precise determination of effects can be made. If impacts on threatened or endangered species cannot be mitigated, then the new areas will not be developed.

COMMENTS

RESPONSES

2 We recommend the study plans for the bald eagle suggested on page 31 be developed. We also recommend that discussions with the Arizona Game and Fish Department, the Colorado Fishes Recovery Team, and our agency concerning rearing in bottical chub rearing cages be initiated as soon as possible to facilitate determination of effect on that species.

3 We also wish to point out that since the peregrine falcon occurs as a breeding species on the NRA, effects on this species should be addressed.

Thank you for the opportunity to comment on this document. If you have questions or require further information, please contact our Phoenix Ecological Services Field Office (FIS 261-2493).

cc: Field Supervisor, Ecological Services, Phoenix, AZ
Ecological Services, Reno, NV
Regional Director (SE), Region 1

2 These study plans will be developed with the appropriate state and federal agencies, as you suggested. Prior to implementation of any development plans, the agencies mentioned will be consulted with and mitigation developed for the species of concern. If impacts cannot be mitigated, then the new areas will not be developed.

3 Management of the peregrine falcon will be coordinated with the appropriate state department of wildlife and the United States Fish and Wildlife Service. Falcons are known to breed in sites near heavily populated areas (even in large cities). In fact, the only known breeding pair within the recreation area in 1985 nested in a cliff site above one of the most heavily used visitor areas. The pair seemed to be unaffected by the heavy public use of the area. The disclosure of falcon nesting areas is not thought to be in the best interest of peregrine falcons, but management steps will be taken to protect any nesting areas discovered from close public contact. As with all threatened or endangered species, consultations will be made with the appropriate state and federal agencies and mitigation developed prior to implementation of plans for new areas. If impacts cannot be mitigated, then the new areas will not be developed.

COMMENTS

RESPONSES



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Ecological Services
2934 W. Fairmount Avenue
Phoenix, Arizona 85017

Memorandum

July 11, 1985

To: Superintendent, Lake Mead National Recreation Area, National Park Service, Boulder City, NV

From: Field Supervisor

Subject: DEIS and Draft General Management Plan and alternatives, Lake Mead National Recreation Area (DEIS 85-29)

We have reviewed the subject documents and have the following comments.

The documents adequately describe the proposed action and alternatives and addresses some of the major impacts. However, impacts to wildlife and important wildlife habitats have not been adequately addressed in this document.

1 We are concerned about the proposed channelization of washes that enter the lakes through developed recreation areas. Even though these desert wash systems have been impacted by human use, they are very important to wildlife. The use of concrete channels to carry flash flood waters to the lakes may be an effective method of flood control, but does nothing to enhance the natural values of the area. We believe that more attention should be given to the losses of this habitat type and possible enhancement and/or restoration efforts. We are also concerned about the attitude expressed in the documents regarding desert springs. Regardless of the proximity or availability of the lake as a water source, these spring areas are as important to many animals as they were historically. Further, as human use increases around the lakeshore, these springs will become even more important.

2 Although grazing is mentioned on page 32 as a use of the NRA, there is no discussion of grazing impacts on other plans to be implemented other than the 1 paragraph on page 32. Why isn't the area that is under grazing leases but not suitable for grazing removed from the leases? What is the effect of grazing on bighorn sheep in the NRA?

3 We believe that the endangered species section should also address the peregrine falcon, an endangered species known to breed in the NRA. The peregrine tends to hunt in riparian areas that could be affected by increased visitor use.

Thank you for the opportunity to review this document and provide comments to you.

Gilbert D. Metz

cc: Director, Arizona Game and Fish Department, Phoenix, AZ
Regional Director, FWS, Albuquerque, NM (AER)

1 The use of concrete channels to protect public life and property far outweighs the slight impacts on wildlife. The channels used to control flood waters will cover less than 2 1/2 miles of the hundreds of miles of wash bottom within the recreation area. Channelization of the identified development areas at the end of the washes will have minimal impact on wildlife species.

As stated in the document, we recognize springs as important habitat but not as critical to many species of wildlife when water is available from the lake a short distance away. Only two selected springs, which have been altered in the past and are no longer in a "natural" state, are being proposed for recreational improvement. Other spring communities in the recreation area will be managed for their importance to wildlife.

2 When original grazing allotment lines were drawn, there was no attempt to identify areas as suitable or unsuitable for grazing. Water availability is a limiting factor for the areas where cattle can graze, and all of the allotments within the recreation area have been identified as ephemeral range except those on the Shivwits Plateau. Two areas have been removed from grazing since 1980, where grazing was thought to have some impact on bighorn sheep. Distribution of cattle on grazing allotments is controlled primarily by water holes and terrain. Sheep grazing, which could have the biggest impact on bighorn sheep by transmission of disease, has been eliminated from the recreation area. Grazing, under present management plans, has shown no detrimental impacts to bighorn sheep populations.

3 Refer to USFWS, Albuquerque, response 3.

COMMENTS

RESPONSES



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street
San Francisco, Ca. 94105

Jerry D. Wagers, Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

AUG 2 1985

Dear Mr. Wagers:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) titled LAKE MEAD NATIONAL RECREATION AREA, DRAFT GENERAL MANAGEMENT PLAN, CLARK COUNTY, NEVADA and MOHAVE COUNTY, ARIZONA. We have the enclosed comments regarding this DEIS.

We have classified this DEIS as Category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of Rating Definitions and Follow-Up Action"). This DEIS is rated EC-2 because of water quality and wetlands concerns. The classification and date of EPA's comments will be published in the Federal Register in accordance with our public disclosure responsibilities under Section 309 of the Clean Air Act.

We appreciate the opportunity to review this DEIS. Please send three copies of the Final Environmental Impact Statement (FEIS) to this office at the same time it is officially filed with our Washington, D.C. office. If you have any questions, please contact Juli Jessen, Federal Activities Branch, at (415) 974-0257 or FTS 454-0257.

Sincerely yours,

Charles W. Murray, Jr.
Assistant Regional Administrator
for Policy and Management

Enclosure (3 pages)

COMMENTS

RESPONSES

Water Quality Comments

1. The DEIS does not address environmental impacts of construction activities such as building berms for flood protection, roads and boat docks. These activities have the potential to deteriorate water quality during construction and operation. The FEIS should discuss these impacts and outline mitigation measures.
 2. The section on impacts from the proposed action includes a lengthy discussion of water quality problems and health risks associated with human feces in swimming areas. The DEIS states (p. 280) that these conditions have nearly closed Boulder Beach and Katherine Swim Beach on several occasions. The document continues (p. 281), "...the proposed action contains several actions that would change shoreline visitation patterns...These actions could indirectly lead to greater increases in visitation than projected and could thus affect water quality and the related public health." Also on p. 281, the DEIS states, "Under the proposed action the existing conditions described above would likely get worse, because of the increasing visitation that is anticipated. Increased visitation along the shoreline would create pollution of shoreline water..." Yet the DEIS concludes on the same page that "Although visitation is expected to increase, the proposed action would not pose significant public health hazards from water pollution in the recreation area..."
- We do not believe that this conclusion is supported by the facts discussed in the DEIS. The DEIS should include plans to protect public health by reducing the amount of human waste entering the shoreline waters. Additional convenient public sanitation facilities could be included in the FEIS plans for beach improvement.
- In the section "Adverse Impacts That Could Not Be Avoided," (p. 302) the DEIS states, "Should water quality deteriorate below the level required by state standards, some swim beaches might have to be closed to use. There is a possibility that shoreline users would contract disease from contaminated water." EPA does not support implementation of any project which could cause violation of state water quality standards and could impact human health. The FEIS should include plans for adequate sanitation facilities to serve additional visitors and avoid contamination.

1. The "Derivation of the Impact Topics" section has been revised to explain why this impact was not considered to be significant: "Construction activities involving earth movement will not add measurably to siltation. The dry wash bottoms and alluvial slopes are either 1) dry and soil movement cannot affect the lake's water quality or 2) flooded very briefly during a flash flood that carries a full sediment load to the lake whether construction activity is in the flood path or not. Construction of marinas is done from the marina or barges, and siltation from anchor placement is not measurable compared to wind-induced wave action."
 2. After reviewing the proposed actions that will affect water quality and related public health, we do not feel that the impact discussion you cited accurately assesses the effects of these proposed actions. The statements regarding water quality and public health because of increased visitation are accurate. However, the proposed action discussed several mitigating measures that would minimize the impacts of increased visitation on water quality and public health. The revised impact discussion references these measures to include changing shoreline visitation patterns to reduce crowding, congestion, and resultant water quality/human health problems; implementing an improved water quality monitoring program; and improving the existing public sanitation and trash removal program.
- Although these mitigating measures will be taken, there is a remote chance that anticipated use at the swimming areas could degrade water quality and cause human health problems. In the "Adverse Impacts" section that you cited we are simply acknowledging the fact that this is a remote possibility at any swimming area on the lake. We are not advocating violation of state water quality standards but stating what would happen if the mitigating measures described did not work. We will close the area to protect public health, and this will have an adverse effect on users who enjoy or prefer the area.

COMMENTS

RESPONSES

Wetlands Comments (Clean Water Act, Section 404(b))

- 3 1. The discussion on page 213, paragraph 5, under Desert Shrub Complex, and on page 215, paragraph 6, under Aquatic Community Complex, identifies desert and stream riparian communities as occurring within Lake Mead National Recreation Area. However, with the exception of the larger riverine, spring, and desert wash complexes, these habitats are given only cursory discussion in the analysis of impacts under each alternative. Specifically, the FEIS should identify riparian communities along washes and streams that are likely to be impacted by structural flood protection. Development of flood control features along these washes and streams may be regulated under Section 404(b) of the Clean Water Act; these activities would have to comply with provisions for the regulation of dredged and fill material under the 404(b)(1) Guidelines (40 CFR 230).
- 4 2. Desert washes provide a source of gravel to Lake Mohave and Lake Mead, and the Muddy, Virgin, and Colorado Rivers. Some fish species may use these gravels in shallow coves near the mouths of washes for spawning. Recreation development and construction of structural flood control projects in washes may disrupt the recruitment of gravel to these inshore habitats; such has been the case in other portions of the lower Colorado River. The FEIS should identify habitats at the mouths of washes that are used, or have the potential to be used, by fishes for spawning. Special attention should be given to cove habitats that have the potential for spawning use by the federally endangered bonytail chub (*Gila elegans*) and candidate razorback sucker (*Xyrauchen texanus*). As an example of this concern, in 1983 spawning aggregations of razorback sucker were observed in Whipple Bay in Lake Havasu, another large reservoir.

3 The "Derivation of the Impact Topics" section explains that the riparian habitat along the Virgin River and Las Vegas Wash would not be affected by any GMP proposals and that only two springs are located where they might be affected. Those potential impacts are described in the draft EIS. Otherwise there are no development proposals that could affect riparian communities along washes and streams or springs. Lake Mead NRA is a desert environment and the proposed development is on dry washes and dry alluvial slopes. Bare unconsolidated soil predominates and vegetation is sparse.

4 Scientific information is not available on what areas around Lakes Mead and Mohave are used for spawning. Periodic observations at the coves where development is proposed have not revealed evidence of spawning by the bonytail chub or razorback sucker. Additionally, the impacts from structural flood control measures would not affect the recruitment of gravel to any significant degree. Most rocks, gravel, sand, and silt are transported during the larger flood events. Such sediment will still be transported to the lakes, whether in the existing dry washes or in man-made structures. Also, the value of spawning habitat is marginal in coves with developed areas because of existing activities around the shoreline and marinas.

The razorback sucker is more abundant in Lake Mohave, and they are known to spawn in gravelly shorelines. The areas they use seem to be gravelly shorelines that are developed by wave action and are not dependent on gravel recruitment from washes. None of the development proposals are in the areas where wave action creates gravelly shorelines.

Cottonwood East is identified as an area suitable for possible future development. Before any final decision is made on development of this area, consultation with the U.S. Fish and Wildlife Service concerning the endangered bonytail chub and the razorback sucker will take place. Development will only occur to the extent that any impacts to these species can be mitigated. If impacts cannot be mitigated, the new area will not be developed.

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION*

Environmental Impact of the ActionLO--Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EJ--Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact StatementCategory 1--Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment



BRUCE SABBITT, *Commissioner*
Commissioners: WINNINGS, Scottsdale, Chairman
 W. L. LYN, Monticomey, Flagstaff
 FRED S. PASKUS, Boulder, City
 FRANCES W. WERNER, Tucson

Director:
 BUD BRISTOW

Assistant Director, Services:
 ROGER J. GRUENEWALD

Assistant Director, Operations:
 DUANE L. SHROUTE

ARIZONA GAME & FISH DEPARTMENT

2222 West Genesee Road Phoenix, Arizona

Jerry D. Wagers, Superintendent
 Lake Mead National Recreation Area
 601 Nevada Highway
 Boulder City, Nevada 89005

Dear Mr. Wagers:

The Arizona Game and Fish Department has reviewed the April 1985 Draft Environmental Impact Statement (DEIS) prepared for the General Management Plan of the Lake Mead National Recreation Area (LMNRA).

Our Department agrees with the 10 issues and concerns displayed in the DEIS, however, we feel wildlife and wildlife habitat, a major issue involved in the management of the LMNRA, should have been included as a priority in the analysis of the General Management Plan.

The Department was unable to select a preferred alternative from those described in the DEIS, primarily because of the inability to compare and evaluate each of the alternative's effects and benefits to fish and wildlife resources.

Our review of the DEIS resulted in the identification of the following issues or problems:

- The DEIS fails to adequately and accurately identify impacts to wildlife species other than threatened and endangered species or bighorn sheep.
- Provisions for developing specific actions to improve habitat conditions should have received consideration within the General Management Plan.
- Provisions to replace structural habitat elements lost through salt cedar removal were omitted.
- Acreage figures depicting habitat loss, by vegetative type for proposed developments, were omitted.
- With the exception of flash flooding, the DEIS failed to adequately describe public safety impacts which may result from a 69% increase in visitor use.

COMMENTS

RESPONSES

Mr. Jerry D. Wagers

-2-

July 8, 1985

The Department's detailed comments in reference to the DEIS are included as an attachment to this letter.

We appreciate the opportunity to review the DEIS and to provide comments. We look forward to a continued cooperative working relationship between our agencies in the management of the fish and wildlife resources associated with the Lake Mead National Recreation Area.

Sincerely,



Bud Bristow
Director

BB:JEB:lea
Attachment

cc: State Clearinghouse, AZ 85-80-0020

Arizona Game and Fish Department
 Review of the
 April 1985 Draft General Management Plan
 Lake Mead National Recreation Area

General Comments

Impact Analysis

We believe the document is incomplete in its analysis of impacts to wildlife and public safety. Consistently throughout the document, mining activities are the only conflicting land use described in any detail as a potential adverse impact to natural features, threatened and endangered species, vegetation and desert bighorn sheep. Although the document commendably recognizes the potential significance of mining to wildlife, it does not describe in detail the potential impacts of other land use activities such as feral and domestic livestock grazing, utility corridors and highway rights-of-way. The impacts of increased visitor use are virtually ignored.

Increased visitor use may be one of the most significant factors adversely affecting wildlife within the LMNRA. A 69 percent increase in visitor use (6.5 million to 11 million annually) is expected to: increase disturbance in sensitive backcountry habitats (e.g. Springs, riparian habitats and bighorn sheep habitat); increase summertime shoreline use conflicts between bighorn sheep and recreationists; and increase consumptive use of a finite fishery resource.

Increased use within the LMNRA will include unauthorized as well as permitted use of backcountry areas. Impacts from off road vehicle use and increased visits to sensitive habitats can be anticipated. Such impacts may include degraded habitat conditions, and human disturbance of wildlife populations.

During summer months bighorn sheep and other wildlife species rely more significantly on the lakes as a water source. If water-based recreationists increase during these months as anticipated, adverse impacts will likely increase proportionately. Such impacts may include common disturbances, harassment by people and camp dogs, and poaching.

Increased visitor use within the LMNRA will likely increase the consumptive demand for the lakes' fisheries. Increasing the supply to meet this demand is not likely. The production of hatchery-reared fish for Lakes Mead and Mohave is presently at its maximum potential. Significant enhancement of the natural reproduction of warm-water species is likewise considered improbable. To increase natural production commensurate with the anticipated increase in demand through artificial lake fertilization would probably be cost prohibitive and politically sensitive. Improvement of aquatic habitat through development

COMMENTS

efforts is possible. However, since habitat condition is not the present limiting factor, the results of such efforts are not expected to compensate for a potential 69 percent increase in demand. Because of the reasons described above, regulation changes (e.g., bag and possession limits) may be necessary to partially compensate for increased consumptive use. Because of the limits on both natural and artificial production, a decrease in the value of a fishing experience is anticipated to result from the increase in visitor use at the LMNRA.

1 Additionally, we recommend that the DEIS address impacts to all wildlife species, rather than limiting its scope to threatened and endangered species and desert bighorn sheep.

2 The potential impacts to public safety are also inadequately addressed. Although the document adequately describes the impacts of flash flooding to public safety, the impacts of increased visitor use are not described. Various public safety statistics such as accidents/year, injuries/year and victim-related crimes/year should be extrapolated to project the increase in these events as a result of the increased visitor use. The boating accident rate within the LMNRA is significant. For example, in 1982 at least 46 boating accidents resulting in ten deaths were reported within the LMNRA. This total was 50 percent of the total boating deaths in the State of Arizona for that year. In 1982 visitor use was approximately 5.6 million, or roughly one-half of the projected annual visits within the life of the plan. We believe that each alternative should include an appropriate increase in law enforcement and emergency services to compensate for the increase in visitor use.

3 Another threat to public safety which should be addressed in the DEIS is that resulting from high winds. On occasion, excessive winds have resulted in significant property damage. For example, on July 11, 1984 high winds which accompanied a thunderstorm occurred at Callville Bay. These winds sunk or swamped 21 boats, and possibly 100 others suffered significant damage. At Echo Bay another 100-150 boats were damaged and two were sunk. Fortunately, no deaths or significant injuries occurred. The GMP should consider measures to minimize such impacts such as constructing breakwaters at marinas which are relatively unprotected from extreme winds. Such marinas may include Callville Bay, Echo Bay, Temple Bar, Las Vegas Wash, Lake Mead Marina, Cottonwood Cove and Katherine Landing.

Management Issues

4 We believe that the GMP inadequately describes the significance of land-based recreation (primarily hunting and trapping) within the LMNRA. Eighty-nine percent (or 14.9 million acres) of the area within the LMNRA boundaries is terrestrial. Significant recreational use occurs within this area. For example 31 percent of the bighorn sheep permits issued in Arizona during 1984 involved recreation area lands.

RESPONSES

1 To focus on the most significant impact topics, the issues, alternatives, and impacts were evaluated throughout the GMP planning process. A few impact topics, like threatened or endangered species, were raised by the public in the scoping process. However, all impact topics, including wildlife, were evaluated by the GMP planning team and narrowed to specific topics that include only those of significant environmental concern. Bighorn sheep and threatened or endangered species were felt to be of the most significant environmental concern and most likely to be affected.

2 A key factor in reducing impacts to public safety is to adequately plan for increased visitation. The plan accomplishes this by attempting to reduce visitor crowding and congestion by redesigning existing developed areas. The plan also attempts to reduce visitor crowding and congestion by redistributing visitor use to new areas. Impacts of the plan on visitor safety are evaluated under the "Impact on Visitor Crowding/Congestion" section.

As part of the ongoing planning for the recreation area, additional funding and staffing will be requested to adequately manage and protect resources, provide for visitor needs, and maintain facilities. Statistics relating to all aspects of visitor activities and to the status and condition of park facilities are collected, maintained, and utilized to identify and justify the need for additional staffing and funds.

Once the GMP is approved and implemented, we would continue to seek additional funding and staffing as required by major development proposals and increases in visitation.

3 It has been determined by the National Park Service that a concessioner must protect his marina without any financial assistance from the Park Service. Many of our concessioners have provided breakwaters in the last few years with varying success. We will assist the concessioner as much as possible in the design and experimentation of floating breakwaters so this problem may be corrected in the future. It has been determined that building a landfill breakwater because of water depths and water level fluctuations is not a feasible task.

4 The Lake Mead National Recreation Area encompasses approximately 1.49 million acres (not 14.9 million acres), of which 88 percent is terrestrial. Of the 6 million ± visitors per year, only 42 people were issued permits to hunt bighorn sheep during 1984 within the recreation area. Although there is much opportunity for land-based recreation, water is the major attraction for over 95 percent of the visitors.

COMMENTS

5 As stated in our previous responses during the early planning process, we recommend that management planning within the LMNRA include measures for improving fish and wildlife habitat. We do not believe that the fish and wildlife resources within the LMNRA have been maximized, as implied on page 30, paragraph two of the GMP. Opportunities still exist to improve habitat conditions and increase habitat availability within the recreation area. We, therefore, recommend that a fish and wildlife habitat management plan be developed to further enhance these resources.

We believe the GMP is somewhat remiss in planning for conflict resolution amongst users. For example, anticipating a low interest in mining based on past interest may not be reasonable. Future economic conditions, or new exploration and processing techniques may make mining desirable within the life of this plan. In this event denial of such interests may also become infeasible. Therefore, the DEIS should discuss in detail the impacts of mineral leasing, and the GMP should state mitigation preferences should such activities occur. The above also applies to other land uses such as feral and domestic livestock grazing, transportation rights-of-way and new hydroelectric needs such as pump-back storage reservoirs and transmission line corridors.

6 We are somewhat disappointed that neither alternative provides for increased access for two-wheel drive vehicles to unimproved shoreline. We realize that in many cases increased vehicle access is adverse to wildlife. However, considering the habitat-type surrounding much of Lakes Mead and Mohave, we believe that substantial opportunity exists to increase access for shoreline recreationists without creating significant adverse impacts to wildlife. Within Arizona there are only nine undeveloped points on Lakes Mead and Mohave, combined, which can be accessed at most times by two-wheel drive vehicles. The other 13 access points in Arizona have either some form of development or require a four-wheel drive vehicle.

7 As stated in previous responses during the early planning stages of the GMP, our Department is concerned with the plans to eradicate tamarisk within the LMNRA. If eradication efforts are immediately followed by revegetation efforts which employ native riparian species, our Department would be supportive of such plans. Without such revegetation efforts we oppose the eradication of tamarisk. Although a prolific exotic, tamarisk does provide habitat value to various wildlife species. Tamarisk provides a foraging guild and nest sites for birds, thermal-cover for many wildlife species, a source of invertebrate food for fish, and when inundated, escape cover for fish. Tamarisk also provides soil stabilization along shorelines, washes and the riverine portion of Lake Mohave in Black Canyon. We cannot endorse any plans to eradicate tamarisk for the purpose of increasing beach area.

RESPONSES

5 The production of hatchery-reared fish for Lakes Mead and Mohave is at its maximum potential, and significant enhancement of the natural reproduction of warm-water species is considered improbable. Bighorn sheep have been transplanted from the recreation area in the recent past at the recommendation of the two state game agencies (Arizona and Nevada) because of overpopulation. It is the policy of the National Park Service to improve habitat conditions only in instances where man has altered those conditions to the detriment of wildlife. Recommendations for habitat improvement are found in the Lake Mead National Recreation Area Resources Management Plan.

6 The rugged terrain prevalent on the Arizona side of the recreation area precludes the development of access points to the shoreline in many cases or through roadless areas still being considered for wilderness designation. The Lake Mead Backcountry Management Plan identifies approved roads within the recreation area. Maintaining roads for two-wheel-drive vehicles is also very expensive, and those roads that offer the best opportunity for shoreline recreation, as much as funds will allow, are maintained for two-wheel-drive access.

7 It is not proposed to eradicate tamarisk from the recreation area. Concerns with tamarisk are that 1) it is drying up some springs so that surface water is not available to wildlife, and 2) it is reducing available beach space for the recreationists. In light of these two concerns, tamarisk would only be removed from selected beach sites which have heavy tamarisk encroachment that eliminates preferred beach space and from springs that no longer have surface flow over much of the year due to evapotranspiration from thick stands of tamarisk. The National Park Service will consult with the Arizona Game and Fish Department on selected eradication sites.

As you requested, sentence 1, paragraph 2, page 364 from the draft EIS has been changed to read concerned with rather than interested in.

COMMENTS

RESPONSES

Additionally, we do not believe that tamarisk eradication can be justified as a water conservation measure. The question of how much water is actually saved by phreatophyte control has been debated almost since vegetation control was first suggested (Lacey, et. al., 1975 and Paylore, 1974). The amount of water transpired by the relatively few acres of tamarisk within the LMNRA is probably insignificant, particularly when compared to the evaporative losses which occur from 191,500 acres of surface water.

Furthermore, it is the policy of the Arizona Game and Fish Commission to:

"... (oppose) implementation and authorization of future vegetation eradication programs until such programs are evaluated by the sponsoring agencies, development agencies, and the Arizona Game and Fish Department for the purpose of determining the nature and extent of benefits to be derived therefrom, and the nature and extent of resource losses resulting from the projects, and until appropriate recommendations for mitigation of resource losses resulting from the implementation of a clearing project are incorporated in the project."

We believe that Sentence 1, Paragraph 2, Page 364 is misleading. Although this statement is true if interpreted literally, we believe it implies a favorable position toward tamarisk control. There is no way that our previous responses concerning this issue can be interpreted in this manner. All of our prior responses regarding tamarisk control have been in opposition. We request that this sentence be reworded to reflect our correct position.

COMMENTS BY PLANNING ZONE

Katherine Zone

We believe that developing an additional boating access site at Lower Mohave as described by the proposed action will likely result in increased congestion problems in an already crowded zone. Increased traffic and other people-related problems should be anticipated. A corresponding increase in law enforcement effort and public services should be provided. Because the proposed action describes a "day-use" facility, we do not anticipate significant adverse impacts to fish and wildlife as a result of this alternative. However, we wish to discourage future plans to add overnight facilities at this new site.

We question the need for additional fuel facilities within this zone. We do not believe that the need for such facilities outweigh their potential for adverse impacts to adequate resources and public safety.

8

The additional day use launch facility is needed to disperse traffic from the present launch facility and parking area, which also supports traffic for the restaurant, store, boathouse operation, ice house, etc. During summer weekends, especially three-day weekends, boaters have long, hot waits to launch or retrieve their boats. A second day use ramp would help alleviate the congestion and long waits now experienced. Increased public services and law enforcement are also being sought to improve services to visitors. Additional fuel facilities would again alleviate the long wait at the present gas dock during the summer weekends.

COMMENTS

9 Cottonwood Zone

We are not in favor of adding facilities at Cottonwood East. Increased use, either boating or shoreline, may further jeopardize the spawning habitat of bonytail chubs and razorback suckers which occur in this vicinity. Furthermore, Cottonwood East is one of the few access points on the lakes which have two-wheel drive access and are undeveloped. We believe there is a shortage of such sites for use by shoreline recreationists.

10 Willow Beach Zone

Because no other overnight facilities occur in the vicinity of Willow Beach, we encourage the LMNRA to retain existing, or add overnight facilities at Willow Beach. If the relocation of existing facilities or addition of new facilities are implemented, it is important to avoid locating them within bighorn sheep habitat. We do not anticipate any adverse impacts at any of the potential sites described in the DEIS.

11 Virgin/Temple Zone

Because of the increase in wintering bald eagle occurrence at the Detrital Bay and Bonelli Landing areas, we recommend that the plans to provide improvements in this area be carefully reevaluated. The proposed launch ramp, campground, parking lot, and restrooms could encourage long-term use by winter visitors similar to that at Pearce Ferry. Such increased long-term winter use may be adverse to the endangered bald eagle.

12 Shiwits Plateau Zone

Adding facilities at either South Cove or Pearce Ferry would increase recreational opportunity at Upper Lake Mead. However, this may be adverse to bighorn sheep. Much of the shoreline of the upper lake is bighorn sheep habitat. Increased visitor use in this zone is expected to result in increased incidences of bighorn disturbance and harassment. For these reasons we prefer the no action alternative within the Gregg Basin/Grand Wash Zone. Because of the fuel facilities proposed by Alternative B, we find this to be the least favorable alternative.

Although no significant adverse impacts to wildlife are anticipated as a result of the proposed developments within the Shiwits Zone, we question the demand for such facilities. Because of this site's location (about a three hour drive from pavement), it is doubtful that the proposed improvements are warranted.

RESPONSES

- 9 Cottonwood East is identified as an area suitable for possible future development. Before any final decision is made on the development of this area, consultation with the U.S. Fish and Wildlife Service concerning the endangered bonytail chub and the razorback sucker will take place. Development will only occur to the extent that any impacts to these species can be mitigated. If impacts cannot be mitigated, the areas will not be developed.
- 10 The Willow Beach development is within bighorn sheep habitat. Sheep still come down to water near the fish hatchery and the mouth of Jumbo Wash. The option to expand the overnight capacity of this area was investigated in the 1979 study for Willow Beach, entitled "Alternatives for Future Use." Relocation of existing facilities or addition of new facilities will be confined to sites mapped on the development concept plan for Willow Beach, thereby avoiding bighorn sheep habitat.
- 11 Detrital Bay and Bonelli Landing are identified as areas suitable for possible future development. Before any final decision is made on development of this area, consultation with the U.S. Fish and Wildlife Service concerning impacts to the endangered bald eagle will take place. Development will only occur to the extent that impacts to this species can be mitigated. If impacts cannot be mitigated, the areas will not be developed.
- 12 Wheeler Ridge and adjacent areas near South Cove and Pearce Ferry are indeed bighorn sheep habitat. The shoreline for much of this area is steep and rocky and does not lend itself to beach camping or beach use. Increased visitor use in this zone will result in increased conflicts between visitors and bighorn sheep similar to what is experienced around the Willow Beach developed area. Sheep herds adjacent to the Willow Beach developed area have adjusted to the recreating public and show no long-term population declines. The development of a paved launch ramp, restrooms, and a ranger/contact station at Pearce Ferry and provision of parking and restroom facilities at South Cove (proposed action) should not promote an increase in visitation that would have detrimental consequences to the bighorn sheep population.

COMMENTS

RESPONSES

SPECIFIC COMMENTS ON TEXT

Page 25; Table 5

13 How will grazing be precluded in areas where it is not a permitted activity? If fencing is really to be considered over such an extensive area, we would appreciate the opportunity to coordinate regarding fence specifications and locations to avoid adverse impact to wildlife.

Page 30; Paragraph 2; Sentence 2

14 Mule deer occur in at least low densities within all habitat types throughout the LMNRA, not just on the Shivwits Plateau as implied.

Page 30; Paragraph 4; Sentence 2

15 We are unaware of any ongoing study of bighorn sheep ecology and their competition with burros within the LMNRA. We would appreciate learning the details of such a study and its results.

Page 30; Paragraph 4; Sentence 3

6 It is doubtful that puncture vine or mosquitoes are significant causes of discomfort to visitors of the LMNRA.

424

Page 31; Paragraph 3; Sentence 1

17 The bonytail chub recovery team should read Colorado River Fishes Recovery Team.

Page 35, Resource Damage Map

18 Stop Sign Cove on Lake Mohave should be listed as a "lakeshore sanitation and trash problem area."

Page 46; Table 9

19 Additional existing flat-wake zones include: Stop Sign Cove, Little Stop Sign Cove, and Ski Cove on Lake Mohave; and South Cove and Pearce Ferry on Lake Mead.

Page 47; Paragraph 2; Sentence 2

20 Arizona Public Health Department should read Arizona Department of Health Services.

Page 57; Table 10

21 There are no existing Interpretive Trails and/or Waysides at Grapevine Canyon as indicated here.

13 Fencing of allotment lines is not anticipated for the control of trespass cattle. Management of water holes along with natural barriers will be used to control movement of cattle. Control of water holes may include fencing of the water. The National Park Service will coordinate with the Arizona Game and Fish Department regarding any fencing projects.

14 Mule deer may be transient through all habitat types in the recreation area but are not year-around residents like they are on the Shivwits Plateau.

15 Personnel of the Kingman Office of the Arizona Game and Fish Department have been kept informed of the bighorn sheep ecology study.

16 Mosquitoes are only a significant cause of discomfort during a few weeks in midsummer when hatches occur. Puncturevine is not a cause of significant discomfort.

17 The reference has been changed to read Colorado River Fishes Recovery Team as you requested.

18 Stop Sign Cove has a lakeshore sanitation and trash problem and has been included as such on the Resource Damage map.

19 These coves have been added to the table as you requested.

20 Reference to Arizona Public Health Department has been changed to Arizona Department of Health Services as you requested.

21 There is a parking lot just off the Christmas Tree Pass Road. A trail leads to the petroglyphs approximately 1/4 mile west. Wayside exhibits and interpretive signs are currently in place along this trail.

COMMENTS

RESPONSES

Page 213; Paragraph 5

22 Sidewinders generally prefer more xeric habitats. They are not considered a good representative of the desert riparian community. Mule deer and several raptor species are good representatives of this habitat-type.

22 The reference to sidewinders has been deleted because they would be found more often in more xeric habitats. Very few mule deer are found within the recreation area, except on Shivwits Plateau.

Page 214; Paragraph 2

23 Pinyon or single-leaf pine should read single-leaf pinyon. Bighorn sheep are not considered good representatives of the woodland vegetation complex.

23 We make no statement that bighorn sheep are considered a good representative of the woodland vegetation complex; however, bighorn sheep are found in this habitat within the recreation area and in many other mountain ranges containing this habitat throughout the Southwest.

Page 215; Paragraph 2

24 Arizona has not planted kokanee salmon into Lake Mohave, only the State of Nevada has. Money Cove should read Monkey Cove.

24 The reference to the state of Arizona has been deleted because the state was not involved in the planting of kokanee salmon. Monkey Cove is the correct spelling.

Page 216; Paragraph 5

25 Pack rat should read woodrat. Field mouse should read deer mouse. Red-shafted flicker should read common flicker.

25 These changes have been made in the document as you requested.

Page 221; Table 18

26 Peregrine falcon (Arizona Group 2, endangered equivalent), and osprey (Arizona Group 3, threatened equivalent) should be added to this table. Additionally, the Arizona Group 2 designation should be indicated for bonytail chub and the Arizona Group 3 designation should be indicated for the desert tortoise and razorback sucker.

26 Changes to reflect the latest Arizona Group designations have been made in the document.

Page 233; Paragraph 4

27 Important bighorn sheep lambing grounds within the Arizona portion of the LNMRA should be included in this list of significant natural features which deserve special protection. These include the lambing grounds at Mt. Davis, Malpais Mesa, Monkey Cove, Black Canyon (Triangle), Fortification Hill, Fortification Ridge, Canyon Ridge, Arch Mountain, and Wishing Well.

27 The lambing grounds identified are shown on the Significant Natural Features map; they are shown as environmental protection zones on the Management Zoning map.

Page 235; Sentence 2

28 The Arizona Department of Game and Fish should read Arizona Game and Fish Department.

28 The reference has been changed to read Arizona Game and Fish Department as you requested.

COMMENTS

RESPONSES

Page 282, Paragraph 1; Sentence 3

29 We do not agree that desert spring ecological communities are "not as critical as they once were because the reservoirs provide some comparable shoreline habitat." The shorelines of Lakes Mead and Mohave do not provide the same habitat-type nor value as natural desert springs. Because of the increased demand placed upon these communities by conflicting users, these springs are possibly more critical than ever.

Page 384; Paragraph 3; Last Sentence

30 The memorandum of understanding between the Arizona Game and Fish Department and the National Park Service was approved on June 7, 1984.

Cove Map

31 The GMP and DEIS consistently refer to specific coves by name. A map featuring these coves would be a helpful addition to the document.

We hope these comments prove helpful in developing the Final Environmental Impact Statement and in selecting a management alternative.

29 See response 1 to the USFWS, Phoenix, Arizona.

30 The correction to show the memorandum of understanding approved on June 7, 1984, has been made in the document.

31 A map showing all the names of the coves within the NRA is available at all visitor centers. It will not be reproduced in this document.

COMMENTS

RESPONSES



ARIZONA
OFFICE OF THE
GOVERNOR
BRUCE BABBITT

OFFICE OF
ECONOMIC PLANNING AND DEVELOPMENT

Beth S. Jarman, Ph.D., Executive Director • (602) 255-6371

DIS

MEMORANDUM

TO: National Park Service
FROM: Arizona State Clearinghouse
DATE: July 19, 1985
RE: National Park Service
Lake Mead Draft Environmental Impact Statement Vol. I & II
Environmental Consequences DEIS 85-29
SAI NO: AZ 85-80-0020

1 This memorandum is in response to the above project submitted to the Arizona State Clearinghouse for review.
The project has been reviewed pursuant to the Executive Order 12072 by certain Arizona State officials and Regional Councils of Government. The Standard Form 424 is attached along with any comments that were received for submission with the project. The comments are advisory.

Attachments
cc: Arizona State Clearinghouse
Applicant

1 Comment noted, no response required.

BOGNOFF

EXHIBIT A 67

OMB Approval No. 0548-0028

<p>FEDERAL ASSISTANCE</p> <p>1. TYPE OF SUBMISSION (Mark appropriate boxes)</p> <p><input type="checkbox"/> NOTICE OF INTENT (OPTIONAL)</p> <p><input type="checkbox"/> PREAPPLICATION</p> <p><input type="checkbox"/> APPLICATION</p>		<p>2. APPLICANT'S IDENTIFICATION NUMBER</p> <p>85-80-19</p>	<p>3. STATE IDENTIFICATION NUMBER</p> <p>15-1999</p>	
<p>4. LEGAL APPLICANT/RECIPIENT</p> <p>A. Applicant Name: National Park Service</p> <p>B. Organization Unit: Lake Mead National Recreation Area</p> <p>C. Street/P.O. Box: 601 Nevada Highway</p> <p>D. City: Boulder</p> <p>E. State: Nevada</p> <p>F. Contact Person (Name):</p> <p>G. Telephone (No.):</p>		<p>5. NUMBER</p> <p>19</p>	<p>6. DATE ASSIGNED BY STATE</p> <p>JUL 19 1985</p>	
<p>7. TITLE OF APPLICANT'S PROJECT (Use section IV of the form to describe a temporary suspension of the project)</p> <p>LAKE MEAD DRAFT ENVIRONMENTAL IMPACT STATEMENT</p> <p>VOLUME II-AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES DEIS 85-29</p>		<p>8. AREA OF PROJECT IMPACT (Name of state, county, parish, etc.)</p> <p>Mohave County, Arizona</p> <p>Clark County, Nevada</p>	<p>9. EMPLOYER IDENTIFICATION NUMBER (EIN)</p> <p>DOJ, NPS</p>	
<p>10. ESTIMATED NUMBER OF PERSONS BENEFITING</p> <p>00</p>		<p>11. TYPE OF ASSISTANCE</p> <p>1. Other</p> <p>2. Other</p> <p>3. Other</p> <p>4. Other</p> <p>5. Other</p> <p>6. Other</p> <p>7. Other</p> <p>8. Other</p> <p>9. Other</p> <p>10. Other</p> <p>11. Other</p> <p>12. Other</p> <p>13. Other</p> <p>14. Other</p> <p>15. Other</p> <p>16. Other</p> <p>17. Other</p> <p>18. Other</p> <p>19. Other</p> <p>20. Other</p> <p>21. Other</p> <p>22. Other</p> <p>23. Other</p> <p>24. Other</p> <p>25. Other</p> <p>26. Other</p> <p>27. Other</p> <p>28. Other</p> <p>29. Other</p> <p>30. Other</p> <p>31. Other</p> <p>32. Other</p> <p>33. Other</p> <p>34. Other</p> <p>35. Other</p> <p>36. Other</p> <p>37. Other</p> <p>38. Other</p> <p>39. Other</p> <p>40. Other</p> <p>41. Other</p> <p>42. Other</p> <p>43. Other</p> <p>44. Other</p> <p>45. Other</p> <p>46. Other</p> <p>47. Other</p> <p>48. Other</p> <p>49. Other</p> <p>50. Other</p>	<p>12. CONGRESSIONAL DISTRICTS OF APPLICANT</p> <p>00</p>	<p>13. TYPE OF APPLICATION</p> <p>1. Other</p> <p>2. Other</p> <p>3. Other</p> <p>4. Other</p> <p>5. Other</p> <p>6. Other</p> <p>7. Other</p> <p>8. Other</p> <p>9. Other</p> <p>10. Other</p> <p>11. Other</p> <p>12. Other</p> <p>13. Other</p> <p>14. Other</p> <p>15. Other</p> <p>16. Other</p> <p>17. Other</p> <p>18. Other</p> <p>19. Other</p> <p>20. Other</p> <p>21. Other</p> <p>22. Other</p> <p>23. Other</p> <p>24. Other</p> <p>25. Other</p> <p>26. Other</p> <p>27. Other</p> <p>28. Other</p> <p>29. Other</p> <p>30. Other</p> <p>31. Other</p> <p>32. Other</p> <p>33. Other</p> <p>34. Other</p> <p>35. Other</p> <p>36. Other</p> <p>37. Other</p> <p>38. Other</p> <p>39. Other</p> <p>40. Other</p> <p>41. Other</p> <p>42. Other</p> <p>43. Other</p> <p>44. Other</p> <p>45. Other</p> <p>46. Other</p> <p>47. Other</p> <p>48. Other</p> <p>49. Other</p> <p>50. Other</p>
<p>14. FEDERAL AGENCY TO RECEIVE REQUEST</p> <p>15. ORGANIZATIONAL UNIT (IF APPROPRIATE)</p> <p>16. ADDRESS</p> <p>SAME AS ABOVE</p>		<p>17. TYPE OF CHANGE (If N/A or No Further Change)</p> <p>1. Other</p> <p>2. Other</p> <p>3. Other</p> <p>4. Other</p> <p>5. Other</p> <p>6. Other</p> <p>7. Other</p> <p>8. Other</p> <p>9. Other</p> <p>10. Other</p> <p>11. Other</p> <p>12. Other</p> <p>13. Other</p> <p>14. Other</p> <p>15. Other</p> <p>16. Other</p> <p>17. Other</p> <p>18. Other</p> <p>19. Other</p> <p>20. Other</p> <p>21. Other</p> <p>22. Other</p> <p>23. Other</p> <p>24. Other</p> <p>25. Other</p> <p>26. Other</p> <p>27. Other</p> <p>28. Other</p> <p>29. Other</p> <p>30. Other</p> <p>31. Other</p> <p>32. Other</p> <p>33. Other</p> <p>34. Other</p> <p>35. Other</p> <p>36. Other</p> <p>37. Other</p> <p>38. Other</p> <p>39. Other</p> <p>40. Other</p> <p>41. Other</p> <p>42. Other</p> <p>43. Other</p> <p>44. Other</p> <p>45. Other</p> <p>46. Other</p> <p>47. Other</p> <p>48. Other</p> <p>49. Other</p> <p>50. Other</p>	<p>18. FEDERAL GRANT IDENTIFICATION NUMBER</p> <p>20. EXISTING FEDERAL GRANT IDENTIFICATION NUMBER</p> <p>21. REMARKS ADDED</p> <p>22. FEDERAL APPLICATION IDENTIFICATION NUMBER</p> <p>23. FEDERAL GRANT IDENTIFICATION</p>	
<p>19. ACTION TAKEN</p> <p><input type="checkbox"/> A. AWARDED</p> <p><input type="checkbox"/> B. RELICTED</p> <p><input type="checkbox"/> C. RETURNED FOR ASSIGNMENT</p> <p><input type="checkbox"/> D. RETURNED FOR REVISION</p> <p><input type="checkbox"/> E. RETURNED BY APPLICANT TO STATE</p> <p><input type="checkbox"/> F. DEFERRED</p> <p><input type="checkbox"/> G. WITHDRAWN</p>		<p>24. ACTION DATE</p> <p>19</p>	<p>25. CONTACT FOR ADDITIONAL INFORMATION (Name and telephone number)</p>	
<p>26. ACTION TAKEN</p> <p><input type="checkbox"/> A. AWARDED</p> <p><input type="checkbox"/> B. RELICTED</p> <p><input type="checkbox"/> C. RETURNED FOR ASSIGNMENT</p> <p><input type="checkbox"/> D. RETURNED FOR REVISION</p> <p><input type="checkbox"/> E. RETURNED BY APPLICANT TO STATE</p> <p><input type="checkbox"/> F. DEFERRED</p> <p><input type="checkbox"/> G. WITHDRAWN</p>		<p>27. ACTION DATE</p> <p>19</p>	<p>28. REMAINS ADDED</p> <p>29. REMAINS ADDED</p>	

STANDARD FORM 63, PAGE 1 (Rev. 4-81)

15 NOT USABLE

RESPONSES

COMMENTS

State Agency or Identifier (SAI) _____
 State AZ No 5-00-0020

Transportation
 Game & Fish
 Parks
 Tourism

SHPO
 Arizona State Parks Board
 1688 W. Adams, Rm. 109
 Phoenix, AZ 85007

FROM: Arizona State Clearinghouse
 1700 West Washington Street, Room 505
 Phoenix, Arizona 85007

This project is referred to you for review and comment. Please evaluate as to the following questions. After completion, return THIS FORM AND ONE XEROX COPY to the Clearinghouse no later than 17 WORKING DAYS from the date noted above. Please contact the Clearinghouse at 295-5004 if you need further information or additional time for review.

- No comment on this project Proposal is supported as written Comments as indicated *on back*
1. Is project consistent with your agency goals and objectives? Yes No Not Relative to this agency
 2. Does project contribute to statewide and/or areawide goals and objectives of which you are familiar? Yes No
 3. Is there overlap or duplication with other state agency or local responsibilities and/or goals and objectives? Yes No
 4. Will project have an adverse effect on existing programs with your agency or within project impact area? Yes No
 5. Does project violate any rules or regulations of your agency? Yes No
 6. Does project adequately address the intended effects on target population? Yes No
 7. Is project in accord with existing applicable laws, rules or regulations with which you are familiar? Yes No

Additional Comments (Use back of sheet, if necessary):
This draft document was not received until 13 June 1985

Reviewers Signature James J. Hoffman Jr AS/SHPO Date 6-14-85
 Title Archaeologist Telephone 255-4174



United States Department of the Interior

NATIONAL PARK SERVICE
WESTERN REGION
430 GOLDEN GATE AVENUE, BOX 34063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

H4217 (WR-RH)

July 1, 1985

Mr. Bob Fink
Denver Office
Advisory Council on Historic Preservation
730 Simms Street, Room 450
Golden, Colorado 80401

Dear Mr. Fink:

Enclosed are the comments of Arizona State Historic Preservation Officer
On the Lake Mead General Management Plan.

We have not received the Nevada State Historic Preservation Officer's
comments but will forward them on receipt.
Sincerely yours,

(Sgt) John S. Adams

John D. Cherry
Associate Regional Director
Resource Management and Planning

Enclosure

cc:
WASO-418 History Division, w/c enc.
DSC-TWE Mr. John Latcher, w/c enc.
LAMP Superintendent, w/c enc.



**ARIZONA
STATE
PARKS**

1688 WEST ADAMS STREET
PHOENIX, ARIZONA 85007
TELEPHONE 602-255-4174

BRUCE BABBITT
GOVERNOR

**STATE PARKS
BOARD MEMBERS**

GWEN ROBINSON
YUMA

REESE G. WOODLING
VICE CHAIRMAN
TUCSON

ELIZABETH A. DRAKE
SECRETARY
PHOENIX

DUANE MILLER
SEDONA

PRISCILLA ROBINSON
TUCSON

JAMES STALNAKER
FLAGSTAMP

ROBERT K. LANE
STATE LAND COMMISSIONER

MICHAEL A. RAINES
DIRECTOR

ROLAND H. SHARER
DEPUTY DIRECTOR

June 17, 1985

Mr. Howard H. Chapman
Regional Director, Western Region
National Park Service
450 Golden Gate Avenue
P.O. Box 36063
San Francisco, CA 94102

Re: Lake Mead NRA
- Draft EIS
DOI-NPS

Dear Mr. Chapman:

We have reviewed the draft Environmental Impact Statement for Lake Mead National Recreation Area. The report appears to consider adequately the cultural resources of the project area at this stage of investigation pursuant to 36 CFR, Part 800 of the Advisory Council's regulations ("Protection of Historic and Cultural Properties"). We look forward to continuing the consultation process regarding the cultural resources of this project.

We appreciate your cooperation with this office in complying with the historic preservation requirements for federal undertakings. If you have any questions, please contact me at (602) 255-4174.

Sincerely,

Teresa L. Hoffmann
Teresa L. Hoffmann
Archaeologist

for Donna J. Schober
State Historic Preservation Officer

TLH:mes

1 Comment noted, no response required.

COMMENTS

RESPONSES

STATE OF CALIFORNIA—THE RESOURCES AGENCY
COLORADO RIVER BOARD OF CALIFORNIA
107 SOUTH BROADWAY, ROOM 8103
LOS ANGELES, CALIFORNIA 90012
(213) 620-4480

JUL 12 1985

July 10, 198

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers:

We have reviewed the Draft Environmental Impact Statement Lake Mead National Recreation Area, dated April 1985, and offer the following comment for your consideration.

Volume II, page 232. We suggest that the first full paragraph be modified to read as follows:

"Another water quality problem common throughout the lower Colorado River is the increasing salinity levels. Present levels of salinity have been attributed to a number of sources, with about half coming from natural sources, irrigated agriculture contributing about 37%, reservoir evaporation causing 12%, out-of-basin exports responsible for 3%, and municipal and industrial uses causing 1%. Salinity increases result from two processes: salt loading and salt concentration. Salt loading increases the quantity of salt in a given amount of water, and salt concentration decreases the amount of diluting water for a given quantity of salt. Salt loading is seen in the discharge of mineral salts from natural and manmade sources to the river system. Salt concentration occurs through the consumptive use of water in the basin and in the diversion from the basin of water with a low salt concentration. High levels of salinity have adverse economic effects on agricultural, municipal and industrial water users in both the United States and The Republic of Mexico. A basinwide federal-state program for salinity control is underway."

Thank you for the opportunity to comment on the report.

Sincerely,



Vernon E. Valantine
Chief Engineer

1 This paragraph has been changed as suggested.

COMMENTS



Department of Comprehensive Planning
RICHARD B. HOLMES
DIRECTOR
JAMES L. LEVY
ASSISTANT DIRECTOR
JINTY BRIDGER BUILDING
SEVENTH FLOOR
VEGAS, NEVADA 89155
(702) 386-4181

July 2, 1985

Mr. Jerry D. Wagers, Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

DRAFT-ENVIRONMENTAL IMPACT STATEMENT
FOR THE LAKE MEAD RECREATION AREA

Dear Mr. Wagers:

The Clark County Department of Comprehensive Planning has reviewed the Draft Environmental Impact Statement (D-EIS) for the Lake Mead Recreation Area. Our concerns center on the water quality of Lake Mead and Lake Mohave and on the flash flood protection of visitors to the lakes. The alternative proposed by the D-EIS appears to provide the maximum protection for both concerns and yet allows the best possible access to recreation activities of Lakes Mead and Mohave.

We would also like to inform you that Clark County is currently actively seeking a consulting firm to provide a plan for flash flood protection for key areas in the County. We would like to stay in close contact with the National Park Service on this matter and possibly coordinate our efforts to provide flash flood protection. We have been in contact with Dennis Davis of your Denver office and he has briefed us on the progress of Flood Loss Reduction Associates in their effort to provide you with a flash flood protection system and emergency plan.

Sincerely,

ADVANCED PLANNING DIVISION

Ted Carraso

Ted Carraso
Planner II

TC:ii

COMMISSIONERS
Thella M. Donato, Chairman • Manuel J. Cortez, Vice-Chairman
Jay Bingham, Paul J. Christensen, Karen Hayes, William U. Peterson, Bruce L. Woodbury
Donald L. "Pat" Sherry, County Manager

RESPONSES

1 Comment noted, requested coordination is underway.

COMMENTS

RESPONSES

The Resort Bargain Of The World

June 13, 1985

Mr. Jerry D. Wagers
Superintendent
Lake Mead National
Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers:

1 First, I want to thank you for sending a copy of the draft environment impact statement for my review.

As you know, the tourism and convention industry in Clark County is expanding every year. It is our number one industry and the life blood of all of Nevada.

To offer our visitors upgraded facilities and service is our number one priority and our duty.

The tourism and convention business is highly competitive. Every area of the United States is offering the visitor and delegate more and more amenities. We must maintain our competitive edge if we are to keep and increase our market share.

Along with the millions of dollars we spend to advertise and promote Las Vegas and our outlying areas the Governor of Nevada has formed the Commission on Tourism who also spends millions of dollars on advertising and promoting "The Other Nevada".

So, with all the dollars being spent to influence the consumer on what the outlying areas have to offer, we can also expect them to stay one or two extra days in our area.

We highly endorse Plan "A" for the next twenty five years. This plan would keep pace with the 68% increase in visitors, offer more services from the concessioners, and safety for our visitors.

Thank you for your time.

Sincerely,



Frank C. Sain
Executive Director

1 Comment noted, no response required.



July 29, 1985

Mr. Jerry D. Wagers
 Superintendent
 Lake Mead National Recreation Area
 601 Nevada Highway
 Boulder City, Nevada 89005

FEDERAL EXPRESS

Re: Lake Mead National Recreation Area General Management Plan

Dear Mr. Wagers:

Energy Fuels Exploration Company ("Energy Fuels") appreciates the opportunity to submit its comments to the National Park Service ("NPS") on the Lake Mead NRA Draft General Management Plan ("DGMP"). As you know, Energy Fuels has participated at all stages in the planning process for the NRA in an attempt to provide the NPS with meaningful and factual information regarding the uranium mineral potential of the Shivwits Plateau and the ability of Energy Fuels and other mining companies to develop the uranium mineral resources which are either known or believed to exist within the NRA. Specifically, we met extensively with you and members of your staff in San Francisco on November 18, 1983 during which we made known to you the nature of the uranium deposits which we believe occur within the NRA as well as describing to you in some detail the de minimus nature of the surface impacts necessary to develop and mine these breccia pipe type deposits. In addition, we took two of your representatives, along with representatives from the Grand Canyon National Park, and the Glen Canyon NRA on a site visit of our Pigeon Mine to more concretely demonstrate the nature and quality of our other mining operations of these types of mineral occurrences.

At the outset, we would indicate our concurrence with the comments submitted by Patrick J. Garver of Parsons, Behle & Latimer on behalf of the Utah Mining Association. Specifically, Energy Fuels expressly incorporates those comments as its own by reference. In addition, we would reiterate our strong belief that any decision by the NPS to eliminate from mineral leasing the areas of the Shivwits Plateau within the NRA is arbitrary, without foundation in law or fact, and directly contrary to the

COMMENTS

Mr. Jerry D. Wagers
July 29, 1985
Page 2



1 language and intent of the enabling legislation for the NRA. There is more than ample evidence, both geologic and otherwise, that the Shivwits Plateau area of the NRA has very high uranium mineral potential -- evidence which the NPS has apparently chosen to ignore. Moreover, we submit that, with respect to uranium, the various references in the DGMP to mineral evaluations, mineral potential and expected adverse impacts of mineral development within this area of the NRA are not factually based and that the approach to the issue of mineral leasing within this area of the NRA demonstrates an unwillingness on the part of the NPS to adequately and thoroughly evaluate and consider the probably mineral potential of this area of the NRA. Because of this apparent unwillingness, the NPS has failed to make an adequate record upon which to base any decision to eliminate mineral leasing in this area of the NRA. Importantly, the failure of the DGMP to present anything more than unsupported conclusory statements with respect to mineral resources and activities within the NRA has served to deny the public of the meaningful opportunity to comment upon the proposed alternatives set forth in the DGMP with respect to mineral leasing alternatives.

2 Finally, the statement made on page 295 of the DGMP and attributable to Energy Fuels that "a price of nearly \$60/ pound would be necessary before these pipes would be economical to mine" should be changed as should any suggestion that prices well in excess of the current market are necessary in order for these types of uranium deposits to be economic. Our experience with these types of deposits suggests that a market price of \$15 per pound would be more than adequate to justify mining and development within the Shivwits Plateau.

We urge the NPS to reconsider its proposed decision to eliminate mineral leasing within the Shivwits Plateau and to manage the NRA consistent with the Congressional purposes set forth in the enabling legislation. As we have continually acknowledged, the NPS has a demonstrable duty to manage the NRA to protect its recreational purposes. However, the NPS can fulfill this duty without, in essence, ignoring its other responsibilities to permit mineral exploration and development in those areas where to do so is not incompatible with the NRA's primary purposes.

We appreciate this opportunity to convey our comments to you. As in the past, Energy Fuels stands ready to provide such additional information regarding the uranium mineral potential of this area to such members of your staff as the NPS feels may be helpful. We are also quite willing to demonstrate to you that the mining activities associated with the exploration and development of these types of mineral occurrences are only temporary in nature (rather than "irreversible" as stated in the DGMP) and that subsequent to mining those activities can be fully reclaimed, even to the degree of being substantially unnoticeable should such a standard be mandated.

Sincerely,

Brad L. Doores,
Vice President- Legal &
Regulatory Affairs

RESPONSES

1 Refer to Nevada BLM responses 2 and 9.

2 References to the "price of nearly \$60/pound would be necessary before these pipes would be economical to mine" have been removed from the final EIS.

COMMENTS

RESPONSES



PO BOX 20041 PHOENIX AZ 85035 TEL 481 1441

July 30, 1985

Jerry Wagers, Superintendent
National Park Service
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, NV 89005

Dear Superintendent Wagers:

The National Park Service should be applauded for their effort in compiling a comprehensive study that will surely be of tremendous value in providing guidelines encompassing the growth and management of the Lake Mead National Recreation Area. It is apparent that the content of the study was well researched providing a solid foundation from which alternatives and actions could be formulated.

In reiteration of Forever Resorts' views and comments presented to the National Park Service at the public meetings held in Boulder City, Las Vegas and Phoenix, for the purpose of discussing the content of the GENERAL MANAGEMENT PLAN AND ALTERNATIVES, this letter represents our formal recommendations regarding this matter.

In general, the PROPOSED ACTION alternatives addressed in the management plan does have merit. However, it appears that based on previous history of concessions located in the Lake Mead National Recreation Area that before new developed areas and accesses are implemented as suggested in the PROPOSED PLAN, that the existing concession developments be allowed to grow to their full potential.

In order to provide Cottonwood Cove and Callville Bay the latitude to develop to their full potential, it is requested the TABLE 1 SUMMARY OF PROPOSED DEVELOPMENTS be amended as outlined.

NOTE: Development Concept Plan and Summary of Proposed Developments attached.

To ensure your understanding of the proposed changes, Forever Resorts would like a meeting with you at your earliest convenience.

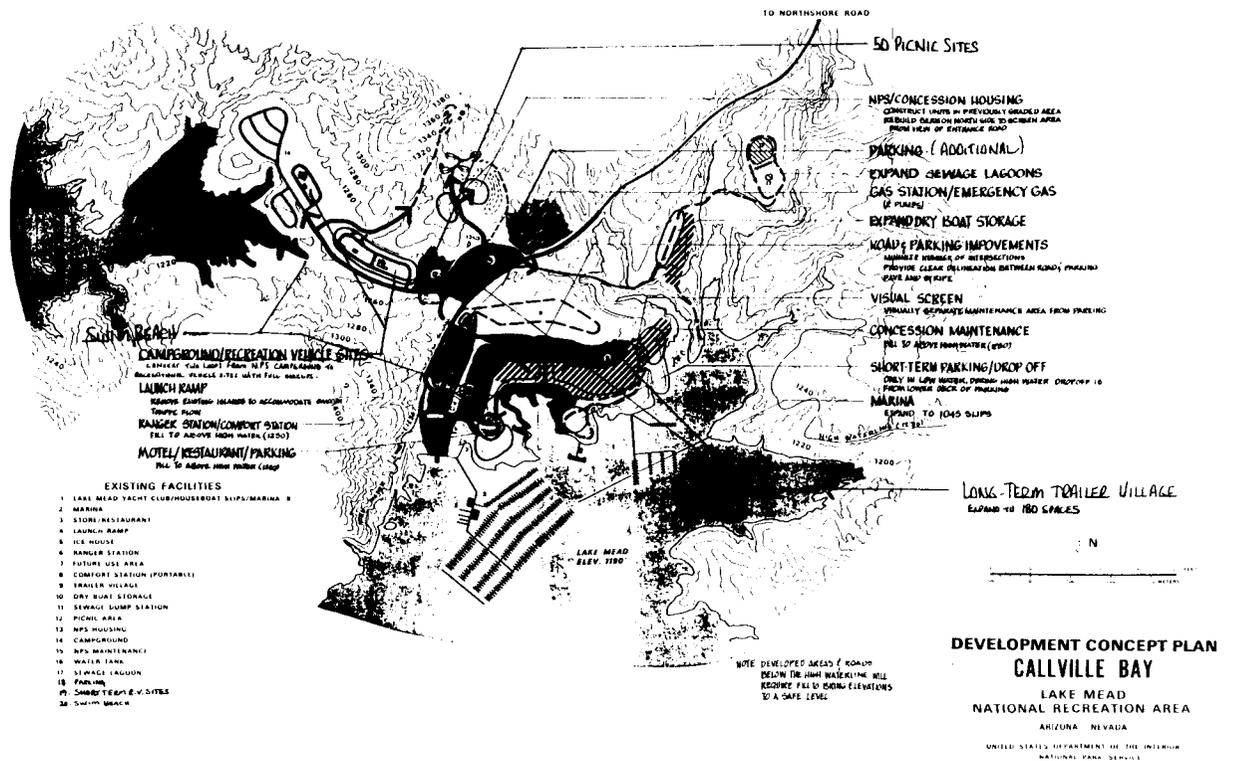
Yours very truly,

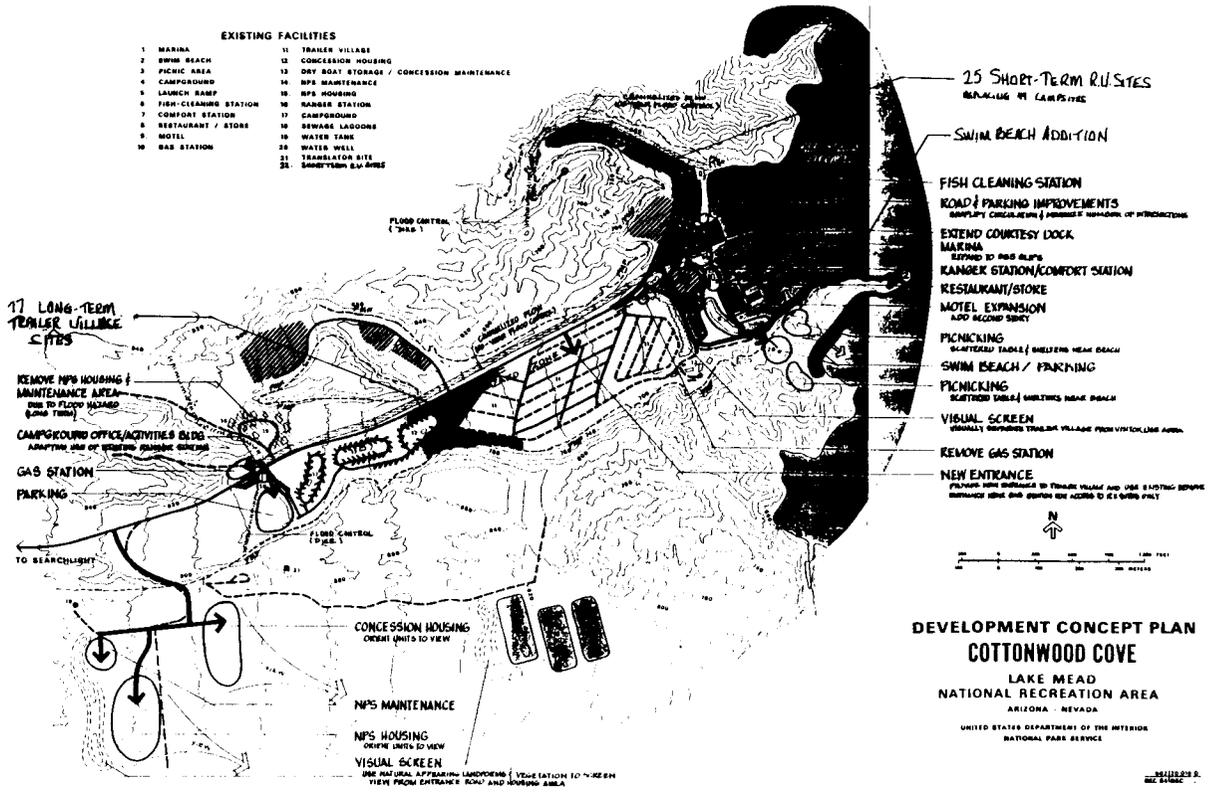
Tom Mace
Tom Mace

Senior Vice President - Resorts
CALVILLE BAY RESORT CALVILLE BAY RESORT
COTTONWOOD COVE RESORT SUMMIT, NEVADA
NEVADA

Encls:
ROCKY MOUNTAIN PARK CO
SOUTH PLACED
COLORADO

1 Comment noted, changes which do not conflict with plan objectives have been made.





RESPONSES

COMMENTS

Table 1: Summary of Proposed Developments (Proposed/Existing)

<u>Zone/Area</u>	<u>Parking Spaces</u>	<u>New Roads (Miles)</u>	<u>Improvements to Existing Roads (Miles)</u>	<u>Vacation Cabin Sites</u>	<u>Long-term Trailers</u>	<u>Short-term RV Sites</u>	<u>Campsites</u>
Cottonwood Cove	1,000/728	-0-	5/0	-0-	300/223	100/75	100/149
Callville Bay	1,800/1,700	-0-	3/0	-0-	180/94	60/6	90/150
	<u>Motel Units</u>	<u>Picnic Sites</u>	<u>Swim Beaches (Acres)</u>	<u>Launch Ramps (Lanes)</u>	<u>Marina Slips</u>	<u>Flood Mitigation Structures</u>	<u>Nonstructural Flood Mitigation</u>
Cottonwood Cove	48/24	30/4	7/5	6/6	535/237	Levees: 850', 650', 200' Channels: 4364', 1545' Bridges: 30', 30'	W, EV, EP, R
Callville Bay	100/0	50/6	5/0	13/13	1,200/300		



National Parks & Conservation Association

1701 Eighteenth Street, N.W. • Washington, D.C. 20009

RUSSELL D. BUTCHER
Regional Representative
SOUTHWEST & CALIFORNIA
Box 67
Cottonwood, AZ 86326
(602) 634-5758

(202) 265-2717

July 15, 1985

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

RE: Draft EIS/GMP
for Lake Mead NRA

Dear Jerry:

National Parks & Conservation Association appreciates the chance to comment on the Lake Mead National Recreation Area "Draft Environmental Impact Statement/General Management Plan & Alternatives," of April 1985.

We first want to express our compliments to you, to Bill Burke, and all the other NPS staff who worked to produce this two-volume document. It has clearly required an enormous amount of outstanding research, input, analysis, and writing.

On first encounter, the Proposed Action Alternative along with flood mitigation measures appeared to recommend an unusually large federal investment of federal monies--out of proportion to other National Park Service unit needs. Upon closer scrutiny, plus some field viewing, it appears that such a substantial investment may not be so far "out of line" after-all when considering such factors as: (1) the Plan's projection period covers at least the next quarter century, (2) visitation-growth projections for Lake Mead NRA are extraordinarily high, and (3) flood-mitigation measures to protect human life and property.

Regarding flood-mitigation measures, as required under Executive Order 11988, "Floodplain Management," this effort is a matter of common sense and is based upon some tragic experiences in the past. As the document says (p. 14, Vol. I) "flash-flood hazard is a critical issue at several of the developed areas." The basic question comes down to whether to provide flood mitigation for Probable Maximum or 100-year hazards. We agree with the document's Proposed Action to provide for mitigation of "adverse effects of a 100-year flood with structural means, and adverse effects of floods above the 100-year level...by using the warning

2-Lake Mead EIS/GMP, NPCA comments

system packages and relocation of facilities in some areas."

The Proposed Action Alternative would allow development at two new sites on the Arizona and Nevada shores of Lake Mohave "if increased visitation warranted it and if an economic feasibility study indicated that new concession facilities were warranted." Assuming that there would be no overall Lake Mohave carrying capacity problems resulting from development of these two sites, we believe they would be a reasonable response to visitation. These would be preferable sites to some that might instead be developed in more remote areas of the NRA, notably in the vicinity of the Grand Wash Cliffs and in the stretches where Grand Canyon opens into wilder parts of Lake Mead. The Fire Mountain site on the Nevada shore of Lake Mohave has the additional advantage of not being a flood-hazard area--thus, not requiring the added level of federal funding to provide flood-mitigation structures.

Concerning the Boulder Basin Zone, we favor plans to upgrade certain facilities, as indicated in the document, improve traffic circulation--including construction of a bicycle/pedestrian path "as a means to link the entire area (Memenway to Lake Mead marina)." The recently accomplished relocation of the dry boat storage out of the flood-hazard zone is a good move, but we urge that the storage area (now only surrounded by a chain-link fence) be visually screened, either with vegetation or some kind of attractive fence slatting, or both. Such screening would reduce the visual impact of the "clutter" of machinery and stored boats from the surrounding visitor-use area.

On the north shore of the Boulder Basin Zone is potentially one of the most attractive developed areas in the NRA: Callville Bay. This area, which has no flood hazard, is already enhanced by the new concession building. If the projected motel structure is built of the same architectural style, visitors will be greeted by a handsome array of buildings that seems to us appropriate and fitting to Callville Bay, specifically, and to Lake Mead NRA, in general. With other improvements, including traffic flow, this area will be a great improvement, aesthetically and practically, over conditions there in the past.

While commenting on the Northshore area, we should emphasize one of our Association's most serious concerns over the management and protection of Lake Mead NRA's natural ecosystem: the impairment and destruction of the desert terrain--its fragile soils and native vegetation--by off-road vehicles. As is evident from the air as well as from the ground, the Northshore of Boulder Basin is the most extremely impacted by off-landers (1) who seek to reach areas of the lakeshore not reachable on the legally approved roads, or (2) who get a thrill out of challenging their machines and driving "skills" by roaring all over the gently rolling country. On a recent visit to some of this area, it was clearly evident to us that the past several years' gains in the constant struggle to slow the rate of off-road degradation are now beginning to come unraveled, principally because of substantial cuts in ranger-patrol and land-rehabilitation programs of the NPS.

3--Lake Mead EIS/CRIP, NPCA comments

While we strongly favor the Proposed Action Alternative's plans for signing legally authorized roads, constructing several new authorized spur roads to help discourage indiscriminate driving to reach less congested shoreline sites, and increased public information and interpretation efforts, we emphatically urge that the most significant need on behalf of resource protection is to substantially increase both the NRA's law-enforcement capability and to restore resource-protection staffing so that places that are degraded by off-road driving can be "restored" promptly. It is an obvious fact that once a single CRV track scars a hillside, that track scar automatically provides an open invitation to other CRV drivers who are inclined to head off across the terrain. There is also a constant need to replace and repair signs and to rebuild fencing and other "barriers" to commonly used off-roading routes. Unless the NPS has these more substantial law enforcement/management capabilities, with steadily mounting visitation, the North-shore and similar problem areas will eventually become "sacrifice areas" that will simply have to be "written off." This is certainly not an acceptable response to the basic mandate to protect the natural resource values of Lake Mead NRA.

Regarding the additional Northshore Proposed Action Alternative plan for "improving roads to historically popular areas by providing roads that parallel the shore...where physically possible," we can see where this approach could conceivably reduce the tendency by some visitors to cut across the terrain to reach less congested shoreline sites, could possibly allow for the abandonment of some existing legally authorized spur roads to the lakeshore, and could result in enhanced ranger-patrol capability. We believe such shoreline road construction should be approached with caution, beginning perhaps with a single shoreline segment where the need and likelihood of success are greatest.

Concerning developed areas elsewhere around Lake Mead, we are especially ~~amazed~~ interested in the Gregg Basin/Grand Wash Zone. We approve of the Proposed Action Alternative's desire to maintain "the primitive, isolated flavor of these areas." But it was evident, on a visit there a few months ago, that there is some need for minimal improvements in the areas of sanitation and resource protection. We disagree, however, with the Proposed Action Alternative's plan to pave the road in this area. In our view, as soon as the access to Pearce Ferry is upgraded to this extent, visitation--and thus, the need to increase facilities substantially--will increase dramatically. One major way to retain the primitive atmosphere of this wild, remote area is to retain the gravel road. (Incidentally, should the "Actions" chart on page 181, under "Proposed Action" column, read: "Same as Alternative B," rather than "Same as no action?" We believe the latter is in error.)

Regarding the Proposed Action Alternative for mining and minerals management, we understand from our own discussions with both Santa Fe Minerals and the Bureau of Land Management that the company is receptive to exchanging out its subsurface interests (some 55,000 acres) within LMNRA. We hope that negotiations toward this end will continue and will ultimately prove successful. We feel this is an important minerals issue, both in the southern end of the NRA and up on the Shivwits Plateau. We believe it is especially

COMMENTS

4-Lake Mead EIS/GMP, NPCA comments

crucial to exchange out this company's mineral interests from the wild, scenic country on the Shivwits Plateau.

On the general matter of resource utilization zoning (the Proposed Resource Utilization Subzone), we believe the document's Proposed Action Alternative has struck a reasonable balance between the need to protect the NRA's natural environmental qualities and the possible development of mineral resources. The areas listed for the Environmental Protection Subzone (317,930 acres); Outstanding Natural Feature Subzone (51,580 acres); and Natural Environment Subzone (680,520 acres) appear to include most of what we believe to be the outstanding natural features and landscapes within the NRA, and compares favorably with the 148,970 acres proposed for Resource Utilization Subzone (which translates to about 10 percent of the NRA).

We have only two suggestions with regard to the Natural Zone: (1) there should be some statement in the GMP to the effect that periodic monitoring will be carried out to determine whether protective designations, such as Environmental Protection and Outstanding Natural Feature, are actually working, or whether increased protection is needed to protect those natural values. This would seem especially important for springs and other fragile riparian and wildlife habitats; and (2) we urge that all or at least some of the outer points of Kelly Point (proposed Natural Environment unit #59) deserve an enhanced protection designation--probably the same Environmental protection status as is proposed for Twin Point. Excellent candidates for higher protective designation are: Suicide Point; and then at least the large point off the west side of Kelly Point and the point off the east side of Kelly. This great "peninsula" of Kelly is one of the major scenic features in the western end of Grand Canyon, and as such deserves as much protection as possible.

While discussing matters concerning the Shivwits Plateau, we agree that the unsightly, shoddy summer firecamp facility needs to be removed and a new structure provided. In doing so, we urge that every effort be made to design and place a new building so that it blends as harmoniously as possible with that wild setting of ponderosa pines and sagebrush. As for the development of a small, primitive campground, we feel this may be particularly beneficial to the extent that it may help reduce impacts in the general area of indiscriminate camping in ponderosa stands on both NPS and BLM lands.

Concerning Reclamation Withdrawal lands within LMNRA, we have tended to view the proposed "Spring Canyon Pumped-storage Project" with some degree of favor, as opposed to possible power-generation alternatives for the region. We have viewed the Spring Canyon site and have reviewed the project report of May 1982, and believe that if the need for substantially increased peaking-power needs can be justified that Spring Canyon does appear to be a relatively environmentally low sensitivity area of Lake Mead NRA in which to build such a facility.

RESPONSES

1 The protection given the Shivwits Plateau area was a natural environment subzone with the exception of Twin Points which, as you noted, was given an environmental protection subzone. These zones are equal in protection, but reasons differ as to why they are different subzones. The Twin Points area has a rare plant species, which is in need of protection, while the rest of the Shivwits is protected for visual, aesthetic, and other reasons.

2 The summer fire camp facility will remain in its present location and be renovated rather than expanded. Because there has been a demand for unimproved campsites at the fire camp in the past, two or three level areas with grills will be installed for visitors who choose to stay there. These campsites will reduce the amount of indiscriminate camping on the Shivwits Plateau and the resultant impact on the meadows.

COMMENTS

5-Lake Mead EIS/GMP, NPCA comments

3

Finally, we are concerned about a matter not mentioned in the document that could have significant impacts upon Lake Mead National Recreation Area: the possible construction of a dam in Las Vegas Wash, just upstream from the NRA, with related developments: a number of large-scale hotel-casinos, residential complexes, golf courses, etc. Such an array of major projects could pose a serious threat of watershed impairment, principally by greatly curtailing stream flow in Las Vegas Wash; could greatly increase visitation within LMNRA; and could possibly impact the watershed from within the NRA. We believe there should be at least some reference to the proposed scheme and an indication of possible impacts upon the management and protection of Lake Mead NRA.

We hope that the above comments may prove helpful. Please let us know if we can be of further help.

cc: T. Destry Jarvis
Vice President of
NPCA

With best regards,


Russell D. Butcher
Southwest-Caifornia Representati
Box 67, Cottonwood, AZ 86326

RESPONSES

3 We have included a reference to the development proposals in the final document. Our major concerns, which we voiced to our Washington Office and the Corps of Engineers, were as follows:
stability of the proposed dam and its threat, if collapse occurs, to downstream visitor use
the view from within the Lake Mead NRA
the tremendous potential for additional visitation for which, considering budget restrictions, we would not be able to provide proper facilities
the question of water stagnation and siltation that could occur in a nonmoving body of water

COMMENTS

RESPONSES

Santa Fe Mining, Inc.

6200 Uptown Blvd. NE, Suite 400
Box 27019
Albuquerque, New Mexico 87125
505/881-3050

June 24, 1985

Mr. Jerry Wagers, Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Superintendent Wagers:

Enclosed is a revised copy of the oral statement which I gave at your June 19 public hearing in Phoenix with respect to the Draft Environmental Impact Statement and the Draft General Management Plan for the Lake Mead National Recreation Area on behalf of Santa Fe Mining, Inc. and its affiliate company, the Santa Fe Pacific Railroad Company. Please include it in lieu of the one I submitted at the hearing. In addition to the comments contained in the enclosure, Santa Fe Mining and Santa Fe Pacific have other concerns with regard to the inadequate assessment in the Draft EIS of mineral potential in the Lake Mead NRA.

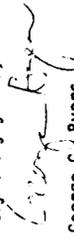
With the primary emphasis at Lake Mead being on recreation and public safety, it is understandable why recreational planners, landscape architects, hydrologists and others were allowed to do in-depth research and analysis regarding planning for the future of Lake Mead. But the Lake Mead NRA contains nearly 1.5 million acres. For this reason alone, a minerals assessment beyond a mere literature search should have been made for this vast expanse.

The Draft General Management Plan proposes zoning for the NRA which would eliminate or severely curtail any minerals exploration and development. Land use planning based on sketchy and inadequate knowledge of an area's resources or potential is backwards land use planning at best. Only when adequate information has been obtained should zoning or uses be proposed for Lake Mead National Recreation Area, the City of Las Vegas, or any other lands.

Finally, and also with respect to the minerals recommendations and judgments which these draft documents contained, it appears that the Bureau of Land Management was not consulted. The BLM is an agency with professional geologists with knowledge of Lake Mead NRA's mineral potential. BLM also is an agency with some degree of responsibility for minerals management in the NRA. The Draft EA will remain deficient until BLM's professional staff has had an opportunity to comment and have input with respect to minerals management recommendations. The Park Service should also discuss minerals matters with companies such as Santa Fe Mining which have had an active minerals exploration program in Mohave County, Arizona since 1979.

Thank you for this opportunity to comment.

Very truly yours,


George G. Byers
Director--Public Affairs

GGB:gem
Enclosure

cc: D. Dean Bibbles
Paul J. Buff

1 Refer to Nevada BLM responses 2 and 9.

2 The National Park Service is the agency responsible for minerals management and land use decisions at Lake Mead. The Bureau of Land Management (BLM) is responsible for lease administration and is the agency of record in leasing matters. The draft EIS was mailed to BLM and mining companies with interests in Lake Mead to provide an opportunity for input. A meeting was also held in Lake Mead on the draft EIS in which all mining interests were invited to attend.

COMMENTS

RESPONSES

LAKE MEAD NATIONAL RECREATION AREA
ARIZONA-NEVADA

COMMENTS OF SANTA FE PACIFIC RAILROAD COMPANY
AND
SANTA FE MINING, INC.

To the Draft Environmental Impact Statement, Draft General Management Plan

PHOENIX, ARIZONA JUNE 19, 1985

Santa Fe Pacific Railroad Company is an affiliate of SF Minerals Corporation of Albuquerque, New Mexico and owns about 55,000 acres of reserved mineral estates in the Lake Mead National Recreation Area. Santa Fe Mining, Inc. is the hard minerals exploration and development affiliate of SF Minerals and is engaged in extensive exploration for precious and base metals in northwest Arizona, including exploration in lands within the Lake Mead National Recreation Area.

Santa Fe Pacific Railroad Company appreciates the fact that its reserved mineral interests are recognized in this Draft EIS, as well as the concept of exchanging these minerals for others outside of the NRA. However, Santa Fe Pacific believes that this Draft EIS will remain deficient so long as any plans to manage areas within the recreation area which would restrict surface access or mineral exploration and development on Santa Fe Pacific's fee land are considered. The National Park Service acquired the surface of these lands subject in each case to Santa Fe Pacific's reserved mineral interests and to the attendant rights of access, exploration, entry, and development. Any plans by the National Park Service which consider creation of areas of restricted access must consider the surface impacts to these where Santa Fe Pacific's minerals are located. These plans must also consider whether the presence of these mineral estates would render the restricted management zone impossible to properly administer.

3 As stated in the draft EIS, nonfederal mineral rights will be managed according to the surrounding zoning category until such time as the owner proposes development of those rights. At that time the development proposal will be evaluated and a determination made as to the significance of the impacts. If a proposal is received in which the impacts cannot be mitigated to an acceptable level, alternative protection schemes as discussed in the land protection plan will be pursued. These alternative schemes may include acquisition of mineral rights through purchase, donation, exchange, or condemnation. These issues will be explored further in the minerals management plan following the GMP.

4 On behalf of Santa Fe Mining, I would point out that the section entitled "Impact on Mineral Leasing Opportunity" appears extremely deficient for a number of reasons. First, while not doubting for one instance the qualifications of the mining engineer who prepared this report, this section on geologic potential should have been prepared by a qualified geologist, and especially one with experience in the exploration for metals in northwest Arizona. Second, the conclusion of the nine-page report is suspect that a "complete inventory and evaluation of the known mineral resources within the Lake Mead National Recreation Area" was made, particularly when it concludes that the inventory indicates no mineral reserves in the Lake Mead NRA. The report also concludes that "all possible mineral resources are classified as economically submarginal and geologically speculative..."

4 Refer to Nevada BLM responses 2 and 9.

COMMENTS

RESPONSES

An absence of mineral exploration or production is not indicative of the absence of an ore body. In 1973 in the Lee Ranch area of McKinley County, New Mexico, there had been little coal exploration nor was there any commercial coal suspected to be present. On October 22, 1984 the first rail shipments of coal from a \$140 million coal mine with over 240 million tons of coal reserves was made. Coal is now being delivered by rail to power plants in New Mexico and Arizona from this mine. Had the assumption been made by SF Coal Corporation, an affiliate of Santa Fe Mining, that the area was worthwhile as an exploration target just because no one had explored and just because no one knew of any coal to be present, then this mining operation would not exist today. Likewise, in the Carlin Trend in north central Nevada, there were no exploration targets or known ore bodies until the mid-1960's. However, as we all know, this area is the largest gold producing region in the United States today.

The twisted logic which is employed in assessing mineral potential in this Draft EIS would have had geologists (and mining engineers) flocking away from the Lee Ranch and Carlin Trend areas in droves. The fact is that the Black Mountains along the east side of the Colorado River are an area of high mineral potential. In fact, the inaccuracy of the report on geologic potential is further amplified by the fact that a pending mineral lease application of Santa Fe Mining is not addressed nor is it an attendant patented lode mining claim shown on maps accompanying the Draft EIS.

This Draft EIS will remain deficient until a more objective and accurate assessment of hard minerals potential can be made for the Lake Mead National Recreation Area. A better picture of recent minerals development interest might be made from research with Santa Fe Mining, the Arizona Mining Association, the Arizona State Geologist's office, the Arizona Department of Mineral resources, or into the recent lease applications on file with the Park Service in Boulder City, not on a literature review on past development. Interest in precious metals has intensified since the mid-1970's, and it is likely that careful research may indicate that an interest in mineral development really does exist in the Lake Mead NRA.

Finally, the Sierra Club Legal Defense Fund filed a lawsuit in 1983 regarding wilderness designation in the Lake Mead NRA. The status and impacts of this lawsuit are not addressed in this Draft EIS.

Thank you for the opportunity to comment.

5 The Park Service recognizes the high potential for finding gold in and adjacent to the recreation area and has taken this into account when making its decisions.

6 All known patented mining claims inside Lake Mead are shown on the Outstanding Mineral Rights map in the final EIS.

7 Refer to Nevada BLM response 2.

8 Information on this lawsuit has been added to the "Mining and Minerals Management" section in volume 1.



SIERRA CLUB
LEGAL DEFENSE FUND, INC.

Sierra, Mr. McAiner 820 16th St., Suite 514 Denver, Colorado 80202 (303) 892-6101
Vivian Adams

SAN FRANCISCO OFFICE

Frederic P. Suberband
Executive Director
Laurens H. Silver
Michael R. Sherwood
Julie E. McDonald
Stephan C. Volker
Deborah S. Reimes
Staff Attorneys
Nawar Parker
Coordinating Attorney

Earl M. Blauer
Of Counsel
Chen Yin Chow
Legal Assistant

Joanne C. May Kleijmans
Director of Development

2044 Fillmore St.
San Francisco, CA 94115
(415) 567-6100

ROCKY MOUNTAIN OFFICE

H. Anthony Ruedel
Karin P. Sheldon
Lois Potter
Staff Attorneys

Douglas L. Hennold
Law Associate

Symes Building
820 16th St.
Suite 514
Denver, CO 80202
(303) 892-6101

WASHINGTON, D.C. OFFICE

Frederick S. Middleton, III
Howard J. Fox
Dorwood J. Zalko, Jr.
Staff Attorneys

Ronald J. Wilson
Of Counsel

Lisa B. Loggeman
Law Assistant

1424 K St., NW
Suite 600
Washington, D.C. 20005
(202) 347-1770

ALASKA OFFICE

Lauri J. Adams
Staff Attorney

Suzanne La Pierre
Philip S. Barnett
Law Associates

419 9th St.
Suite 321
Juneau, AK 99801
(907) 586-2751

SIERRA CLUB'S COMMENTS ON DRAFT GENERAL MANAGEMENT
PLAN AND EIS, LAKE MEAD NATIONAL RECREATION AREA

These comments supplement those of the Toiyabe Chapter of the Sierra Club, dated July 16, 1985, and pertain specifically to two issues: (1) wilderness preservation and (2) mineral leasing and development activities. The Sierra Club still has litigation pending in federal district court against the National Park Service over those issues, and these comments are made with an eye toward resolving the issues which gave rise to the suit.

(1) Wilderness preservation.

A. Lack of a separate management plan for proposed and potential wilderness. Table 3, Volume 1, illustrates this deficiency. This table outlines the various types of management zones, their management strategies, and the types of development and other activities permitted. However, there is no separate management plan or sub-zone for the areas which NPS has identified as wilderness-eligible in the Wilderness Suitability map (Vol. 2, pp. 205-6). These areas currently are classified as natural sub-zones. Since this proposed and potential wilderness acreage totals 674,375 acres, almost half the NRA, the magnitude of need for appropriate wilderness management is apparent.

NPS' Management Policies (1978), supplemented by provisions of the Wilderness Act, 16 U.S.C. § 1131 et seq. provide the proper directives regarding wilderness management during the period of wilderness review:

PROTECTION OF ROADLESS STUDY AREAS

Roadless study areas subject to review for wilderness designation will be protected from activities which would endanger or alter their natural, primitive character until administrative study or the legislative process determines their suitability for wilderness designation.

Management Policies, p. VI-2.

Current management strategies for the natural sub-zones allow some activities which are incompatible

1 The text in both the "Management Zoning" and "Wilderness Suitability" sections has been changed to reflect NPS management plans for these areas.

-2-

with wilderness preservation. For example, development of management facilities is allowed in the natural sub-zones, even though construction should not take place in wilderness, "an area of undeveloped federal land ... without permanent improvements or human habitation." The Wilderness Act, 16 U.S.C. § 1131(c). Dune buggies, trail bikes, and four-wheel drive vehicles are permitted on "approved roads" within the natural sub-zones, but should not be allowed anywhere within proposed or potential wilderness, since the Wilderness Act forbids all mechanical forms of travel. 16 U.S.C. § 1133(c). Accordingly, NPS should include in the FEIS and final GMP a plan specifically aimed at managing proposed and potential wilderness as wilderness, not simply as natural sub-zones which allow some wilderness-incompatible activities.

2 B. Wilderness management for the Shivwits Plateau region. This point follows directly from the preceding.

The land on the Shivwits Plateau (areas 58 - 60A, inclusive, on the management zoning map) should also be managed for wilderness protection. Although this land is identified as wilderness or potential wilderness on the Wilderness Suitability map, the GMP proposes several actions which contradict wilderness status and are incompatible with wilderness management. These actions include construction of an airstrip, ranger station, primitive campsites with toilets, and interpretive signs. It is unclear from the GMP whether or not all of these facilities fall within potential or proposed wilderness.

Regardless of whether the airstrip would lie within the wilderness, the air traffic will have an adverse effect on wilderness qualities and NPS should not construct this airstrip. The Shivwits Plateau is already experiencing severe environmental problems due to extensive air traffic in the Grand Canyon region. The proposed airstrip lies within the lower Grand Canyon ecosystem and would exacerbate this problem. See Attachment A, a newspaper story describing the problem. Construction of airstrips in wilderness contravenes the Wilderness Act, 16 U.S.C. § 1133(c), and NPS Management Policies (1978), p. VI-8: "Helipads, helipads, and airstrips are not permissible." Although NPS may intend this airstrip solely for "administrative access," its construction would invite use by mineral prospectors and sightseeing planes, among others.

Other development, including ranger housing, primitive campsites and toilets, should be constructed only if absolutely necessary to wilderness preservation and management. NPS Management Policies, P. VI-9. The GMP and DEIS do not establish that there is over-use of these areas, or other special conditions which would justify development in an otherwise-pristine area. The FEIS and final GMP should reevaluate the need for development

2 Management access must be provided to the Shivwits Plateau so it can be managed in the manner set by Congress in the enabling legislation and in the guidelines set by the National Park Service, whether it be as a natural zone, a special use zone, or a development zone. This isolated area is susceptible to unwanted uses, such as vandalism to historic structures and archeological sites, poaching of animals, and other activities. A small facility is needed at the entrance to monitor vehicles, fire potential, and other emergency conditions. The facility will remain in its present location and be renovated. In response to a demand for unimproved campsites at the fire camp in the past, two or three level areas with grills will be installed for visitors who choose to stay there. The impact on the meadows will then be reduced through less indiscriminate camping on the Shivwits Plateau.

An airstrip is proposed to provide for proper supervision and delivery of adequate supplies in an economical and timely manner. The airstrip will replace the one currently being used on the access road, which is approximately 15 miles (45 minutes) from the fire camp, when the weather is good. Airplane service to the fire camp will require one-sixth of the time it takes to drive. Total use of the airstrip for management is likely to be, at the most, twice weekly and only from May 1 to September 30 (the fire season). The only time the airstrip will be used more frequently will be in case of a forest fire.

The proposed strip will be available for use only by the NPS airplane (a single engine with STOL equipment) and will not be large enough to allow larger twin engine planes to land. The normal flight pattern is to the west, which is the shortest route to the NRA's administration areas and not over the Grand Canyon. This flight pattern is currently being used. Although the flights are infrequent, they cause noise and visual intrusions on the wilderness area. To minimize the number of these flights, the superintendent will review each trip to determine the necessity and efficiency of aircraft use consistent with park goals. If the airplane is not the most efficient method of accomplishing the purpose of a trip, alternative access means will be used.

COMMENTS

RESPONSES

in wilderness-eligible lands in light of the Wilderness Act and NPS Management Policies.

C. Zoning. The zoning decision in the GMP may preclude wilderness status for those lands zoned for resource utilization, since mineral leasing activities can go forward in resource utilization zones. Thus, Sierra Club supports Alternative A, which minimizes the acreage open to resource utilization. Further, the proposed action regarding zoning contravenes the Management policy quoted on page 1 of these comments, which requires protection of wilderness-eligible land. Under the rule set out in Management Policies, NPS should adopt Alternative A and continue to manage all wilderness-eligible lands as wilderness, disallowing mineral leasing. Two wilderness-candidate areas deserve special mention because of their proximity to BLM wilderness candidate areas:

3 (a) disallow resource utilization along the U.S. 93 corridor, including the acreage adjacent to BLM's Wilson Mountain wilderness study area. This area (#24 on map of proposed management zoning) should be managed so as to preserve its wilderness character and its eligibility for wilderness designation. According to the map, "Existing Mining Claims and Mineral Leases," there are no leases currently in this area which would conflict with wilderness management.

4 (b) The Bowl of Fire area, which is adjacent to BLM's Muddy Mountains wilderness study area, should be included in the plan for proposed wilderness.

(2) Mineral leasing and development.

5 A. Clarify effect of excepted-area zoning. The FEIS and final GMP should clarify that lands not in the resource-utilization sub-zone are immediately closed to all mineral leasing activities. The DEIS misleadingly indicates that "leasing would gradually be phased out." Vol. 2, p. 294.

6 B. Procedure to amend C.F.R.'s. The excepted-areas map and pertinent regulations must be revised to conform precisely to the management zoning plan contained in the FEIS. Because there has already been notice of this revision process in the Federal Register, and there has been opportunity for public comment, there need not be another notice-and-comment procedure for the amendment of the excepted-area regulation. This should constitute no more than a technical revision of the regulations. To go through yet another notice and comment procedure would simply generate another round of the same comments as are now being submitted. The resources of the NPS and the public are better spent by going on to work on the MMP.

A new map has been added to volume 1 of the document, showing the location of the facilities and airstrip on the Shivwits Plateau. As shown on that map, neither the facilities nor airstrip are located in potential wilderness areas.

3 See response 4, Sierra Club, Toiyabe Chapter.

4 See response 5, Sierra Club, Toiyabe Chapter.

5 A statement has been added clarifying the fact that all lands outside the resource utilization subzone are immediately closed to any future leasing upon finalization of the EIS. The statement referred to on page 294 of the draft EIS, which states that "leasing would be gradually phased out in the remainder of the recreation area," will also be clarified. This statement refers to existing leases that occur in areas that will no longer be open to mineral leasing. These leases will continue to exist and will not be renewed when their current term expires. This includes all current leases in Lake Mead, including six oil and gas leases and two mineral leases totaling 8,238 acres. The earliest of these expired on April 1, 1986, and the latest will be on December 1, 1992, if not relinquished earlier.

6 The Park Service will consult with the office of the solicitor to seek advice on the revision of excepted areas in the regulations once the EIS is final.

COMMENTS

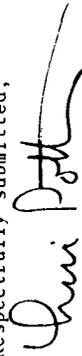
7 All pending lease applications pending for "excepted areas," "excepted" zone should be summarily rejected as soon as the new excepted-area regulation is published in final form in the Federal Register.

8 C. Lease applications pending in resource-utilization zone. All pending lease applications for areas to be in the resource utilization zone should remain pending until finalization of the MMP, so that NPS has developed appropriate surface protection stipulations and a lawful NEPA compliance process to apply to those pending applications. These stipulations and the NEPA procedure can be described and subjected to public comment during development of the MMP.

E. The Shivwits Plateau region. The Sierra Club strongly supports closure of the Shivwits Plateau region to all mineral leasing activity. Sierra Club's research corroborates NPS' conclusion that "under the current price structure for uranium, it is unlikely that any of the uranium resources contained in the known breccia pipes would be developed." Vol. 2, p. 295. See Attachment B, Wall Street Journal story, and Attachment C, Science magazine story, describing the uranium market. The current and long-term outlook for the domestic uranium industry is so totally speculative as to nullify any argument for leaving this spectacular region open to mineral leasing or development.

The Shivwits Plateau region, including management zones 58-60A, inclusive, and wilderness units 33-36, inclusive, is an important part of the Lower Grand Canyon ecosystem. This acreage consists of plateaus and side-canyons with magnificent views into the Grand Canyon and surrounding country. It is primitive, unspoiled, wilderness-quality terrain which merits wilderness designation. This entire region, comprising some 141,810 acres, should not only be excepted from mining but also managed for wilderness preservation. See discussion under point 1(B), above, of these comments.

Respectfully submitted,



LORI POTTER
SIERRA CLUB LEGAL DEFENSE FUND
820 Sixteenth Street, Suite 514
Denver, Colorado 80202
(303) 892-6301

Attorney for Sierra Club

July 30, 1985

RESPONSES

7 All pending lease and permit applications outside the resource utilization subzone will be rejected once the regulations have been revised.

8 The Park Service will not process lease and permit applications inside the resource utilization subzone until the minerals management plan has been finalized. The Park Service is currently in the process of developing servicewide surface protection stipulations, which will be attached to all future leases and permits and plans of operations.

The Park Service recently completed servicewide guidance for all NPS units open to federal leasing. The document, which is entitled "Procedures for Managing Federal Mineral Leasing and Operations," was released in December 1983 and provides consistent procedures for processing lease and permit applications and completing all necessary compliance actions.

Flight noise fouls Canyon backpacking

Increased aircraft tours threaten 'natural quiet'

BY JOHN SCHROEDER
Northern Arizona Bureau
7-15-85
AZ Review

GRAND CANYON — Deep within the majestic Grand Canyon, backpackers are finding that the serenity and harmony they often seek with nature are shattered by the incessant noise of aircraft.

The problem of noise pollution by aircraft has grown to such proportions that protecting the park's "natural quiet" ranks as a top resource-management issue affecting the vast Grand Canyon National Park.

Most of the noise stems from scenic flights in and over the canyon by fixed-wing aircraft and helicopters, said Steve Hodapp, chief of park resource management and planning.

"We feel there's a conflict between aircraft noise and the experience of back-country visitors to the park," Hodapp said.

Aircraft noise has become the "issue of second-highest concern expressed to park management by the public," he said.

The leading public concern involves problems with mules leaving pungent puddles and pits along canyon trails used by hikers.

In 1976, 13,000 flights were made into Grand Canyon Airport, 90 percent of which were scenic canyon flights. By the early 1980s, the number had soared to 50,000 flights over the park.

An Arizona Department of Transportation master plan for Grand Canyon Airport projects the number as exceeding 100,000 flights by the year 2003.

Hodapp said 40 scenic-flight companies conduct tours in canyon airspace. He said most flights originate in Las Vegas, Nev., or at Tusayan, near the park's southern entrance.

Sometime this fall, probably in October, Hodapp said, a series of public meetings will be held around the state to receive public response to a series of options being assembled to resolve the problem.

The proposals will range from a "no aircraft" option to a "no action" option that would permit an increase in air traffic along the lines of the Transportation Department's projections.

"In between those two extremes," Hodapp said, "will be a range of options" for the public to consider. The park official said an information package will be distributed before the meetings.

Hodapp said that in recent years, the noise problem has been reduced through the use of larger aircraft that carry more people on fewer flights, and technological improvements that have reduced engine noise.

He said scenic-tour flights have been holding at about 50,000 annually in recent years.

Commercial airlines flying over canyon airspace have been recognized as a lesser part of the problem.

"It's at night when the perceived effect from commercial airlines is the greatest," Hodapp said.

Forty percent to 60 percent of back-country users "find aircraft as a negative impact on their experiences," he said, adding that more than 90 percent of visitors to the North and South rims do not consider it a concern.

Although noise has an impact, people "still are

Noise

Continued from B1

having a very positive backpacking experience within the park," Hodapp said.

Each year, about 300,000 canyon visitors take the scenic flights, he said.

A study also is being made of noise-sensitive areas, such as the impact on wildlife and potential damage to Indian ruins by vibrations from low-flying helicopters.

Hodapp said the Park Service is working closely with the Federal Aviation Administration.

"We cannot directly promulgate regulations to control airspace," he said. "But we clearly have a mission to protect park values, and natural quiet is a value we are directed to protect."

Nuclear Reaction U.S. Uranium Mines, Thriving 5 Years Ago, Are Nearing Extinction Three Mile Island Is Blamed For Hastening Collapse, But Federal Policy Helped Will Foreign Ore Be Limited?

By WILLIAM E. BLUNDELL
Staff Reporter of THE WALL STREET JOURNAL
GRANTS, N.M. — Not long ago, the U.S. Department of Energy declared that the domestic uranium industry is not dead. If that's so, people here ask, where's that smell of death coming from?

Grants was the Pittsburgh of uranium. In 1966, thousands of men working dozens of area mines dug out a third of U.S. production and, on pay of \$35,000 to \$70,000 a year and sometimes more, spent like kings. They bought Cadillacs, Lancias, boats and pickup gear. They ran and fought the mines. They were the Pats of Bar, sometimes finishing a raucous night by blowing down a few light stanchions on building a few A-frames that one is closed. Pats is closed. The Lux theater is closed. Its marquee blank and broken. Some 200 homes stand vacant. In the Uranium Cafe, dust settles over stacked-up chairs and tables and a deadly silence has settled over Santa Fe Avenue. Says Mark Lauman, an industrial developer trying to bring new business to a shrinking Grants: "The game is over. Uranium is history."

Many Depressants
Much the same thing is happening across the West as the domestic uranium business plunges toward extinction. Antipathy toward nuclear power after Three Mile Island is only one reason. Also to blame are colossal misjudgments by major players and Energy Department policies that sometimes seem designed to discourage instead of preserve U.S. mining and milling.

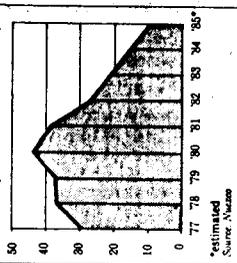
To save the remnants of the industry, producers and others are fighting to limit the use of foreign uranium here and to force the Energy Department to alter its policies. If they fail, most in the business fear that it is finished. In any case, recent discoveries of enormously rich, low-cost foreign deposits blight domestic uranium's future, on pure economics alone, the industry no longer has a reason to exist. It barely exists now, after a collapse that by industrial standards occurred practically overnight. Five years ago, about 22,000 U.S. workers turned out a record 43.7 million pounds of yellowcake, the uranium oxide that is processed into fuel, to feed the non-Communist world. This year, a work force that has already shrunk almost 90% is expected to produce only 10 million pounds, about a third of Canada's projected output. Capital investment in the domestic business has almost vanished, too.

Lost Jobs

In Wyoming, where 15 of 19 mines are mothballed, Jeffrey City lost most of its payroll in a single year. In Tropic, Utah, a town built by a uranium unit of Consumers Power Co. of Jackson, Mich., barely three dozen people now huddle in mobile homes, all that's left of nearly 500 who once worked there. The uranium operation—and with it an interest in Tropic itself—is for sale, cheap. So are similar dormant properties across the West as more and more producers abandon the business.

The industry has been hammered by an enormous glut of uranium that still overhangs non-Communist-world markets and

U.S. Uranium Production
(Millions of pounds of uranium oxide)



probably won't be worked off for three to five years. The oversupply has already sent spot prices for uranium plummeting from \$40 a pound in January 1980 to \$15 today—less than half the current cost of producing the metal in the U.S. The only producers here that can make money in conventional uranium mining are those fulfilling contracts signed at much higher prices years ago, and those orders are running out.

The origins of the glut lie in the past of an industry plagued by perennially unfounded optimism. Says George White Jr., the chairman of Nucor, a Menlo Park, Calif., uranium broker, consultant and industry information bank: "Tomorrow, always tomorrow, was going to bring the golden age. We all went wrong by continuing to believe optimistic forecasts long after we had reason to doubt them."

Clinging to Hope

In the early 1970s, utilities ordered nuclear plants by the fistful to meet electricity demand that they expected to double in 10 years. Even after energy conservation began to short-circuit their forecasts, they were slow to see this or, at least, couldn't afford to believe it; so long as any chance remained that their plants of the 1980s

Please Turn to Page 24, Column 1

24 THE WALL STREET JOURNAL WEDNESDAY, JUNE 12, 1953

Nuclear Reaction: Uranium Mines Near Extinction, Victims of Three Mile Island and Federal Policies

Continued From First Page

would be needed, they had to fuel them. And they were forced to do this unrealistically far in advance by a new enrichment contract imposed in 1973 by the now-defunct Atomic Energy Commission.

The AEC then had the non-Communist world monopoly on enrichment, the process by which the tiny percentage of U-235 concentrate is increased to create fuel-grade uranium. Under the old AEC agreement, utilities could contract for enrichment only months before they needed fuel; under the new one they had to contract for it up to eight years in advance and were locked into near order schedules.

The AEC wanted to set a better fix on the anticipated heavy demand for enrichment. But the new contract immediately forced utilities into long-term deals for, low-risk when they couldn't be sure, so far ahead of time that their planned plants would be built on time or needed at all. In effect, the AEC created a wave of artificial advance demand completely divorced from any current need for fuel. After this became apparent, the AEC and its successor agencies tried contract adjustments, but supply remained hopelessly out of whack with demand.

Then Westinghouse Electric Corp. added another complication. It had collected 40% of the reactor market, in part by promising customers uranium at about \$10 a pound to fuel their plants. But it hadn't bothered to buy \$6 million of the 81 million pounds that it had pre-sold, gambling on a stable market for its later purchases. It lost.

This policy itself helped keep prices low for a while by removing a lot of demand from the market without reducing current supply. But other buying—and, it developed, price-rigging by a producer cartel—jacked prices up to \$26 a pound by the fall of 1975. Facing enormous potential losses, Westinghouse abandoned its uranium commitments, was sued by a flock of customers and, in turn, sued producers allegedly involved in the cartel. The utilities that it had left in the lurch poured into the market to cover their uranium needs; prices exploded anew, topping out at \$43-40 in 1976.

Feeding on the high prices, uranium mining boomed as never before in 1976-80—precisely when the real need for uranium was clearly shriveling.

By then, it was plain that energy conservation was destroying the need for many of the planned power plants; at the same time, their projected construction costs were soaring. So, some utilities began canceling and delaying power plants years before the 1979 near-disaster at Three Mile Island. After it, the stream of cancellations became a flood—just as a tide of uranium and processed fuel swamped the markets. All the industry's chickens had come home to roost at once, and prices and production plummeted.

Caught Unprepared

The bust caught many unprepared. Gulf Corp. had barely begun production from its giant Mount Taylor mine near Grants, a project that cost Gulf more than \$400 million to develop, when it had to shut down. Today, giant pumps still suck warm water from the mine, which a Gulf official has called "the deepest hot tub in New Mexico." The power bill alone for the pumping, which is designed to keep the mine from filling with water and thus becoming much more expensive to reopen some day, exceeds \$250,000 a month.

The human cost has been great, too. East of Grants, Indians of the Laguna Pueblo stare into the pits of the mammoth Jackie-Paguate Mine, closed for good. Once an agrarian people, the Laganas had, for 30 years, increasingly abandoned fields and pastures to rely on a resource now no longer needed.

In Grants, therapists are struggling with heavy caseloads of victims of alcoholism, family breakdown, abuse of wives and children, and deep insecurity. Local 2-708 of the Oil, Chemical & Atomic Workers, once 1,300 strong, is down to about 25 members; its president, Fiorentino Ortiz, recently lost his own job. "If our members

homes weren't paid for, they lost them and all their credit, too," he says. "How can they ever buy houses again? There is just tremendous frustration."

In neighboring Milan, some remaining miners eke out a living by selling firewood or harvesting, on hands and knees, pine nuts from the forest. The city water department accepts \$3 partial payments painfully accumulated by families, on \$15 monthly bills. "These are proud people who don't want charity," Mayor Toby Michael says. "It just breaks your heart to see this happen to friends who've lived here 20 years."

Foreign Advantages

The uranium glut, collapsing the domestic industry, and places such as Milan nearby as much. They have the advantages of a strong U.S. dollar, which helps them sell here, and of recently developed deposits so rich—and consequently so cheap to exploit—that domestic mines can't come close to matching them. "The leverage ob-

tained from high-grade ore is tremendous. Grade is the name of this game," says Mr. White of Nuexco.

The U.S. industry and its supporters want protection against such imports, which are rapidly spreading into what is left of the U.S. market. They aren't getting it from the Energy Department, although the Atomic Energy Act requires that agency to preserve a viable domestic industry.

The department could attempt a rescue by sharply curbing or eliminating its enrichment of foreign uranium for use here. It hasn't. It also could formally declare the industry to be inviable, thus triggering consideration of trade restrictions on foreign uranium. It hasn't done that, either. Indeed, using a complex set of formulas, it declared the business still alive as recently as last December, to the astonishment of practically everyone familiar with domestic uranium's plight.

Last year, moreover, the department converted most of its customers to a new enrichment contract that, though far more

flexible than the old, seems geared to increase Energy Department revenues at the expense of domestic producers. To its many critics, all this makes the department guilty of a conflict of interest. "It is shutting down the industry it is supposed to preserve," says Paul Biederman, New Mexico's secretary for energy and minerals.

Processing Emphasized

There are two ways to get a given quantity of fuel: use a sizable amount of uranium and a modest amount of processing work (which is what the Energy Department gets paid for) or use less uranium and more work. The new contract encourages the latter. What's more, the department has been shaving its own processing costs by drawing from the federal uranium stockpile and adding that to the feedstock provided by utilities. This further robs producers of sales, they argue.

The department denies that it is snuffing out the domestic industry. But it does have a vested interest in processing foreign as well as domestic uranium, and in otherwise increasing its revenues and slicing its costs. It is legally obligated to fully cover the costs of its enrichment program, which has been battered by foreign competition arising over the past decade. The worst threat to domestic producers, it ar-

gues, would be the deterioration of domestic enrichment, an event that the new contract seeks to prevent. Stuck with idle capacity, the department has already announced the closing of an old enrichment plant and the abandonment of another still unfinished after a \$2.8 billion outlay.

Producers aren't buying that. "If the federal government wants to tell us there is no need for our product, that security of supply is no problem, that the common defense and general welfare provisions of the Constitution are meaningless, then I guess we'll just go away," says Edward Farley Jr., the chairman and president of Atlas Corp., which has had to close its uranium operations. Without help, he gives what's left of the business a year to live.

Three other producers are suing the Energy Department in federal court in Denver, seeking, among other things, a ban on enrichment of foreign uranium for use here pending permanent restrictions, invalidation of the enrichment contract, and a ban on any department moves limiting domestic uranium demand. The industry also is lobbying for protective federal legislation.

Lost Clout

But even if the industry gets such help, it will never again be a power in world markets. Its uranium deposits are no

longer competitive and are growing less so with every foreign discovery. At Cigar Lake in Saskatchewan, for example, a foreign consortium is probing for the limits of a huge strike that, if mined, could yield 250 pounds of yellowcake per ton. New Mexico producers get only three to six pounds per ton. Uranium from such rich lodes could drive U.S. supplies out of all unprotected markets. "Cigar Lake is a real gorilla, and a gorilla goes where it wants," says a marketing executive of one producer here.

Grants isn't counting on a uranium revival even though Chevron Corp., Gulf's new owner, has begun limited mining at Mount Taylor to test its costs there. Instead, Grants hopes to draw tourists by building a ski resort, and it seeks retirees who, as City Manager Frank King puts it, "don't want to sit in Florida and sweat a lot." And Mr. Lautman, the industrial developer, offers a bounty of up to \$1,000 for a lead that results in a new business setting in Grants.

A few have, and the state has located prison and highway facilities nearby, but Grants has barely begun to replace its losses. "It's coming slowly never had to compete; it invented 8,000 uranium jobs," Mr. Edmund says. "Now, every job we bring in will have to be won in battle."

Uranium Shortage Turns to Glut

Paris. A new shadow has been cast over the medium-term commercial prospects for both fast breeder reactors and nuclear fuel reprocessing in Europe. This time it comes from the recent decision of the Australian Labour Party to drop its pre-election commitment to tough restrictions on the export of uranium. Since Australia possesses the largest proven reserves in the non-Communist world, this could lead to yet further oversupply in the world's uranium market.

In addition, the Paris-based Nuclear Energy Agency (NEA) of the Organisation for Economic Cooperation and Development (OECD) last month drastically revised its forecasts of uranium supply and demand. NEA now estimates that supplies of uranium from known resources are likely to keep up with world demand "for several years beyond the end of the century." This contrasts sharply with a report released only at the end of last year by the agency, which suggested that the crossover point might occur by the end of the 1980's.

The figures reflect sharp upward assessments of known uranium reserves, including those of Australia. In March, the Australian Bureau of Mines placed the country's "reasonably assured resources," which could be processed for less than \$80 per kilogram, at 474,000 tonnes; only a year previously, the official figure had been 314,000 tonnes. The other major increase has come from Niger, where estimated reserves have been increased from 213,000 tonnes to 454,000 tonnes.

The new figures also reflect a steep drop in projections of future installed capacity for nuclear power. In 1982, the agency predicted, based on official government figures, that by the year 2000 member countries of the OECD would be producing 489 gigawatts (GW) of electricity by nuclear power; the agency's current official estimate for this date is 392 GW and members of the secretariat feel that the true figure could be as low as 320 GW (the level predicted 2 years ago for 1990).

Based on these new figures, NEA estimates that uranium production capability from existing and committed centers will be 54,000 tonnes a year by 1994, almost exactly the same as anticipated demand from nuclear reactors. If planned and prospective centers were included in the calculation, production could be as high as 72,000 tonnes by the year 2000, still considerably above predicted reactor requirements.

"The exploration push of the late 1970's means that the uranium reserve situation has improved considerably, both in absolute terms and relative to projected demand," says Pekka Silvenoinen, head of the NEA's nuclear development division. However, he adds that with the current depressed state of the uranium market—where the price of uranium oxide has fallen from about \$70 per kilogram in 1980 to less than \$40 today—mining companies might put off their long-term plans, so that future estimates of production capability could prove to be too high.

Even so, the revised uranium supply figures will undercut the economic argument in favor of the rapid development of fast breeder reactors, and thus by implication the reprocessing of spent fuel from power reactors. They have also taken on a particular significance in the light of the growing conflict between the governments of Australia and France over French testing of nuclear weapons at the South Pacific test site of Mururoa.

Australian Prime Minister Bob Hawke, having persuaded the Labour Party to accept his plans for expanded uranium mining, has also announced that the government will fulfill the party's commitment to ban the shipment of uranium to France as long as the tests are continued. Such a move would cut off a trade worth more than \$300 million in 1982.

Although the nuclear industry in France currently depends on Australia for one-third of its uranium needs, with the depressed state of the market it expects little difficulty in finding the uranium elsewhere. Hawke's action has, however, been strongly criticized by French Defense Minister Charles Hernu, who has complained that it represents "interference" in the country's internal affairs.—DAVID DICKSON

Kadec has certainly been frankly critical of the program. In a recent interview, she referred to it as a "management nightmare" and said that it is "too broad-based" to fit with EPA's mission. In a memorandum to her boss last January, she stated her views more emphatically: "I consider the CIS and its management over the past few years as an affront to the American people. . . . I am in no way supportive of the decision to prolong the life of this system, through further investment of time or money, to cover past mistakes."

Asked for specific examples of problems, however, Kadec said only that the system is "not well defined," and that "files are uneven." But, she adds, "There's no question that [some] files within the system are extremely valuable." She notes that the system is undergoing a complete audit and that the agency's inspector general also is conducting an investigation, but will not elaborate.

There clearly have been serious management problems. For example, no one kept very good track of money flowing in and out of CIS. It never was an easy task because the billings and expenditures were not handled centrally. Besides, users were often agencies that also were providing some of the data bases and thus transactions were muddled on that level as well.

Yet another complication for CIS has been its frequently changing relationships with contractors and subcontractors. The recent handling of this has been sharply criticized by several members of Congress. For example, Fein-Marquart, which has held the major CIS contract for developing software and maintaining the data bases during the past 9 years, switched its subcontractor for computer services in May, even though its own contract runs only 5 months longer. Senator Durenberger and Senator Baucus tried to prevent this move, arguing that it "has the potential for causing additional disruptions in service that will further damage the system." (EPA documents indicate that this change of computers brought forth a rash of complaints from users this spring.)

In referring to "additional disruptions," the senators were alluding to an incident late in 1983 when CIS was shut down for several days due to lack of funds. These incidents and cuts in CIS funding, recently led Representatives James H. Scheuer (D-N.Y.), Henry A. Waxman (D-Calif.), and James J. Florio (D-N.J.) to send a strongly worded letter to EPA Administrator William D. Ruck-

COMMENTS

RESPONSES



SIERRA CLUB

Toiyabe Chapter - Nevada and Eastern California

July 16, 1985

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, NV 89005

Dear Mr. Wagers:

This open letter represents the Las Vegas Group of the Toiyabe Chapter of the Sierra Club's official response to the Draft Environmental Impact Statement (DEIS) on the proposed general management plan for the Lake Mead National Recreation Area (LMNRA). We understand the proposed general management plan will serve to guide park planning activities for the next 25 years.

The Sierra Club is one of the nation's principal independent conservation organizations. The Club played a decisive role in the formulation of the National Park Service (NPS). It has also been instrumental in establishing several national parks. In every EIS distributed by the NPS there is the passage that the Department of the Interior is "the nation's principal conservation agency." We mention the foregoing as a preface so that the following comments by the Sierra Club will be construed as those of an ally, not an adversary, to the NPS.

Hence, as one conservation agency to another, we would like to applaud you for a quality DEIS. It is a polished and professional document. We wholeheartedly concur with your objective that the primary management goal of the LMNRA is to provide a quality visitor experience in concert with protecting the area's significant resources. We support your finding that the proposed action is the preferred alternative.

Nevertheless, we have nine general recommendations that we hope you consider in formulating the final EIS. The nine recommendations are as follows:

- 1 (1) We recommend a table (similar to Table 2 on page xv) depicting a summary of the major differences among the alternatives. This table might look similar to the following. At the intersection of the alternatives and resource parameter, we recommend an appropriate numerical figure be supplied. If a numerical figure is inappropriate, we recommend qualified expressions such as "very beneficial," "slightly beneficial," "slightly adverse," or "very adverse" compared to existing conditions.

1 Such a table has been added to the "Summary" section of volume I.

COMMENTS

RESPONSES

Resource Parameter Proposed Action No Action Alternative A Alternative B

Cost for NPS

Cost for Concessioners

People in flood plains

Effects on LMNRA water quality

Acres of soils destroyed

Endangered species effects

Effects on bighorn sheep

Acres subject to development

Congestion effects

Effects on wilderness lands

Etc.

2 (2) We recommend that no development actions be considered for the Shivwits Plateau. This area contains such unique geologic features, scenic vistas, and wilderness potential that it should be preserved un tarnished for future generations.

3 (3) We feel that too much emphasis has been placed on protecting the "public" areas from the intrusions of mining. It is important to remember that the backcountry visitor also deserves to enjoy the beauty of the area, unmarred by destructive mining influences. Therefore, we prefer the Alternative A Resource Utilization Zoning.

4 (4) Mineral development should not be allowed along the U.S. 93 corridor south of Hoover Dam. This area is adjacent to the proposed BLM Wilson Mountain wilderness unit and should thereby be considered for wilderness designation, contingent upon Congress designating the BLM area as wilderness. Keeping this area in a natural state is also important for the enjoyment of travellers along the highway.

2 See response 2, Sierra Club, Legal Defense Fund.

3 Comment noted, no response required.

4 Unit 24 on the Management Zoning map is located between the Bureau of Land Management's Mount Wilson Wilderness Study Unit (WSA) and U.S. Highway 93 in Arizona. This unit is approximately 10 miles long but only averages 1 1/2 miles wide, with one area being only 1/2 mile wide. Three dirt roads to old mine sites entering the area total approximately 6 miles. Numerous flood control dikes protect highway 93, and approximately 3 1/2 miles of old highway 95 (now abandoned but still open to public use) loop into unit 24. Mining in this unit has occurred as recently as the late 1950s, and it is still an area of mineral interest. A number of short spur roads in the vicinity of the old mining activity and numerous articles of trash, such as junked cars, bedsprings, cans, and other items, are still present.

Because the area shows so much disturbance from the past, it does not meet wilderness criteria, and although the most recent recommendation from BLM for the adjacent Mount Wilson WSA is for wilderness status, unit 24 would not be suitable for wilderness. Because of the number of roads and other disturbances, such as flood-control dikes and mining scars, the area would best be managed as a resource utilization unit rather than for natural area values. If mining is to occur in this unit, visual intrusion from highway 93 will be mitigated, and other resource values will be protected through stipulation.

COMMENTS

RESPONSES

5 (5) Bowl of Fire should also be considered for wilderness designation. As is the situation in point #4, this area is adjacent to the BLM's proposed Muddy Mountains wilderness area. The definite wilderness qualities of this area entitle it to wilderness protection, and it would meet the size qualifications should Congress accept the Muddy Mountains as wilderness.

6 (6) We recommend that the final EIS numerically define, in terms of annual visitation usage, the optimal carrying capacity for LMNRA. Optimal carrying capacity is a concept for approximating the best balance of people and resources for a given geographic area. Defining an optimal carrying capacity would appear to promote further sound management strategies for LMNRA. As an illustration of the benefits that can occur with a defined carrying capacity, we are reminded that the high quality of life in Boulder City is at least in part attributed to its controlled growth ordinance. Conversely, we all regret that sub-Saharan Africa neglected to define its optimal carrying capacity.

7 (7) We recommend that the final EIS contain a chart similar to the following. In recording the historical relationship among visitation, budget, and staff for the previous 10 years, a basis can be formulated for establishing LMNRA's needs for the next 10 years.

YEAR	HISTORIC & ANTICIPATED VISITATION IN MILLIONS	HISTORIC & ANTICIPATED BUDGET IN MILLIONS	HISTORIC & ANTICIPATED FULL-TIME STAFF	HISTORIC & ANTICIPATED SEASONAL STAFF
1975				
1976				
1977				
1978				
1979				
1980				
1981				
1982				
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994				
1995				

5 The Bowl of Fire area (unit 50 on the Proposed Action/Management Zoning map) has been given the highest protective management zoning (outstanding natural feature) without wilderness designation. The area did not meet wilderness criteria because of its small size (less than 5,000 acres), but with the Bureau of Land Management's proposal to make the adjacent Muddy Mountains WSA a wilderness area, the Bowl of Fire may well be proposed for wilderness status when the upcoming Lake Mead wilderness study is initiated.

6 Carrying capacity is addressed. A total capacity for the entire recreation area is not meaningful. The limiting factor is use levels of boaters and how those boaters affect the shoreline and campsite areas and how they affect each other's experience. The quantified analysis of boating use capacity is contained in the "Carrying Capacities" section.

7, 8 and 9 The budgetary process is separate from the planning process. Funding for implementation of the GMP will be by Congress through the normal NPS budgetary channels. Funding of the projects proposed in the GMP will be evaluated along with other NPS projects in the western region. Staffing, on the other hand, is provided through lump-sum funding for the entire National Park Service.

8

(8) The DEIS indicates that average annual visitation currently exceeds 6,500,000 and is projected to reach over 11,000,000 during the 25-year projected life of the plan. The draft further notes that this constitutes an increase of about 68 percent. We add that the projected annual visitation increase for LMNRA is 180,000--a population slightly greater than that currently incorporated in Las Vegas. Accordingly, we strongly recommend that the final EIS recommend that the staff and budget serving the LMNRA be increased by at least 68 percent during the next 25 years. Only if the staff and budget are kept roughly commensurate with anticipated visitation increases will the quality and standards of the LMNRA be maintained.

9

(9) According to page 18 of the May 20, 1985 issue of U.S. News and World Report, the Reagan Administration "...wants to chop the budget for national parks by 30 percent." A copy of this page follows. In the absence of more precise information, we can only conclude that the budget for LMNRA may be reduced by 30 percent. Hence, we recommend the final EIS contain a detailed analysis of how the operations of LMNRA may be affected by such significant budgetary reductions. Given a scenario of significant budgetary reductions coupled with significant visitation increases, we can only realistically foresee (despite an energetic and dedicated staff) a future of significantly decreased quality management of the LMNRA. Examples of decreased quality management would include less law enforcement, reduced maintenance, and general deterioration of the natural environment. We further recommend the analysis include a discussion of potential effects to Boulder City where the NPS is a major employer, to the economy of Las Vegas, and to tourism in southern Nevada.

The National Park System includes 39 national parks, 92 national monuments, 10 national seashores, 60 national historic sites, and 17 national recreation areas such as LMNRA. The NPS contains 76 million acres, an area slightly larger than Nevada. The current budget for the NPS is slightly less than 1 billion dollars. For comparison purposes, the Star Wars research budget for 1986 is 2.5 billion dollars.

The NPS is charged with preserving America's national treasures. It is authorized to protect the wildlife of Yellowstone and Yosemite. It is sanctioned to promote the scenery of Sequoia and Shenandoah. It is mandated to preserve the grandeur of the Grand Teton and the Grand Canyon.

The LMNRA is America's largest National Recreation Area. The LMNRA has more annual visitors than virtually any single National Park. The LMNRA is a region of spectacular scenery and superior recreational assets. Half the visitors to the Entertainment Capital of the World also visit the LMNRA. It is

COMMENTS

for these reasons we suggest the preceeding recommendations to protect and conserve this most unique national resource.

Cordially,

Mark Bird

Mark Bird, Chair
Las Vegas Group
P. O. Box 19777
Las Vegas, NV 89132

Copies of this open letter have been sent to the following individuals and organizations. Any of these individuals and organizations are welcomed and encouraged to make copies or excerpts of this letter for publication or distribution. Any entities wishing to comment on the LEIS must submit statements by July 31, 1985.

1. Senator Paul Laxalt
2. Senator Chic Hecht
3. Representative Harry Reid
4. Representative Barbara Vucanovich
5. Nevada Governor Richard Bryan
6. Arizona Governor Bruce Babbitt
7. Mayor Bill Briare of Las Vegas
8. Las Vegas Councilman Al Levy
9. Las Vegas Councilman Paul Christensen
10. Las Vegas Councilman Ron Lurie
11. Las Vegas Councilman Bob Nolen
12. Mohave County Board of Supervisors
13. Clark County Chairman Thalia Dondero
14. Mayor Lorna Kesterson of Henderson
15. Mayor Bob Farraro of Boulder City
16. The Las Vegas Sun
17. The Las Vegas Review Journal
18. The Henderson Home News
19. Boulder City News
20. Mohave County Minor
21. Toiyabe Trails
22. The Nevada Magazine
23. KVBC TV-3
24. KVVU TV-5
25. KLAS TV-8
26. KTNV TV-13
27. Nevada Commission on Tourism
28. Las Vegas Convention and Visitors Authority
29. Boulder City Chamber of Commerce
30. Henderson Chamber of Commerce
31. Desert Research Institute
32. UNLV Geoscience Department
33. UNLV Biological Sciences Department

RESPONSES

COMMENTS

RESPONSES

- 34. UNLV Sociology Department
- 35. UNLV Environmental Research Center
- 36. Clark County Planning Department
- 37. City of Las Vegas Parks and Recreation Department
- 38. Callville Bay Marina
- 39. Cottonwood Cove Development Co.
- 40. Echo Bay Resort, Inc.
- 41. Lake Mead Lodge and Marina
- 42. Lake Mohave Resort, Inc.
- 43. Overton Beach Resort
- 44. Temple Bar Marina
- 45. Willow Beach Resort
- 46. National Park Service, Washington, D.C.
- 47. National Park Service Regional Offices
- 48. Fraternity of the Desert Bighorn
- 49. Nevada Organization for Wildlife
- 50. Nevada Wildlife Federation
- 51. Nevada Wildlife Department
- 52. Red Rock Audubon Society
- 53. Soroptimists of Las Vegas
- 54. League of Women Voters
- 55. Citizen Alert
- 56. Sierra Club National Office
- 57. Sierra Club Legal Defense Fund

COMMENTS

RESPONSES

TOMORROW (continued)

in 1979. The treaty was never ratified, but both sides--on the surface, at least--have been following it. It expires at the end of the year.

SHOULD U.S. KEEP SALT II?

The betting now Reagan will extend U.S. adherence to pact. Reasons--Soviets are suspected of having exceeded SALT II limits, but they're putting out the word that they intend to continue observing the treaty. Letting SALT II lapse would give a go-ahead to the Kremlin to deploy new missiles, planes and submarines without retiring other weapons. Ending it would stir up protests at home and among allies.

New Labor Secretary Brock is mapping an ambitious agenda. He plans attacks on youth unemployment, improvements in workplace safety and a new effort toward pension reform. A top priority is to send Reagan administration fences with unions. He has appointed a former United Auto Workers attorney to a key job. Brock met May 8 with top leaders of the AFL-CIO. It was the first such session between the AFL-CIO and a Labor Secretary in four years.

TROUBLED FARM LENDERS

The federal farm-credit system is sending out danger signals. Eight production-credit associations--prime farm lenders--in the Northwest have failed in the last two years. Many others are troubled. The nation's 400-plus PCA's will lend 17.5 billion dollars in 1985. Farmers also are flocking to the Farmers Home Administration for loans. FmHA, under political pressure, is dishing them out by the carload. FmHA will provide farmers 3.8 billion dollars in loans this year. What happens if these debts turn out bad? They will pour more red ink into federal ledgers. Federal lenders will be burdened with farmland, further depressing land values. All that carries the threat of collapse of the farm-credit system.

DECAY IN NATIONAL PARKS

Visitors to many national parks this summer will find fewer rangers to give them tours, deteriorating nature trails. Familiar reason: Funds cut for 334 parks visited by 79 million people yearly. Result--There's no money to restore and reopen most of the health spas at the Hot Springs National Park in Arkansas. Yosemite Park in California has fewer than half as many ranger-naturalists as a decade ago. Staff cuts ahead for parks at old Indian ruins could mean more thefts of artifacts. The outlook: More of the same. Reagan wants to chop the budget for national parks by 30 percent from the current 860 million dollars.

Whistle-blower laws are getting popular in the states. Seven legislatures are considering bills to protect employees from retaliation for revealing information unfavorable to an employer. Since 1981, 19 states have enacted laws. Most laws apply to government employees, but seven states extend protection to private workers.

Your chance of being a violent-crime victim this year is 1 in 33. How does that compare with risks of some other misfortune? Chance of being injured in an auto accident is 1 in 40. Death of spouse, 1 in 100. Highest risk: A 1-in-10 chance of an accidental injury at home.

LAW OFFICES OF
PARSONS, BEHLE & LATIMER
A PROFESSIONAL CORPORATION

185 SOUTH STATE STREET, SUITE 700
POST OFFICE BOX 1896
SALT LAKE CITY, UT 84147-0896
TELEPHONE (801) 532-3234
TELEFAX (801) 532-3234, EXT. 273

JOHN B. WILSON
ROBERT C. HYDE
CRAIG B. TERRY
DAVID M. ANDERSON
KEVIN J. O'ROURKE
PATRICIA J. WINNILL
JAN P. BENSON
FRANCIS M. WILSON
J. STEPHEN LASSAW
DANIEL W. HINDERT
T. PATRICK CASEY
ALICE L. HARRIS
VALDEN R. LIVINGSTON
JOHN A. ANDERSON
D. N. CHAMBERS
BYRON J. SAAR
*MARK E. RINEHART
MICHAEL L. LARSEN
JOHN W. ANDERSON
DAVID G. MANGUM
JULIA C. WEBB
DEREK LANGTON
*ADMITTED IN COLORADO ONLY
*ADMITTED IN CALIFORNIA AND
SOUTH CAROLINA ONLY

1801 "K" STREET, N.W., SUITE 100BL
WASHINGTON, D.C. 20006
TELEPHONE (202) 639-0862

FORMERLY
DICKSON, ELLIS, PARSONS & MCREA
1882-1889

OF COUNSEL
CONSTANCE K. LUNDBERG
LYNNE D. FINNEY

C.C. PARSONS
(197-1988)
CALVIN A. BEHLE
1947

July 29, 1985

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers:

Thank you for the opportunity to comment on the Lake Mead NRP Draft General Management Plan ("DGMP"). My comments, on behalf of the Utah Mining Association ("UMA"), will be limited to the National Park Services' ("NPS") evaluation of the energy mineral potential within Lake Mead National Recreation Area (the "NRA"), and NPS' proposed restriction of mineral exploration opportunities within the NRA.

SUMMARY OF COMMENTS

1 Each alternative within the DGMP, other than the "no action" alternative, virtually eliminates any reasonable opportunity for mineral exploration within the NRA. Unfortunately, the record reflects that NPS has virtually no information about likely mineralization or mineral development, to support this limited selection of alternatives.

2 NPS must be able to demonstrate a compelling reason if it intends to eliminate the existing opportunities for mineral leasing in the NRA. Historically, there has been no apparent land management problem associated with limited mineral exploration within the NRA. Public opinion has not demanded the elimination of mineral leasing activities within the NPS. In fact, public opinion has supported leasing. Yet, despite this history and the existence of ample NPS authority to mitigate or eliminate site-specific impacts of any proposed mineral

- 1 Refer to Nevada BLM responses 2 and 9.
- 2 NPS management decisions concerning zoning are based on protection of natural and cultural resource values and recreational needs, not on mineral resource values or occurrence. As a result, the areas open or closed to mineral leasing are not located according to known mineral potential or lack of potential. However, in analyzing the impacts of the proposed actions, we have considered the mineral potential of the area. Leasing has been a land management problem for many years because of lack of adequate planning and the need to review lease applications on a case-by-case basis without the assistance of an overall management guidance document. Over 700 lease applications have been reviewed by the Park Service in the history of the NRA, and approximately 268 have been issued. The review of these leases and the compliance required on the part of the Park Service has presented a substantial manpower commitment and expenditure of federal funds. The mineral leasing program has not resulted in the production of any minerals or the identification of any mineral deposits. The options were limited to streamlining the process by eliminating areas of resource concern from potential leasing, or implementing a cost lease review and compliance (regardless of whether the lease or permit is approved), and then attaching stringent surface protection stipulations to the leases.

exploration or development activities, NPS seeks to essentially eliminate a NPS management option, mineral leasing, specifically approved by Congress. UMA recommends a more thorough analysis of the mineral potential of the NRA and a more flexible and reasoned approach to mineral exploration and development opportunities.

COMMENTS

The DGMP proposal virtually eliminates mineral leasing in the areas of interest to the mining industry. The DGMP suggests that some 78% of the NRA is presently open to mineral leasing. The proposed action reduces this percentage to 10%. Alternatives A and B reduce the "leasable" area to 3% and 22%, respectively. See Table 2. The area of principal interest to the uranium industry, i.e., the Shiwits Zone, has been entirely closed to mineral leasing (p. 20).

These proposed decreases in land available to mineral leasing are staggering, unexplained, and contrary to public opinion on the issue. In 1982, an "issue survey" conducted by NPS concluded that a "clear majority" of responses to the DGMP survey felt that "mining and mineral leasing is acceptable in the Lake Mead NRA within limits (i.e., not visible, etc.)." If NPS seeks to exercise its discretion to fundamentally amend and restrict the areas designated by regulation as available for leasing, it must properly explain the factual basis for doing so. The DGMP fails to offer an adequate explanation of the limited and skewed selection of alternatives.

Even the "leasable" area figures presented, i.e., 10, 3 and 21%, do not accurately reflect the true scope of the proposed reduction. Much of the theoretically "leasable" land is within areas that NPS will ultimately designate as wilderness (compare pp. 20 and 204) or effectively withdraw from leasing as a result of restrictions incident to the forthcoming Mineral Management Plan. Or, more importantly, the theoretically leasable land is located within areas that have never been the subject of any demonstrated mineral interest or potential. In comparison, in areas of high mineral interest, e.g., the Shiwits Zone (p. 37), the opportunity for mineral development has been totally eliminated (p. 20).

The NPS does not have a record upon which to base such restrictive proposals. A previous NPS study, DES 74-3 ("Draft Environmental Statement for the Lake Mead Wilderness Proposal") acknowledged that NPS did not have any mineral data sufficient for informed decision making. It noted:

3 It is the intent of the National Park Service that all lands shown in the resource utilization subzone be eventually open to consideration for mineral leasing, subject to necessary stipulations and resource concerns (as specified in the minerals management plan).

4 Refer to Nevada BLM responses 2 and 3.

5 The National Park Service has changed its terminology to fit BLM mineral potential terminology. The O'Brien report is a summary of the known mineral occurrences. Although this report may have overlooked some information, the Park Service took the necessary steps to improve on this information as noted in Nevada BLM response 2.

COMMENTS

Mr. Jerry D. Wagers
July 29, 1985
Page 3

Because no comprehensive mineral inventory of the recreation area has been prepared, future discovery of commercially exploitable mineral deposits remains possible.

DES 74-3 at 38. The DGMP, however, inexplicably contends

the results of the mineral resources evaluation indicates that there are no minerals within the recreation areas of significant quantity or quality to affect the nation's supply of any given commodity.

6 (p. 203). A review of the principal authority for this conclusion, the O'Brien report, and the sources upon which it relies, reveals no meaningful information concerning mineralization of the area. In particular, it virtually ignores the high grade uranium deposits that are now thought to widely occur throughout the Grand Canyon region. Unlike uranium deposits throughout much of the Colorado Plateau, the Grand Canyon deposits are the only domestic uranium deposits that presently are economically developable. One UMA member, Energy Fuels Nuclear, Inc., described the nature and occurrence of these deposits to NPS representatives in detail in a meeting in the Regional Director's office on November 18, 1983 and, I understand, gave NPS representatives a tour of a representative uranium deposit and mining operation near the NRA. Some 27 prospecting permit applications relating to such deposits are apparently presently before NPS. Many additional permit applications have no doubt been put "on hold" by mining companies due to NPS' longstanding inaction on pending permit applications. Had NPS permitted any prospecting under these permits, mineral information would now be available to permit informed decision making. On the limited record that exists, however, it is inconceivable that NPS could conclude in the DGMP that "the probability of future mineral development . . . is remote because of an unfavorable mineralized environment of the recreation area." (p.203)

7 I was more than mildly surprised to read that any "mineral resources evaluation" had purportedly been completed in connection with the DGMP. In a Freedom of Information Act request dated October 17, 1983, I requested all such information. After receiving a reply from NPS on December 13, 1983, that did not include any mineral data, I again requested that NPS provide such documents so that my mining clients could utilize such documents in the DGMP process. The NPS response, dated December 22, 1983, was as follows:

RESPONSES

6 Refer to Nevada BLM responses 2, 7, and 15.

7 As stated in our letter of December 22, 1983, the staff at Lake Mead National Recreation Area, when preparing the FOIA response, was not aware of any additional information not already submitted to Mr. Garver.

Mr. Jerry D. Wagers
 July 29, 1985
 Page 4

In response to your letter of December 13, 1983, we are not aware of any additional material, documents, or papers, that exist in our files concerning mining and mineral resources used in conjunction with the development of the General Management Plan.

Copies of these FOIA letters are attached to these comments, and incorporated herein. On January 31, 1984, Superintendent Wagers confirmed by telephone that no minerals analysis had been prepared. Yet NPS now contends it is relying principally upon a 1982 study by O'Brien (p. 37) and certain "other sources" of mineral data (p. 199) none of which were identified by NPS in the FOIA process. In view of the continuing NPS inaction on pending prospecting permits, apparent disregard for the information provided by Energy Fuels, and statements of the NPS that minerals studies did not exist, UMA members and the public have had no reasonable opportunity to evaluate or participate in the so-called "minerals analysis" of the NPS before the instant remarkably restrictive alternatives were formulated. resources in the absence of quality data concerning mineral departure from the existing system of mineral leasing described in the DGMP:

Lease applications are [presently] considered within all other lands of the NRA, subject to a determination of effect upon surrounding park resources. Applications are reviewed through the NEPA process, which identifies significant resources. Those resources are then either excluded from the lease or stipulations are applied to mitigate the impact to them.

(p. 68). Conceptually, at least, the existing system makes sense. NPS should not rule out any area from exploration until it has some facts concerning the mineralization of the area, the nature and duration of any mineral exploration or development proposal and the opportunities to mitigate or eliminate adverse impacts to other values. Notwithstanding this comment, however, you should not be misled. UMA is not enthusiastic about the existing leasing system. In practice, it has not worked to permit any meaningful exploration. On the other hand, it does not engage in the unfounded presumptions contained in the DGMP, i.e., that no minerals exist or that minerals may not be developed consistent with other values and

COMMENTS

RESPONSES

Mr. Jerry D. Wagers
July 29, 1985
Page 5

Congressional objectives for the NRA. In the absence of compelling reasons to eliminate the public's opportunity to determine whether minerals exist within the NRA, NPS should retain the existing system and attempt to improve it to provide meaningful exploration opportunities consistent with other public values.

Lake Mead NRA is not a typical unit of the National Park System. Unlike other NPS areas, Congress specifically chose to protect the possibility of mineral development within the NRA. NPS should attempt to manage the NRA consistent with all Congressional purposes. Clearly it is appropriate to protect non-mining NRA values. However, there are less restrictive management options available to NPS than a total ban on prospecting within the principal areas of interest to the mining industry.

Very truly yours,



Patrick J. Garver

PJG:ss

0082Q

COMMENTS

WILLOW BEACH RESORT

WILLOW BEACH, ARIZONA

Mailing Address:
Post Office Box 187
BOULDER CITY, NEVADA 89005
602/767-3311

July 30, 1985

DJK

Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
621 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers:

It is six years this month since the National Park Service launched it's drive to protect Willow Beach Resort facilities from a floodplain situation. Closing of the N.P.S. campground July 19, 1979, has hurt our business. Frequent rehashing of our hazardous area by the media also has had its effect on business.

We would urge that this Resort be put on a high priority for construction of an R.V. campground between the Resort and the Fish Hatchery. We understand frequent mention of Willow Beach Resort as a flood hazard in the Draft Environmental Impact Statement - Volumes I and II - qualifies this area for high priority. In view of this, we request that the campground relocation be the first consideration.

Relocation of the trailer village will not create the trauma your report suggests among our trailer village residents. Only a few of those residing here in July, 1979, remain. New tenants have been told what to expect if the government relocates the trailer village.

We also wish to point out that James Kelly only rents a trailer space and boat slip and is not a spokesman for Willow Beach Resort. Two members of the Denver team ~~that~~ he was responsible for one of the engineers transferring. We feel ^{implied} he damages our relationship with N.P.S.

Having personally witnessed two floods in Las Vegas recently and two in Boulder City last year, we feel minor attention to the canyon roads at Willow Beach Resort will greatly alleviate our flood hazard.

We placed Willow Beach Resort on the market in June of 1984 but the General Management Plan stalls any prospect because of its uncertainty. We feel we have been kept in limbo long enough and urge action.

Sincerely,

Audrey M. Hebb
Mrs. Audrey M. Hebb
President

AWW:chg

RESPONSES

1 The comment regarding trauma to trailer village residents because of relocation only applies to alternative B, not the proposed action. Under alternative B (which was considered and rejected), the trailer village would be removed and not replaced.

COMMENTS

RESPONSES

HALTER BARBUCK
 4050 Palos Verdes, Apt 19
 Las Vegas, NV 89119
 29 July 1985

Mr Jerry Wagers
 Superintendent
 Lake Mead NRA
 601 Boulder Hwy
 Boulder City, NV 89005

Comments Concerning the Draft EIS for the Lake Mead NRA

Mr Wagers:

The Mining Industry is attempting to procure leases for Uranium exploration on the Shivwits Plateau. It's common knowledge of the depressed state the Uranium industry is in. This could only be considered a blatant and obnoxious act to hold a cloud over these beautiful lands. Please consider the verbal comments I made at the public hearing in Las Vegas, June 18, 1985. It must also be emphasized the Uranium possibilities are speculative at best (O'Brien 1982). It is my opinion there is no need to even consider the feelings of the Uranium industry because of the comments and my factual verbal comments.

Aside from the above, the undeveloped back-country will be protected. This contains side-canyons (Whitmore, Parashant and Andrus) to the Grand Canyon with views into Grand Canyon National Park. With the uproar over noise pollution in GCMR the back-country could use all the help it can get. This should make it easier for the Park Service to reconsider its decision to build an airstrip for "administrative purposes" at Shivwits. This is of course inconsistent with proposed wilderness status of the area. The wilderness act prohibits access by airplane. It is essential to gain access to the area, a helicopter should do just fine. For the above proposes wilderness status the Park Service should also reconsider its plan to build a ranger station, primitive campsites and toilet facilities at Shivwits.

I support the NPS management zoning plan. Particularly the "Special use zone" subsegment "resource utilization subzone"(mining). This would give the mining industry 148,970 acres in which to apply for permits or work their current claims such as A11815, A10896, A10897. It would deny them all other areas of the NRA where it's legal for the Park Service to do so.

Bowl of Fire (area 50) of "Management Zoning" is classified as having "Significant Natural Features"(area 9). It would not, because of it's size (less than 5000 acres) meet wilderness criteria. The area is however contiguous with the BLM's proposed Muddy Mountain Wilderness and could certainly meet all criteria if Muddy Mountain is so designated by congress. Please keep this fact in mind when the final EIS is drafted or for future wilderness studies.

The BLM is expected to recommend wilderness status for their land on Wilson Ridge. This lies in view of scenic highway 93. In-between according to "Management Zoning" is area 24. The purpose of granting this a zoning criteria #2 would be to protect wilderness values on nearby BLM lands(Wilson Ridge) and protect natural atmosphere and views along scenic hwy 93. I realize #2 is worded to include lands only in the NRA but perhaps could be reworded to reflect above.

1 See response 2, Sierra Club, Legal Defense Fund.

2 See response 5, Sierra Club, Toiyabe Chapter.

3 See response 4, Sierra Club, Toiyabe Chapter.

COMMENTS

RESPONSES

According to the document (DEIS Vol II P. 201) there are no mineral leases or other mineral interests in Area 24. The availability to mining in the entire NRA would be reduced from 148,970 acres by the amount of acreage in area 24. It's duly noted by the undersigned that issues raised in the above 2 paragraphs are addressed on P. 51 titled "Adjacent Federal Lands".

Illegal vehicle use is always a cancer on public lands. Perhaps cemented wooden poles in the ground would help or combination heliconter and jeep operation. Confiscation of illegal vehicles could be, if allowed, an answer. Stiff fines or jail sentences should be considered. Ignorance in a crucial matter like this should be no excuse. Fines and sales of violating vehicles could help defray expenses. Perhaps congress could help.

In summary: The highly speculative nature of the mineral resources within the NRA indicates that the long term gains obtained from preserving the recreational values of the park far outweigh the uncertain relatively short term gains from mineral development(P. 302). No justification other than informational has been demonstrated for even the slightest development on Shiwits. Please don't develop. Don't add 30 campsights to the South Cove of the GB/GW zone. Hopefully this would not make any trash problems worse. Please keep this area as wild and pristine as possible. NPS to be commended on their multi-year formula for when to further develop the NRA. Hopefully this could be confined to already developed areas. The proposed action for the other seven management areas, except where noted(area 24), is a good compromise.

Sincerely,
Walter Barbock
WALTER BARBUCK
member
Sierra Club

COMMENTS

3370 Frontier St.
Las Vegas, NV 891
June 28, 1985

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, NV 89005

Dear Mr. Wagers:

I would appreciate my remarks in this letter being included in the official record of public comments on the Draft Environmental Impact Statement (DEIS) for a proposed General Management Plan (GMP) for the Lake Mead National Recreation Area (LMNRA).

I feel very strongly about the importance and need for a GMP to provide long-term direction to the management and development of LMNRA. I have been enjoying the Recreation Area, both its land and water resources, throughout the 28 years of my residence in southern Nevada, and I have become increasingly aware of the degradation of the environment there over the years as a result of the problems attending growth in visitation. This planning effort should help immeasurably in addressing these problems.

I especially feel good about the plan to zone the Recreation Area for various uses, especially with respect to oil and gas and mineral activities. The protection of the scenic views as well as the natural environment and significant features is especially appreciated. The phase out of mining in areas other than an acceptable Resource Utilization zone is a critical part of any plan. This is also true for the recognition of areas answering the basic suitability criteria for wilderness, since wilderness can complement and enhance without conflicting with the basic purposes of the Lake Mead Act or the Park Service's mission. Portions of the Recreation Area are to me integral with the contiguous Grand Canyon National Park, and I appreciate the effort to protect opportunities for enjoying this incredible natural wonder.

Many of the objectives of the Proposed Action Alternative are excellent. Addressing the growth of visitation is realistic so long as such growth does not become a self-fulfilling prophecy. Proposed flood control efforts seem reasonable and desirable. Protection of the environment through education, ranger contact, beach cleanup, ORV control and land rehabilitation is excellent.

Despite agreement with the general objectives and most specific proposals, I wish to express some concerns with the Proposed Action Alternative. These are as follows:

1. The proposed Resource Utilization Zone exhibits a tendency for an "out of sight, out of mind" mentality in its attempt at screening possible mining from public view, as if the public's perception of the area's vastness and naturalness can be maintained by a sort of facade, an illusion which would be destroyed upon closer exploration. Granted that mineral development would be eliminated in views from the lakes or most major corridors and that the best of the de facto wilderness

RESPONSES

- 1 Comment noted, no response required.

COMMENTS

RESPONSES

would be maintained, but what of the visitor touring the accepted primitive roads or hiking into the backcountry from roads or lakeshore? He should also be assured unmarred views and a feeling of naturalness and beauty. From this standpoint, I prefer something closer to an Alternative A Resource Utilization Zone while endorsing most other elements of the Proposed Action zoning.

2. The DEIS recognizes the wilderness qualities of the Shivwits and Sanup Plateaus yet advocates an administrative airstrip on the Shivwits. My feeling of wilderness has been repeatedly violated by aircraft overflights while visiting remote areas of the Grand Canyon, and I think encouraging increased aircraft intrusions through an airstrip is unwise. The Shivwits provides the closest thing to a wilderness experience I know of that is possible by auto, and I feel that primitive campgrounds or a ranger station would seriously impair the experience.

3. The scenic US 93 corridor through the Recreation Area south of Hoover Dam should be preserved in its entirety by zoning against mineral development east of the highway, as is already proposed to the west. This I feel is important in protecting the overall feeling of naturalness for the motorist. It is also important in eliminating a narrow wedge of potentially destructive zoning activity in the foreground of the expected BLM Wilson Mountain wilderness unit, which would be contiguous with the Recreation Area on the east. Indeed, this narrow strip would best be recognized in the plan as potential wilderness contingent upon Congress accepting a BLM proposal for wilderness on Wilson Ridge.

4. Similarly, the Bowl of Fire has intrinsic wilderness qualities of outstanding note and no conflicting management intentions. Its small size is not an obstacle to recognition of these qualities, especially if the area is viewed as potential wilderness contingent upon the BLM's contiguous Muddy Mountains wilderness proposal being accepted by Congress.

5. The Park Service says it intends to phase mineral leasing out of all zones except the finally determined Resource Utilization Zone. This logically implies that no approval of existing applications for prospecting permits would be granted on that portion of the 11,640 involved acres which fall outside this approved zone. But nowhere in the DEIS could I ascertain this essential criterion for approval or denial. I think this should be the most important criterion and should be explicitly stated.

I very much appreciate the hard work of the Park Service in formulating this document and the opportunity I have had in commenting on it.

Sincerely,

Howard G. Booth
Howard G. Booth

2 See response 2, Sierra Club, Legal Defense Fund.

3 See response 4, Sierra Club, Toiyabe Chapter.

4 See response 5, Sierra Club, Toiyabe Chapter.

5 Refer to responses 7 and 8, Sierra Club Legal Defense Fund.

COMMENTS

RESPONSES

2621 Beale Dr
No. Los Vegas,¹
28 July 1985

Jerry D. Wagner
LMNRA

601 Nevada Hwy
Boulder City, NV 89005

Dear Sir,

I support the decision to zone the Shivwits Plateau
closed to mineral leasing. This will probably draw industry
north because of the interest in uranium mining there, but
this decision will protect undeveloped back-country
containing side canyons (Whitmore, Parahent, Andrews) & the
Grand Canyon and will also protect the air and water
quality of Grand Canyon National Park.

I object to building a landing strip for "administrative
access" to the Shivwits area because this is inconsistent
with the proposed wilderness status of this area. Also,
it is inconsistent to build a ranger station, campsite, and
toilet facilities.

I support the proposal to eliminate mining from all
but 148,970 acres of the Recreation Area and that all
pending permits be denied which involve lands outside
of the area zoned for mining. Vol. II, p. 296, states that only
one lease of over 200 acres issued in the recreation area
has resulted in commercial production.

¹ See response 2, Sierra Club, Legal Defense Fund.

COMMENTS

RESPONSES

- 2 I propose that the Bowl of Fire be included in Lake Mead lands for wilderness as it is contiguous with the BLM's proposed muddy river wilderness.
- 3 I also propose that mining be prohibited in the narrow strip between U.S. Hwy 93 and the east boundary of the Res. Area in order to protect wilderness values on the nearby BLM lands and to protect the natural atmosphere and views along the scenic highway.

Sincerely,
Bob Futak

2 See response 5, Sierra Club, Toiyabe Chapter.

3 See response 4, Sierra Club, Toiyabe Chapter.

COMMENTS

Mr. Jerry Wagers, Superintendent
 Lake Mead National Recreation Area
 601 Nevada Highway
 Boulder City, Nevada, 89005

July 25, 1985

Dear Mr Wagers,

I am writing you in response to the "Lake Mead Recreational Area Environmental Impact Statement" published and distributed recently by your services. That I am long in replying can be attributed to the fact that in spite of my several years association with Willow Beach living, it was only by chance that I learned of aforesaid report and request for response.

Your report fails miserably to be an Environmental Impact report. Its greatest impact is a manner to modify the Willow Beach establishment, either totally or in great part. Your real objective is obfuscated! It could be an attempt to justify an earlier (and miserably) failed effort to close Willow Beach. It could be a bureaucratic attempt at fear-saving withdrawal from that ill-fated exercise. By initiating a poor brown "government buying" program, you could be hoping to remove that earlier defect through default.

If your researchers have genuine concern for people safety, they have all the intuition of a blind mole! If they were totally concerned about the "PMF" of any portion of the river basin, they would abandon the 100 year flood syndrome! It has already been proven inaccurate in the case of Willow Beach!

COMMENTS

They should recommend the removal of all humans along the river
"train" from Page, Arizona, to the Mexican border! Just one
"incident" (in the next 100 years, mind you) at Glen Canyon, Hoover,
Davis or Parker could wipe out another human lives! In
earthquake! Deterioration from 4 (or 5) tests! "Orange"! Some
down for radical with a semi load of TNT? Or WAR!
You people have an understandable paranoia on the Colorado
Canyon disaster. Yet, those conditions hardly began to exist
at Willow Beach. Why, the gullies feeding the main channels
to the resort are so minor that the State of Arizona didn't even
put a bridge on them! Bridges at 8-mile and 4-mile are miles
away from Willow Beach tributaries crossing Highway 93.

The authors of your report ignored consideration of a broad
scope of alternatives towards providing for increased people
participation and protection in the Willow Beach area. While
oblitating the structure of the Willow Beach resort, they conveniently
ignored the supposed adjacent safety risks to the launch ramps,
the parking area, the curbing dock, the rent-a-boat dock, the pump
out dock, and the marina. How inconsiderate are they?
Instead of re-building the world, why not just build on greater
structural protection on the trailer village diked? To answer increased
participation, increase the trailer sites "complex"! Create a new
Campground (or repair the old one!). And, get off our backs!

Sincerely,



N.K. GAY
13606-G LA JOLLA CIR.
LA MIRADA, CA
90638

RESPONSES

1

The alternatives presented for Willow Beach were the result of a long
process begun in 1979. Structural protection of existing facilities
was considered initially, but it was found to be economically
infeasible. Expansion of facilities at Willow Beach was also
considered but rejected because of high cost and site limitations.
The alternative to close Willow Beach was also discarded at that time
because of the strong public support to keep it open.

COMMENTS

Jerry D. Wagers, Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nv 89005

Dear Mr. Wagers:

I am submitting a written reply to your requested input on the General Management Plan published in April, 1985.

Please do not misinterpret the next statement as an "I told you so, Jerry", but if you will recall, at the public hearing held in the Federal Building in Los Angeles in 1976, I testified as a professional witness that if expansion of facilities were granted to the concessionaire at Katherine's Landing i.e. allowing more slips, houseboats and the construction of a berm, that the day would come when pollution would take over. Well, it happened in 1984.

1 It is still my strong opinion that, as was pointed out in your present impact statement, Katherine's Landing is over utilized and any additional development will merely increase a known and recognized problem. Development, if any, should be considered 10-12 miles north. This would relieve the overlogged condition and over utilization presently existing in the Katherine Area.

2 I would also suggest that serious consideration be given to restoring a realistic bilateral lease agreement with the cabinsite leasees. This holds many advantages for both the Park Service and the leasees. It provides a substantial guaranteed annual income (\$86,400.00) for the Park Service with virtually no cost except clerical billing and occasional field trip for compliance inspections. At Katherine's we provide our own water, sewers, electricity, phone service, trash pick up and VIP services, i.e. pick up of trash along access road to cabinsite point. This is a customary practice by several of our ladies who routinely clean up after a weekend. In fact, one of our gals is presently recovering from a broken leg sustained while cleaning up trash on the beach at cabinsite point. We also act as a deterrent to off road travel, vandalism of NPS informational road markers, destruction of natural vegetation, rock formations, fires, etc. We are the eyes and ears for the NPS just by our mere presence in a remote but congested area.

3 In accordance with the original presentation for the lease sites, Congress expressed itself very clearly that the location of the cabin site area could not conceivably be utilized for any other purpose due to terrain and natural run off without unwarranted heavy expenditures which would violate the natural growth and terrain.

In addition, the original lease agreement contained the two-year notice of cancellation. I must, at this point, agree with your conclusion that any thought of lease cancellation would indeed be a very traumatic and tragic event to allow to happen to the lease holders.

RESPONSES

1 A secondary launching facility is proposed approximately 7 miles upstream from Katherine Landing. The purpose is to disperse use in the lower portion of Lake Mohave and to alleviate a portion of the use and congestion at the Katherine Landing ramp area.

2 A public meeting was held to discuss the policy of the National Park Service in relation to the cabin site policy at Lake Mead National Recreation Area. The results of that meeting were that extensions of the existing leases will be granted, but the leases will be nontransferable. All annual lease fees that are collected go directly into the United States Treasury. The National Park Service does not actually receive any of that money.

3 The enabling legislation does not make reference to the suitability of the terrain for cabin site use. The legislation does, however, declare cabin site use as one of the permitted activities within the recreation area. As a permitted activity cabin sites are allowed, subject to regulation by the secretary of the interior, provided they do not conflict with the recreational or reclamation use of the area. Regulations for cabin site use have been developed and published in 43 CFR, 21.4. The regulations state that cabin site permits will be "reviewed at least once in every 5-year period to determine if the continued use of the individual cabin site is not inconsistent with the needs of the general public for use of the area. In periodically reviewing whether the existence of private cabin sites conflicts with the best public use of an area, consideration will be given to (i) existing and projected public need for the area, (ii) compatibility between public uses and private cabin sites, (iii) development potential and plans for the area, and (iv) other relevant factors. This review was completed as part of the GMP planning effort. The cabin sites were found to be compatible with public use, and no need for these sites was projected.

COMMENTS

Without exception, I feel confident in saying that the lease holders have a high level of pride in contributing to the Lake Mead Recreation Area monetarily, through lease fees, by maintaining respectable neat private structures and by their unsolicited services provided to the NPS. I feel it is well within the realm of the NPS to grant a reasonable lease with the right to transfer said leases.

With reference to the right of lease transfer, this is more advantageous to the NPS due to a guarantee of continuous lease fees. A lessee who loses a spouse and finds it difficult to retain the lease invites degradation of the area and demolition of private structures one at a time until there is left a burned-out ghetto type area. The loss of revenue to NPS and the loss of pride in the area by the public are ugly compromises to a reasonable and responsible request.

4 In view of the present endeavors by the Arizona Land Commission to acquire portions of land within the Katherine area, to be sold to developers, I feel the NPS and the cabin site lease holders should join hands to avoid such a travesty from occurring.

I am looking forward to the continuation of compatible and acceptable conditions to all parties concerned in this most important matter.

Sincerely



N.R. Hattman, President
Katherine Cabinsite Ass'n, Inc.

RESPONSES

4 The National Park Service has related to the Arizona Land Commission that no land within the Katherine area will be considered for their acquisition.

July 30, 1985

Douglas Holmes

R PRESCOTT COLLEGE

National Park Service
 Lake Mead Recreation Area
 Comments on Management Plan.
 Mr. Jerry Weavers
 To whom it may concern:

I have read the R.P.S. management proposal for the Lake Mead National Recreation Area. I am familiar with the region and the ecological importance of the area. I generally agree with the recommendations proposed by the R.P.S. and would like to support their opinion on the preferred alternative as a management option. Specifically I would like to emphasize the following points:

1. I feel it is extremely important to close the Shivwits Plateau to mineral leasing. The area is geographically adjacent to Grand Canyon National Park and should be managed as a wilderness to protect the ecological integrity of this area. It should have originally been included in the Park, as it is a part of the same geographic and ecologic unit. Any mining or operation in this area would affect air and water quality of the Shivwits and Grand Canyon National Park.

1 As shown on the Proposed Action/Management Zoning map in volume 1, the Shivwits Plateau has been zoned as a natural zone which precludes mining activity. It must be noted that there are a few nonfederal parcels of land on the Shivwits Plateau which the National Park Service does not have any jurisdiction over and within reason must allow access to the owner.

COMMENTS

2 I disagree with the P.P.S. opinion that a landing strip be built on the Plateau. Air traffic is already a major negative factor in the canyon, and any further encouragement of air traffic should be avoided.

3 While it was not specifically mentioned in the P.P.S. statement, a review of boating regulations should be made to create a consistent policy between boaters on Lake Mead, and those utilizing the Grand Canyon. Boats should not be allowed to motor above Exposition Canyon in the Lower Granite Gorge, and Lake Mead Boaters should be required to maintain the same strict camping ethics as those who boat through the Canyon.

I have used this area both as a recreational and an educational resource. It is a significant wilderness and ecological resource. (One day we counted 36 desert big horns) My compliments to the P.P.S. for their hard work in preparing the management proposal.

Respectfully,
D. Anthony Anderson
Instructor of Env. Studies.

RESPONSES

2 Management access must be provided to the Shivwits Plateau so that the area can be managed in the manner set by Congress in the enabling legislation and the guidelines set by the National Park Service, whether it be as a natural zone, a special use zone, or a development zone. This isolated area is susceptible to unwanted uses, such as vandalism to historic structures and archeological sites, poaching of animals, and other activities. A small facility is needed at the entrance to monitor vehicles, fire potential, and other emergency conditions. The facility will remain in its present location and be renovated. In response to a demand for unimproved campsites at the fire camp in the past, two or three level areas with grills will be installed for visitors who choose to stay there impact on the meadows will then be reduced through less indiscriminate camping on the Shivwits Plateau.

An airstrip is proposed to provide for proper supervision and delivery of adequate supplies in an economical method and timely manner. The airstrip will replace the one currently being used on the access road, which is approximately 15 miles (45 minutes) from the fire camp when the weather is good. Airplane service to the fire camp will require one sixth of the time it takes to drive. Total use of the airstrip for management is likely to be, at the most, twice weekly and only May 1 to September 30 (the fire season). The only time the airstrip will be used more frequently will be in the case of a forest fire.

The proposed strip will be available for use only by the NPS airplane (a single engine with STOL equipment) and will not be large enough to allow larger twin-engine planes to land. The normal flight pattern is to the west, which is the shortest route to the NRA's administration areas and not over the Grand Canyon. This is the same flight pattern that is being used now. Although the flights are infrequent, they cause noise and visual intrusions to the wilderness qualities of units 13, 14, 21, 24, 30, and 31 within the recreation area. To minimize the number of these flights, the superintendent will review each trip to determine the necessity and efficiency of aircraft use, consistent with park goals. If the airplane is not the most efficient method of accomplishing the purpose of a trip, alternative access means will be used.

3 We will be discussing this with the superintendent of Grand Canyon in the near future.

July 13, 1985

Dear Mr. Wagers,

We are writing in regard to the General Management Plan for Fraker Mead. We are cabin owners at Stewarts Point and have a vested interest in what happens to that particular area and to the whole area in general.

Concerning the Stewarts Point site we were greatly relieved to see there were no changes planned for the cabin area.

As former campers and now cabin owners we would like to see the area remain the way it is. We were drawn to the area because of its remoteness and lack of facilities. We feel by paving the access road and putting in a launch ramp it would draw many more people to the area and it would lose the quality we appreciate the most.

There are many places on the lake that have facilities for those people who want that kind of experience but we feel that there should also be places for those people who don't want that kind of experience.

We would like to thank you for giving us the opportunity to voice our opinion.

Sincerely,
Charles & Colene Jenkins

1 Comment noted, no response required.

COMMENTS

RESPONSES

James C. Kelley

July 13, 1985

Mr. Jerry Wagers, Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

Dear Mr. Wagers,

This is in response to the "Lake Mead Recreational Area Environmental Impact Statement" as published by the National Park Service.

I put the title of the report in quotations because it is purely a title and certainly not an Environmental Impact Statement.

As with the Mooseburner report on Willow Beach, this is a very poor quality report written with no actual, current, nor proposal for future knowledge of the situation.

As with the Mooseburner report and the accompanying Falvey Mitigation report, it appears that this report was written with the same reckless abandon of, "Do something". It doesn't have to be good but make it expensive and controversial so that we can have many, many meetings.

Due to the fact that my primary knowledge is the Willow Beach Resort area, I will limit my comments to this area.

1 First of all the pictures, and especially the picture of the canyons around Willow Beach, are misleading. The canyon picture is taken from a spot almost up to the restriction cable. This is at least eight miles upstream.

2 I am sure that when the Sierra Club or the press find that you are proposing to move the trailer village to what you call the old settling ponds from the sewage plant, the headlines will probably read that the Reagan Administration is now subdividing Toxic Waste Dumps. Which these are, indeed, abandoned Toxic Waste dumps and would certainly never even be considered in a true Environmental Impact Statement.

3 We then come to the tremendous growth of the visitors to Willow Beach and the need for 100 additional boat slips.

This is absolutely ludicrous!

1 All pictures at the beginning of a section relate to the zone, not a specific developed area. Thus these pictures represent the Willow Beach zone, not the Willow Beach development.

2 We have had the public health officials inspect the settlement ponds that have not been used for 15 years and to approve their usage. The ponds never contained and were never used for disposal of toxic wastes.

3 This number of slips is not proposed but represents the maximum number that will be allowed in the area.

COMMENTS

James C. Kelley

-2-

Your projections, I am sure, were used and enhanced purely to get the budget increased. The figures were projected upward from the large number of visitors to Hoover Dam during the 1983-84 fiasco.

Tremendous crowds half of which were fascinated by the spectacular waterfall over the spillway and the other half in total awe at the mistake of the century by the Government agencies who carried on the carnival spirit through those quasi congressional hearings, pointing the finger at one another and blaming the Reagan Administration. I am quite sure that if they could, they would also have blamed El Nino.

Yet you use these projections for the benefit of the report and state further that the steady drop has been 14% at Willow Beach.

There is absolutely nothing said about the water flow through this area from the installation of the new generators at Hoover Dam, and the Central Arizona Project which comes on stream December 1985 and will be moving a great deal of water through 1992.

Some of the projections of the Bureau of Reclamation again propose 60 million CFS through the dam. No consideration is given to the damage or devastation this causes.

Probably with the interest in the carnival atmosphere and the wet T Shirt contests, no one noticed that the feed along the bottom of the river for fifteen plus (15+) miles below the dam was destroyed by the scouring action of the water. Fishing, as we once knew it, is not back yet and with the heavy flow, it will never return.

Now if you are going to turn Willow Beach into a Ghost Town, why should a great deal of money be spent rearranging it into a dangerous, toxic and disease ridden residential resort other than to be able to write many more reports and spend millions changing it back.

I just don't get it.

James C. Kelley
James C. Kelley

JCK:pf

RESPONSES

4

A document entitled "Hoover Powerplant Modification - Environmental Impact Statement" was prepared by the Bureau of Reclamation in 1983 and addresses all impacts to the river below Hoover Dam, including the expected high flows during peak electrical use and the environmental impacts associated with them.

COMMENTS

RESPONSES

Amencourt Forkuit
July 19-85

Ferry H. Wagers
Superintendent
Lake Mead Recreation Area
Dear Sir,

Thank you for sending me a copy of the impact statement. I can see that a lot of work planning has been done.

But also know that our government, having the money now or in the near future; as the government is cutting is ~~be~~ better project it can do to cut the budget.
So I do appreciate all the work planning for the

COMMENTS

1 money years, but do think it would be best interest of the cabin owners, to extend our leases for 25 more years, with the option of selling our cabin in those 25 years. It would really make a hardship on me, if I had to move the cabins.

I thank you very much for letting me express my opinion on this matter. You have been very nice to deal with.

I remain

Ora P. Nelesen
592 E 700 North
American Fork UT
84003

RESPONSES

1 No use has currently been identified for the cabin site areas, thus, we do not, for the length of the plan, foresee any cabin site lessees being asked to vacate their lots.

COMMENTS

RESPONSES

Mr. Jerry D. Wagers, Superintendent
Lake Mead National Recreation Area
601 Nevada Hiway
Boulder City, NV 89005

July 16, 1985

Dear Mr. Wagers,

Thank you for the opportunity to respond to the Lake Mead National Recreation Area/Arizona-Nevada Draft Environmental Impact Statement, dated April, 1985.

After reading both volumes, the proposed General Management Plan (GMP) seems to be the most appropriate for each zone in the Lake Mead area. The National Park Service (NPS) recognizes the need for expanded facilities for our increased tourist and local use.

I would like to commend the NPS for the flood hazard mitigation measures they have proposed. Any plan that is agreed to should incorporate these measures.

Wilderness should be included in the GMP. Coordinating several different plans, written at different times creates a problem when trying to tie all aspects of any given plan together. Time constraints are difficult but a complete package is more cohesive to work with and to comprehend.

Mining has been minimal over the years and will probably continue to be. Prospects for any significant find is unlikely, therefore, the proposed plan will not hurt mining.

In closing, the NPS has done an outstanding job in these two volumes. The proposed GMP should be the one chosen.

Sincerely,



Rebecca Parr
5303 Stampa Ave.
Las Vegas, NV 89102

- 1 Additional information on plans to follow the GMP, such as the wilderness plan and the minerals management plan, as well as present NPS plans for these lands, has been added to the document.

COMMENTS

L. Cordell Peterson
994 North 1725 West
St. George, UT 84770
July 28, 1985

Mr. Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, NV 89005

Dear Mr. Wagers:

Thank you for the opportunity to respond to the Lake Mead National Recreation Area Draft Environmental Impact Statement. The individuals that participated in compiling such an extensive document should be highly commended for their extraordinary effort.

The proposed action appears to be a viable alternative to meet the next 25 year NRA's expansion requirement without adversely affecting the pristine nature or jeopardize flora and fauna survivability within the NRA. In most cases, confining development to already established sacrifice area's or imposed sacrifice area's (i.e. areas of unauthorized encroachment) is a rational approach to meet projected recreational demand.

In reviewing volumes 1 and 2, the below listed comments are forwarded for final EIS consideration:

1 (a). Desert Bighorn Sheep (DBH) protection and preservation should, other than human safety needs, be considered the number one priority within the framework of the NRA General Management Plan (GMP). DBH protection and preservation should take precedence over mineral development, grazing or any human recreational development improvements. This includes new access routes into wilderness or potential wilderness areas. In this priority placement context, how does the expansion of the Boulder Beach and Las Vegas Wash areas, with associated increased human activity, impact area #57 (pps. 21 and 29)? On page 234, area #57 was identified as "significant natural feature" #8 which implied necessary protection is being properly focused. However, it is not clear if this is the only area within the NRA considered critical DBH lambing grounds or essential to DBH habitat need? If not, why are other lambing ground/critical habitat not considered and identified in the "special natural subzone" (p. 234).

Pinto Valley (p. 289) was identified as an area with possible DBH and oil/gas conflict. Mitigation measures were identified as a program to collect and record DBH response data to development after the development process commenced. Even though mineral exploration/extraction was considered a minor threat, if past attempts at mitigation by other resource agencies is an indicator, once exploration, including seismic exploration, and extraction commence, mitigation is relatively a meaningless word. The

RESPONSES

1 The River Mountains is an area of approximately 35 square miles that is bordered around its entire perimeter by development. The area has no natural water sources and in the distant past was used as a wintering area by bighorn sheep. The present herd of bighorn sheep is very healthy. They use the recreation area side (where man-made water holes are located) for summer range and the Bureau of Land Management side for winter range, with very limited migration out of or into the range. Some of the sheep currently water in a developed area of Boulder City and have become somewhat tolerant of the perimeter urbanization. Because the sheep have such a limited range within the River Mountains and virtually no unimpeded migration routes, it was felt that the area should not only be put into a natural zone but should be given one of the two special protection zone designations. Unit 57 on the Proposed Action/Management Zoning map was given environmental protection subzone status as were a number of other bighorn sheep lambing grounds.

Expansion of the Boulder Beach and Las Vegas Wash area is not expected to impact the River Mountains herd because almost all of the proposed improvements are between the lake and Lakeshore Road. Those few improvements on the River Mountains side of the road will remain far enough away from water holes and primary grazing areas so they do not impact the herd.

The possible oil/gas - bighorn sheep conflict near Pinto Valley will be mitigated through monitoring bighorn sheep if and when mining activities take place. Through the leasing procedure, some possible sheep conflicts have already been mitigated through stipulation. When a plan of operations is filed, access routes will be identified by National Park Service and appropriate state wildlife personnel so as to cause the least impact to sheep and other resources. All possible avenues to protect bighorn sheep populations from oil/gas development activities will be taken.

COMMENTS

RESPONSES

action of a "temporary shutdown of operations", would be difficult, if not impossible, to achieve if DBH research data so indicated such action was necessary. This approach to accommodate development, at the expense of the DBH, is not an acceptable alternative. The NRA and the NFS should actively pursue action to protect DBH habitat either through procurement of existing leases or through wilderness designation. It is realized Sec. 3(b) of Public Law 88-639 allows for mineral leasing. However, as it possible under Sec. 6 for the Secretary of Interior to prevent road access to lease areas for development purposes to preserve DBH habitat/lambing grounds. This is especially critical in reducing DBH stress, which may lead to a irreversible population decline prior to any field test assessment being finalized.

Because area #57 (p. 234) is identified as critical to DBH, why was this area not considered for Wilderness Act protection status (Wilderness Suitability, P. 205). Since DBH requires infrequent human contact, it would seem reasonable that the imprints of man would be non-existent or at the very most minimal. Therefore, the NRA should consider adding area #57 to recommended wilderness suitability status.

2 (b). Wilderness Act Criteria Designation. In order to protect the threatened bald eagle's winter habitat, unique geologic and significant values, and rare species such as Opuntia basilaris var. breveseal from extinction, the potential wilderness acreage of 14,645 acres and 13,030 for units 11 and 12 (p.207) should be changed to Wilderness Act criteria status. If the potential Bureau of Reclamation (BOR) project is as extensive as p. 207 suggests, the potential of Black Canyon's scenic beauty being severely altered is a real possibility. Any BOR promises, written or implied, to mitigate damage must be viewed with much skepticism. As a priority BOR mitigation, based on past BOR projects, is one of non-mitigation compliance or a token mitigation response. The NPS should fight such BOR projects. The first step in this process should be to redesignate units 11 and 12 as Wilderness Act criteria.

The Shivwits Plateau, Unit 33 (p. 210), 83,980 potential wilderness acres should be re-evaluated and the majority of this acreage designated as meeting the Wilderness Act criteria. Under the proposed action, the 17,590 acres under mineral lease for uranium should be rejected. The speculative, relative inaccessibility, the negative imprints (i.e. radioactive tailings) left by the uranium industry throughout the West and a horrendous record for waste cleanup should be the basis for reclassification of this land to prevent uranium development. As for oil and gas, 20 years (p. 295) of non-interest, the speculative nature of this fuel and a minimal impact nonavailability of Shivwits Plateau land should have on the oil/gas industry should also justify the upgrading of Shivwits Plateau land to Wilderness Act criteria.

Area #59 (p.29), except for the primitive road that leads to Kelly Point, should be reinventoried and additional acreage identified as Wilderness Act criteria land. In addition, included in Wilderness Act criteria land should be area #58 (p.29) which is indicated as roadless to Twin Point, and is already receiving environmental protection subzone status. Again, 20 years of non-interest should qualify these areas for Wilderness Act designation. Wilderness Act criteria land should be so classified, even if potential development conflicts exist.

Would minimum encroachment mean a 50-75 year revegetation cycle for

2 The National Park Service has designated these areas as potential wilderness areas because of the following nonqualifying conditions:

Unit 4 is encumbered by outstanding subsurface mineral reservations, but the quality of this unit does meet the criteria for wilderness.

Units 11 and 12 were candidates for pumped-back storage units being proposed by the Bureau of Reclamation as requested by Congress. Unit 11 is still being considered, but unit 12 will be removed from the potential wilderness category and included with wilderness lands meeting the criteria.

Unit 33 is also encumbered by outstanding subsurface mineral reservations but does meet the criteria. In the case of units 4 and 33, as soon as the outstanding subsurface mineral reservations have been obtained by the National Park Service, these areas will be included in the lands that meet the criteria.

COMMENTS

the Shivwits Plateau region, Unit 33? Development speculation should not be allowed in areas where such a time consuming land healing process is necessary to return the natural landscape.

3 (c). Mineral Leasing. Page 5 identified areas in which mineral leasing would not be allowed. This list should be expanded to include all DBH habitat especially lambing grounds. This species' sensitive nature, should not be subjected or tested to a point of population decline prior to corrective measures instituted to correct stressful situation. At this time, the Nation does not need the mineral resource the NRA has to offer bad enough to sacrifice a highly restricted range species such as the DBH. Once again it must be re-emphasized - that one mineral exploration/extraction commences, it is virtually impossible to stop.

4 (d). Shivwits Plateau Dirt Landing Strip. The proposed landing strip should not be considered. Even though the primary purpose of the landing strip is for administrative access, the other uses are of primary concern. The air strip's presence alone could destroy the primitive nature of this region. Unless use is strictly controlled, it could be an access point to increased development and provide a base forever increasing encroachment into this relatively undeveloped region. The other uses, if deemed appropriate, should be fully identified in the Final EIS. Would the addition of this landing strip add to an already exorbitant flight congestion problem being experienced over the Grand Canyon region?

(e). Miscellaneous.

5 (1). Federal and state T & E species and candidate species for such status should be adamantly protected from development encroachment even if minimal impacts are expected to occur in established resource management zones. The 640 acre protection rule established for cultural resources should be adopted for protected species. Without such protection an accidental annihilation of a species could occur.

(2). page 27, Table 6 - Area 33 is not listed.

(3). page 210 - Shivwits Plateau should be indicated as unit

33.

(4). page 287 - To what extent rare, T & E plants and animal species in Fire Mountain development area and access point to Detrital Bay would be impacted should be more specific and included in the Final EIS.

7 It has been a pleasure responding to NRA Lake Mead's DEIS. Would you place my name on the list to receive the Final Report, the Draft Wilderness Plan and the Draft Mineral Management Plan and any other documentation that will assist in my preparation to respond to the two indicated draft plans.

Cordially,

Cordell Peterson

L. Cordell Peterson

RESPONSES

3 As shown on the Proposed Action/Management Zoning map, areas with bighorn sheep lambing grounds and other critical habitat have been identified as environmental protection subzones under the natural zone and will not be open to mineral leasing. The areas identified on page 5 of the draft EIS, where mineral leasing will not be considered, were established in the Code of Federal Regulations (CFR). Revisions to the CFR will be made to reflect zoning in the GMP and any other excepted areas after the minerals management plan is completed.

4 See response 2, Sierra Club Legal Defense Fund.

5 Any development that may affect threatened or endangered species will contain mitigating measures to protect those species.

Consultation with the Fish and Wildlife Service would take place before any development to ensure that threatened or endangered species are given the highest possible protection.

6 These changes have been made in the document.

7 Because the possible impacts to threatened or endangered species near these sites will depend on the type and size of development, it is impossible to provide more specific information. If and when these sites are necessary for development, more specific plans will be exhibited, which will, in turn, allow for a much better assessment of the possible impacts to threatened or endangered species. Again, consultation on threatened or endangered species with the Fish and Wildlife Service would take place before any development occurs.

COMMENTS

RESPONSES

Jerry D. Wagers
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005

July 15, 1985

Dear Mr. Wagers,

I have reviewed the United States Department of The Interior Draft Environmental Impact Statement, and I would like to make the following comments concerning it.

I am a cabin site owner at Stewart's Point, and support the proposed actions with a few reservations, additions and corrections.

- 1 The proposed action of paving the road into Stewart's Point for the unpaved portion of .8 miles is in error. The unpaved portion is 2.4 miles. While this should not require 3 times more money for the proposed action, it will obviously be more than the budgeted amount of \$75,000.
- 2 While the residents of Stewart's Point are greatly concerned about the sanitation facilities available to those members of the public utilizing the primitive beach camping, the question has arisen as to the benefits derived from changing the current 12 square foot pit toilet to a 12 square foot organic toilet at a cost of \$16,000. Although the number of campers at Stewart's Point has been declining, I personally feel there is sufficient traffic during the summer holidays to warrant 2 toilets.
- 3 I feel that the Overton Beach residents raised many valid issues concerning the flood plan, especially as the Bureau of Reclamation has issued statements concerning the expected water level at the dam for this decade. An average of approximately 1212 feet at the dam would not appear to create a need as extensive as is being considered in the Impact Study.
- 4 The impact study quotes Department of the Interior regulations (43 CFR 21) as prohibiting the sale of lessee improvements after the original period of the lease has expired. This is an error. While a policy statement to that effect has been issued, regulation (43 CFR 21) does in fact permit a transfer of improvements after an extension has been granted.

In summary as a member of the public, I am greatly concerned about the preservation and maintenance of our country's recreation areas. And I feel that with the exceptions previously mentioned the Impact Statement adequately addresses those issues.

Cordially,

James E. Slayton

James E. Slayton
Stewart's Point #32
P. O. Box 725
Overton, NV 89040

- 1 The figure given for the cost of construction was correct for 0.8 mile of road. The figures for road lengths were transposed and have been corrected.
- 2 We are currently trying to install the most practical sanitation facilities at the lake for the use of our visitors. The organic restrooms being considered are what we feel is a better solution for our situation than the existing pit toilets. The organic restrooms cost less for us to maintain, are odonless, and present a more pleasing interior than the pit toilet.
- 3 In the past we were under the impression that the water level would never surpass the 1,221.6-foot (top of raised gates) elevation, but in 1983 the water level rose to 1,225.8 feet, which cost the National Park Service over \$1 million in damage, not including what it cost concessioners. We have now made a decision that any new facility constructed on Lake Mead must be above the 1,230-foot level, which is above the highest lake water level possible. The water level in August 1985 was already 1,214 feet, which was above the level predicted by the Bureau of Reclamation for 1985.
- 4 As stated in the document, the Department of the Interior regulations prohibit granting new leases and are silent on the subject of prohibiting the sale of leases.

COMMENTS

Mr. Jerry D. Wagners
Superintendent
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, NV 89005

Harold von Beck
835 Riverfront Drive
Riviera, AZ 86447

June 11, 1985.

Dear Mr. Wagners,

Two unrelated tragic incidents cause me to write this letter. A close friend of mine, a former member of the Army Corps of Engineers, died recently. He had ordered your Draft Environmental Impact Statement, Volume 1 of April 1985, Lake Mead.

I read most of the material in his copy. You will accept comments. I like to comment as a substitute for my late friend.

The second incident occurred last Sunday. The Southern California Edison Mohave Power Plant was struck by a terrible accident. It could be many months, even years before it can be restarted. This plant was one of my former places of work as an engineer. I am retired now.

Your impact statement has two items missing in my opinion. There is no mentioning of noise pollution by inconsiderate power boaters. A certain segment of the boating public feels that it should do on the waterways what can not be done on the highways any more. They pretend going out for relaxation in nature, while in reality these persons intoxicate themselves with feelings of power induced by open air engine exhausts. This is ridiculous in as much as little gain in power and performance is realized out of very much noise. Good hull design assures such gains in a much more acceptable way. My observations appear to indicate that the better waterskiers are usually behind quiet boats. Whoever turns out to be one of the better sportsmen just could not afford having his hearing impaired by being behind loud power boats often.

Noisy boats can not be eliminated through Sheriff patrols. Only a national law which would make mufflers mandatory on boats, the same way it is mandatory on automobiles, will succeed. There may be little political hay to be made with this issue. Combating noise is not your immediate responsibility. Yet an agency of the government which is concerned with the protection of the environment could initiate action on pertinent legislation. The water jockeys with their noisy boats will increase in numbers. Some water spray in open exhaust pipes is practically meaningless; and the devices are often defeated. I wish an agency like yours would work on this problem. No commercial interests of any magnitude could be hurt. The same number of boats will be bought and sold. The manufacturers of header type exhausts can sell the mufflers too.

RESPONSES

1 A regulation limiting noise levels generated by boats operating in NPS waters became effective in 1984. The regulation prohibits levels in excess of 82 decibels measured at a distance of 82 feet (25 meters). The NRA recently acquired the equipment necessary to begin enforcing the regulation, and enforcement action is now being initiated.

COMMENTS

Mr. J. D. Wagners

HVB 6/11, 1965.

2 Air, soil, and water pollution in the Lake Mohave area is my other concern. Stack emissions from the Mohave Power Plant must have been excessive all along, based on visual observation and on having breathed samples of its flue gases at close range. I have the feeling that Lake Mohave would be a dead lake by now if it was not for the fact that it has considerable throughflow.

The plant is down. That is unfortunate. But now would be the right time to gather base data on the environment with clean air all around. Disregarding the cost factor in all of SCE's trouble, suggestions might emerge which would lead to bettering the emission monitoring and control equipment.

This is a letter by a concerned citizen. I am only trying to bring real problems and possible solutions into the stage of public debate. Your environmental impact statement surely could be rounded out with the subject of a degradation of the quality of life by various forms of pollution. Please let me mention that the area south of Davis Dam is effected too.

Sincerely

Harold von Beck

Harold von Beck.

RESPONSES

2 Air quality data on emissions from the Mohave Power Plant near Laughlin, Nevada, have been gathered regularly by the Desert Research Institute from two locations within the recreation area since the plan became operational. One station is near Katherine and the other near Cottonwood Cove. The NRA is designated as a class II area, and air quality degradation may not exceed the standards for class II.

The Park Service is having air quality data gathered at the NRA in conjunction with air resources specialists in Fort Collins, Colorado, to ensure that class II standards are not exceeded.

COMMENTS

Box 97
Meadview, AZ 86444
30 May 1985

Dear Mr. Magors:

I have received a copy of the Volume I-
draft general management plan & alternatives for LARA
dated April 1985.

For the Gregg Basib/Grand Wash Zone I
have the following comment:

You should give serious consideration to
moving the South Cove landing contact with the lake
to a cove to the north. This cove would provide a
more secure site for launching and landing boats
during high wind actions which are common. The cove
will be less vulnerable to erosion from wave action
now experienced at the present site of the landing.
The floating dock now at the landing is of
marginal assistance during high wind action.

1

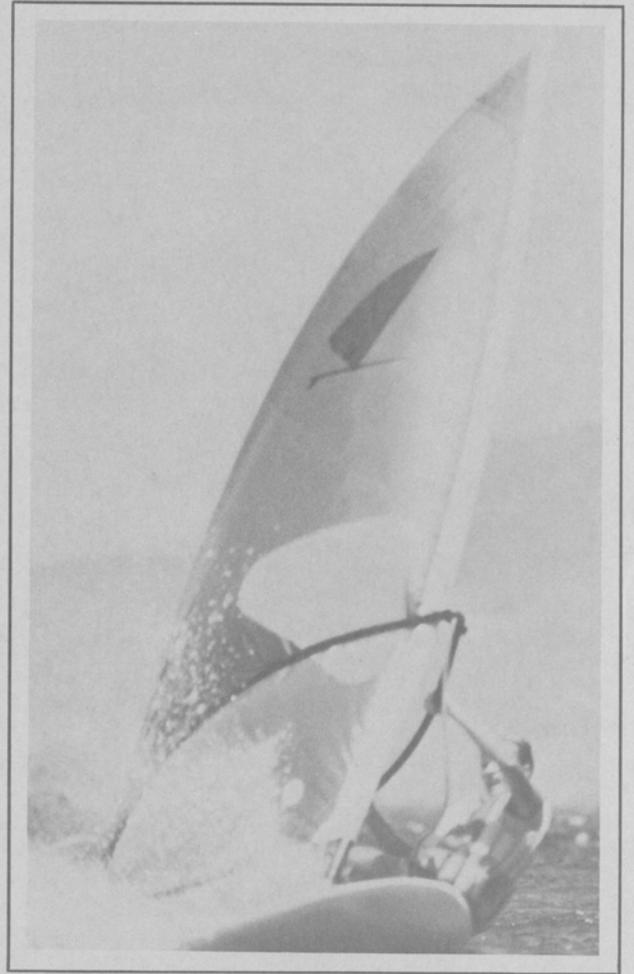
Sincerely,


F.G. Wilson

RESPONSES

1

Initially, consideration was given to moving the South Cove ramp to
a cove north of its present location, but use of the present
launching ramp did not justify the cost of extensive earth moving
and construction.



APPENDIXES
BIBLIOGRAPHY
LIST OF PREPARERS
INDEX

APPENDIX A: LEGISLATION

Public Law 88-639
88th Congress, S. 653
October 8, 1964



An Act

78 STAT. 1032.

To provide an adequate basis for administration of the Lake Mead National Recreation Area, Arizona and Nevada, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in recognition of the national significance of the Lake Mead National Recreation Area, in the States of Arizona and Nevada, and in order to establish a more adequate basis for effective administration of such area for the public benefit, the Secretary of the Interior hereafter may exercise the functions and carry out the activities prescribed by this Act.

Lake Mead National Recreation Area. Administration.

SEC. 2. Lake Mead National Recreation Area shall comprise that particular land and water area which is shown on a certain map, identified as "boundary map, RA-LM-7060-B, revised July 17, 1963", which is on file and which shall be available for public inspection in the office of the National Park Service of the Department of the Interior. An exact copy of such map shall be filed with the Federal Register within thirty days following the approval of this Act, and an exact copy thereof shall be available also for public inspection in the headquarters office of the superintendent of the said Lake Mead National Recreation Area.

Boundaries.

Filing with Federal Register.

The Secretary of the Interior is authorized to revise the boundaries of such national recreation area, subject to the requirement that the total acreage of that area, as revised, shall be no greater than the present acreage thereof. In the event of such boundary revision, maps of the recreation area, as revised, shall be prepared by the Department of the Interior, and shall be filed in the same manner, and shall be available for public inspection also in accordance with the aforesaid procedures and requirements relating to the filing and availability of maps. The Secretary may accept donations of land and interests in land within the exterior boundaries of such area, or such property may be procured by the Secretary in such manner as he shall consider to be in the public interest.

Boundary revision.

Donations of land.

In exercising his authority to acquire property by exchange, the Secretary may accept title to any non-Federal property located within the boundaries of the recreation area and convey to the grantor of such property any federally owned property under the jurisdiction of the Secretary, notwithstanding any other provision of law. The properties so exchanged shall be approximately equal in fair market value: *Provided*, That the Secretary may accept cash from or pay cash to the grantor in such an exchange in order to equalize the values of the properties exchanged.

Property acquisition.

Establishment or revision of the boundaries of the said national recreation area, as herein prescribed, shall not affect adversely any valid rights in the area, nor shall it affect the validity of withdrawals heretofore made for reclamation or power purposes. All lands in the recreation area which have been withdrawn or acquired by the United States for reclamation purposes shall remain subject to the primary use thereof for reclamation and power purposes so long as they are withdrawn or needed for such purposes. There shall be excluded from the said national recreation area by the Secretary of the Interior any property for management or protection by the Bureau of Reclamation, which would be subject otherwise to inclusion in the said recreation area, and which the Secretary of the Interior considers in the national interest should be excluded therefrom.

Property exclusion.

SEC. 3. The authorities granted by this Act shall be subject to the following exceptions and qualifications when exercised with respect

Hualapai Indian lands.

to any tribal or allotted lands of the Hualapai Indians that may be included within the exterior boundaries of the Lake Mead National Recreation Area:

(a) The inclusion of Indian lands within the exterior boundaries of the area shall not be effective until approved by the Hualapai Tribal Council.

(b) Mineral developments or use of the Indian lands shall be permitted only in accordance with the laws that relate to Indian lands.

(c) Leases and permits for general recreational use, business sites, home sites, vacation cabin sites, and grazing shall be executed in accordance with the laws relating to leases of Indian lands, provided that all development and improvement leases so granted shall conform to the development program and standards prescribed for the Lake Mead National Recreation Area.

(d) Nothing in this Act shall deprive the members of the Hualapai Tribe of hunting and fishing privileges presently exercised by them, nor diminish those rights and privileges of that part of the reservation which is included in the Lake Mead Recreation Area.

Recreational purposes.

SEC. 4. (a) Lake Mead National Recreation Area shall be administered by the Secretary of the Interior for general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop, and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area, consistently with applicable reservations and limitations relating to such area and with other authorized uses of the lands and properties within such area.

Activities.

(b) In carrying out the functions prescribed by this Act, in addition to other related activities that may be permitted hereunder, the Secretary may provide for the following activities, subject to such limitations, conditions, or regulations as he may prescribe, and to such extent as will not be inconsistent with either the recreational use or the primary use of that portion of the area heretofore withdrawn for reclamation purposes:

- (1) General recreation use, such as bathing, boating, camping, and picnicking;
- (2) Grazing;
- (3) Mineral leasing;
- (4) Vacation cabin site use, in accordance with existing policies of the Department of the Interior relating to such use, or as such policies may be revised hereafter by the Secretary.

Hunting, fishing, trapping.

SEC. 5. The Secretary of the Interior shall permit hunting, fishing, and trapping on the lands and waters under his jurisdiction within the recreation area in accordance with the applicable laws and regulations of the United States and the respective States: *Provided*, That the Secretary, after consultation with the respective State fish and game commissions, may issue regulations designating zones where and establishing periods when no hunting, fishing, or trapping shall be permitted for reasons of public safety, administration, or public use and enjoyment.

Regulations.

SEC. 6. Such national recreation area shall continue to be administered in accordance with regulations heretofore issued by the Secretary of the Interior relating to such areas, and the Secretary may revise such regulations or issue new regulations to carry out the purposes of this Act. In his administration and regulation of the area, the Secretary shall exercise authority, subject to the provisions and limitations of this Act, comparable to his general administrative authority relating to areas of the national park system.

The superintendent, caretakers, officers, or rangers of such recreation area are authorized to make arrests for violation of any of the regulations applicable to the area or prescribed pursuant to this Act, and they may bring the offender before the nearest commissioner, judge, or court of the United States having jurisdiction in the premises.

Arrests.

Any person who violates a rule or regulation issued pursuant to this Act shall be guilty of a misdemeanor, and may be punished by a fine of not more than \$500, or by imprisonment not exceeding six months, or by both such fine and imprisonment.

Violations.

SEC. 7. Nothing in this Act shall deprive any State, or any political subdivision thereof, of its civil and criminal jurisdiction over the lands within the said national recreation area, or of its rights to tax persons, corporations, franchises, or property on the lands included in such area. Nothing in this Act shall modify or otherwise affect the existing jurisdiction of the Hualapai Tribe or alter the status of individual Hualapai Indians within that part of the Hualapai Indian Reservation included in said Lake Mead National Recreation Area.

Jurisdiction.

SEC. 8. Revenues and fees obtained by the United States from operation of the national recreation area shall be subject to the same statutory provisions concerning the disposition thereof as are similar revenues collected in areas of the national park system with the exception, that those particular revenues and fees including those from mineral developments, which the Secretary of the Interior finds are reasonably attributable to Indian lands shall be paid to the Indian owner of the land, and with the further exception that other fees and revenues obtained from mineral development and from activities under other public land laws within the recreation area shall be disposed of in accordance with the provisions of the applicable laws.

Revenues and fees.

SEC. 9. A United States commissioner shall be appointed for that portion of the Lake Mead National Recreation Area that is situated in Mohave County, Arizona. Such commissioner shall be appointed by the United States district court having jurisdiction thereover, and the commissioner shall serve as directed by such court, as well as pursuant to, and within the limits of, the authority of said court.

Mohave County, Ariz. Appointment of commissioner.

The functions of such commissioner shall include the trial and sentencing of persons committing petty offenses, as defined in title 18, section 1, United States Code: *Provided*, That any person charged with a petty offense may elect to be tried in the district court of the United States, and the commissioner shall apprise the defendant of his right to make such election, but shall not proceed to try the case unless the defendant, after being so apprised, signs a written consent to be tried before the commissioner. The exercise of additional functions by the commissioner shall be consistent with and be carried out in accordance with the authority, laws, and regulations, of general application to United States commissioners. The provisions of title 18, section 3402, of the United States Code, and the rules of procedure and practice prescribed by the Supreme Court pursuant thereto, shall apply to all cases handled by such commissioner. The probation laws shall be

62 Stat. 831. Probation laws.

Appropriation.

applicable to persons tried by the commissioner and he shall have power to grant probation. The commissioner shall receive the fees, and none other, provided by law for like or similar services.

Sec. 10. There are hereby authorized to be appropriated not more than \$1,200,000 for the acquisition of land and interests in land pursuant to section 2 of this Act.

Approved October 8, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 1039 accompanying H. R. 4010 (Comm. on Interior & Insular Affairs).

SENATE REPORT No. 380 (Comm. on Interior & Insular Affairs).

CONGRESSIONAL RECORD:

Vol. 109 (1963): Aug. 2, considered and passed Senate.

Vol. 110 (1964): Aug. 3, considered and passed House, amended, in lieu of H. R. 4010.

Sept. 28, Senate concurred in House amendment.



United States Department of the Interior

NATIONAL PARK SERVICE

WESTERN REGION

450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

N1621(WR-PPA)

February 24, 1983

Memorandum

To: Regional Director, U.S. Fish and Wildlife Service, Albuquerque,
New Mexico

From: ~~ACTING~~
Regional Director, Western Region

Reference: Lake Mead National Recreation Area, General Management Plan/Land
Protection Plan, Environmental Impact Statement

Subject: Formal Consultation Pursuant to Section 7, Endangered Species Act

A planning team composed of members from the Denver Service Center and Lake Mead National Recreation Area is preparing a general management plan, a land protection plan and environmental impact statement for Lake Mead. The plan encompasses actions throughout the recreation area with primary emphasis around established developed or visitor use areas. Per this memorandum we would like to initiate consultation with your office and request an endangered species list covering areas in your jurisdiction within the recreation area. A similar request is being made of your Portland, Oregon office for the portions of Lake Mead in Nevada. We would also be interested in any comments or concerns you may have at this time. The information received from you will be considered during our planning process and we will provide you with draft copies of documents for review when they become available.

Contacts regarding this consultation can be made with Terry Goodrich, National Park Service, 755 Parfet Street, P.O. Box 25287, Denver, Colorado 80225, FTS telephone 234-4509. A timely response to this request would be greatly appreciated since we are working under a very tight schedule. Please advise us which Regional Office and/or area offices will have the responsibility for coordinating this consultation.

(Sgd) John D. Cherry

Enclosure

cc:

Supt., Lake Mead w/o enc.

Assistant Manager, Alaska, PNW/Western Team, DSC w/o enc.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

GREAT BASIN COMPLEX OFFICE
4600 Kietzke Lane - Bldg. C
Reno, Nevada 89502-5093

April 8, 1983

File No.: 1-5-83-SP-16

Mr. Terry Goodrich
National Park Service
755 Parfet Street
P. O. Box 25287
Denver, CO 80225

Dear Mr. Goodrich:

As requested by N1621 (WR-PPA), dated February 23, 1983, you will find attached a list of the listed and proposed endangered and threatened species (Attachment A) that are present or may be present in the area of the proposed Lake Mead General Management Plan. The list is intended to fulfill the requirement of the Fish and Wildlife Service to provide a list of species under Section 7(c) of the Endangered Species Act of 1973, as amended. Please see Attachment B for your requirements.

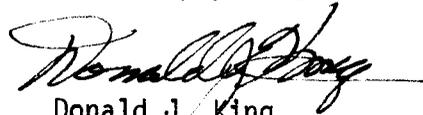
Also, for your assistance we have included a list of candidate species that are present or may be present within the project area. These species are presently being reviewed by this Service for consideration to propose and list as endangered or threatened. It should be noted that candidate species have no protection under the Endangered Species Act and are included for your consideration as it is possible these could become formal proposals and be listed during the construction period.

Upon completion of the Biological Assessment (see Attachment B), should you determine that a listed species is likely to be affected (adversely or beneficially), then your agency should request formal Section 7 consultation through this office. If there are both listed and proposed species (or candidate species, if included in the assessment) that may be affected; then we will confer on the proposed species (and/or informally consult on the candidate species) during the formal consultation. However, should the assessment reveal that only proposed species (or candidate species) may be affected, then you should consider informal consultation with this office.

One of the benefits of informal consultation to the consulting agency is to provide the necessary planning alternatives should a proposed (or candidate) species become listed before completion of a project.

Should you have any additional questions regarding your responsibilities under the Act, please contact this office. We thank you for your interest in endangered species, and we await your Biological Assessment.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Donald J. King". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Donald J. King
Complex Manager

Attachments:

cc: Regional Director (AFA-SE)
GBC Files
Boise FO

General Management Plan
Land Protection Plan
for
Lake Mead National Recreation Area
Mohave County, Arizona

LISTED SPECIES

Bonytail chub
(Endangered)

Gila elegans

Historically found throughout mainstream of Colorado River and major tributaries in eddies and pools; Lake Mohave contains the only universally recognized pure population.

Bald Eagle

Haliaeetus leucocephalus

A winter resident of Lake Mead; found along shorelines.

PROPOSED SPECIES

None

CRITICAL HABITAT

None

CANDIDATE SPECIES

Mammals

Spotted bat

Euderma maculatum

Found throughout Arizona in rocky cliffs and canyons. Rare in Lake Mead Recreation Area.

Fishes

Razorback sucker

Xyrauchen texanus

Historically found throughout mainstream of Colorado River and major tributaries; Lake Mohave contains one of the largest populations known.

Birds

White-faced ibis

Plegadis chihi

A fairly common to uncommon transient visitant along major water courses in Arizona.

Swainson's hawk

Buteo swainsoni

A transient in western Arizona; feeds on gophers and grasshoppers; Rare.

Ferruginous hawk

Buteo regalis

An uncommon resident of grassy plains of northern Arizona, more often seen as a winter visitor; feeds entirely on rodents.

Western snowy plover

Charadrius alexandrinus
nivosus

A rare transient visitant along lower Colorado River, found along sandy or alkaline shores, riverbanks, and mudflats.

Mountain plover

Charadrius montanus

A transient, rarely breeding, in western Arizona found along grassy mesas, desert flats, or fallow fields. (one observation in LMRA)

Long-billed curlew

Numenius americanus

A rare transient visitant throughout Arizona found along marshes, mudflats, and beaches.

Western yellow-billed
cuckoo

Coccyzus americanus
occidentalis

Breeds in extreme north-west Arizona and a transient along wooded streams and in towns; Rare summer visitant.

Reptiles

Desert tortoise

Scaptochelys agassizii

Found in Sonoran and Mohave deserts along rocky hillsides and washes.

Gila monster

Heloderma suspectum

Found in arid and semi-arid areas particularly desert flats, nearby canyons, and washes. Between Echo Bay and Overton near Katherine's Landing by Davis Dam.

Plants

	<u>Camissonia exilis</u>	Known for the eastern base of Virgin Mountains on gypsum covered flats at 3,500 feet elevation.
	<u>Eriogonum thompsonae</u>	Found in Mohave County on red clay hills, Great Basin sagebrush and along highway right-of-way.
Sticky buckwheat	<u>Eriogonum viscidulum</u>	Limited in distribution to area of Riverside near Virgin River, Clark County, NV or washes and flats in sandy soil.
	<u>Perityle megalcephala</u> var. <u>intricata</u>	Associated with shadscale near Overton Beach; on NNNPS Watch List.
Golden bear poppy	<u>Arctomecon californica</u>	Occurs near Las Vegas Wash and Boulder Beach on barren, gravelly desert flats, hummocks and slopes associated with gypsum soils. Also near Stewart Point.
Bicolored penstemon	<u>Penstemon bicolor</u> ssp. <u>roseus</u>	Near Las Vegas Wash on slight elevations, in shallow gravelly washes, roadsides (possible taxonomic problems)

FEDERAL AGENCIES' REQUIREMENTS UNDER SECTION 7(c)

Biological Assessments

This process is initiated by a Federal agency in requesting a list of proposed and listed endangered and threatened species that may be within the area of a construction project.^{1/} The purpose of the assessment is to identify any proposed and/or listed species which are/is likely to be affected by a construction project. When present in the project area, proposed species are included on the list even though they do not have legal protection under the Act. Their inclusion recognizes that they may be listed at anytime and have the portent to cause delays or modifications to the proposed action. In light of this, we recommend that those species be included in the biological assessment. The assessment should be completed within 180 days after initiation of the assessment (or within such a time period as is mutually agreed to by our two agencies). The assessment should begin within 90 days after receipt of the species list or a new list should be requested. No irreversible commitment of resources is to be made during the biological assessment process which would result in violation of your requirement under Section 7(a) of the Act. Planning, design, and administrative actions may be taken by your agency; however, no construction may begin.

Your agency should conduct an on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or for potential reintroduction of the species. Review literature and scientific data to determine species distribution, habitat needs, and other biological requirements. Interview experts including those within Fish and Wildlife Service, National Marine Fisheries Service, State conservation departments, universities and others who may have data not yet published in scientific literature. Review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat. Analyze alternative actions that may provide conservation measures. At the conclusion of the assessment as described above, the Federal agency shall prepare a report documenting the results. The report shall also include a discussion of study methods used, any problems encountered, and other relevant information. The report should be forwarded to this office.

^{1/} "Construction Project" means any major Federal Action which significantly affects the quality of the human environment designed primarily to result in the building or erection of man-made structures such as dams, buildings, roads, pipelines, channels, and the like. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorization or approval which may result in construction.

APPENDIX C: CULTURAL RESOURCE CONSULTATIONS

In accordance with the September 1981 revision to the 1979 programmatic memorandum of agreement between the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers, the National Park Service has requested the advice and consultation of the Advisory Council and the Nevada and Arizona state historic preservation officers during preparation of this plan. A formal letter indicating that the planning effort was underway and a request for their participation was sent to those three offices on May 13, 1982, along with a list of planning issues. Subsequently, the results of the issues survey was sent to both state historic preservation officers and the Advisory Council in July 1982, and the planning alternatives workbook was submitted for their review and comment in December 1982. The Advisory Council has also attended planning sessions for the general management plan in April, July, and October 1982, and January 1983. The advice and consultation of these offices will continue to be requested as the plan progresses. Review copies of the draft plan will be submitted for comment, and they will be invited to attend all future public meetings.

In February and March 1982, a National Park Service anthropologist conducted preliminary consultations with nine native American groups representing the Mohave, Hualapai, and Chemehuevi/Southern Paiute tribes. These consultations were initiated with the purpose of identifying the locations of any sacred sites within Lake Mead, and of ascertaining any special concerns the native Americans wished to express during the planning process. The results of these consultations were relayed to both the recreation area staff and the planning team, and the native American groups were included on the mailing list for the plan, to ensure them an opportunity to attend all public meetings, and to review and comment on all public information documents released throughout the life of the plan.

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

Reply to:

Lake Plaza South, Suite 616
44 Union Boulevard
Lakewood, CO 80228

730 Simms Street, Room 450
Golden, Colorado 80401

December 20, 1982

Mr. Kenneth Raithel, Jr.
Assistant Manager
Alaska/Pacific Northwest/Western Team
Denver Service Center
National Park Service
P.O. Box 25287
Denver, CO 80225

Dear Mr. Raithel:

On December 13, 1982, we received the review copy of "Planning Alternatives Workbook" for Lake Mead National Recreation Area, Arizona/Nevada and your letter requesting our informal review of the document pursuant to the Programmatic Memorandum of Agreement ratified by the Chairman September 1981. After reading this document and discussing certain points with Dr. Latschar, we find that we have no comments to offer at this time.

Thank you for the opportunity to examine the "Planning Alternatives Workbook".

Sincerely,



Louis S. Wall
Chief, Western Division
of Project Review

APPENDIX D: COOPERATIVE AGREEMENTS

The National Park Service (NPS) is under contract to place utilities underground and update all the existing power system at Boulder Beach to allow the Nevada Power Company to maintain the system and to provide the required power. When Nevada Power Company takes over the new system, the National Park Service will release 500 kw of firm energy entitlement to the Western Area Power Administration (WAPA).

The memorandum of understanding between the Bureau of Reclamation and National Park Service, related to land leased by the Bureau of Reclamation to the Nevada Division of Colorado River Resources, provides authorization to operate the Southern Nevada Water Project.

The memorandum of understanding between the National Park Service and the Nevada Department of Fish and Game (July 1971) defines individual responsibilities for the management of fish and wildlife resources within units of the national park system in Nevada. This agreement provides that the National Park Service will consult with and obtain concurrence from the state's fish and game department about programs that significantly affect fish and wildlife resources and cooperate in the joint enforcement of hunting, fishing, and boating laws. The department will consult with the National Park Service before establishing fishing and hunting seasons and regulations affecting NPS areas. The two agencies will meet annually to discuss matters of mutual interest. A similar agreement is being pursued with the Arizona Department of Fish and Game.

A supplemental agreement of August 1971 was granted to the Nevada Department of Wildlife for exclusive use of lands to be used for construction and operation of a fish hatchery within lake Mead National Recreation Area for a period of 99 years. Fish reared in the hatchery are planted for recreational purposes in Lakes Mead and Mohave.

There is a supplemental memorandum of understanding of 1975 with the Nevada Department of Fish and Game to work cooperatively on a bighorn sheep trapping and management program.

A memorandum of understanding between the Bureau of Reclamation, National Park Service, and U.S. Fish and Wildlife Service (FWS) provided an area at Willow Beach for the use and occupancy by FWS for construction, operation, and maintenance of a fish cultural station. Fish reared in this hatchery are planted in Lake Mohave and in the lower Colorado River.

A memorandum of agreement between the National Park Service, Bureau of Reclamation, and the state of Nevada, related to leasing wildlife managements in Lake Mead National Recreation Area (July 1978), resulted in the leasing of the Overton Wildlife Management Area to the state of Nevada for 25 years. This area provides nesting habitat for waterfowl and recreational hunting opportunities.

The cooperative firefighting agreement between the Bureau of Land Management (BLM) and National Park Service (October 1975) provides for cooperative assistance in wildland firefighting activities. The principal assistance is rendered in the Shivwits Plateau area. BLM personnel are more capable of initial attack on fires in area.

In April 1972, a memorandum of understanding between the Bureau of Land Management, Bureau of Reclamation, and the National Park Service about grazing provides that grazing within Lake Mead will be administered by the Bureau of Land Management in accordance with the act of October 8, 1964. Fees collected will be deposited in accordance with BLM requirements.

A basic agreement between Lake Mead and the American Federation of Government Employees, Local 3062, grants exclusive recognition to the union to represent maintenance personnel and to provide and promote the efficient administration of Lake Mead.

A mutual aid agreement between Lake Mead and Boulder City (June 1975) provides for fire suppression and ambulance service in the Boulder Beach area.

Lake Mead and Bullhead City have a mutual aid agreement (January 1977) that provides for fire suppression in the Katherine area.

There is a letter of agreement with the Clark County Department of Building and Safety to inspect new construction of public structures occurring within Lake Mead National Recreation Area.

APPENDIX E: GLOSSARY OF PLANNING TERMS

Access Point	A location where vehicular access to the water is provided
Carrying Capacity	The population that an area will support without undergoing significant deterioration. In this document, carrying capacity has been further defined by the Lake Mead Carrying Capacity Study as "the maximum number of boats which can be accommodated at one time in each zone of the lake" (USDI 1980). This study defined physical carrying capacity only. Social variables that would determine the social carrying capacity of the lake or the maximum number of visitors who could be on the lake, without the visitor's experience deteriorating, have not been determined as of yet
Courtesy Docks	Docks provided for such temporary use (normally 15 minute zone) as stops to get ice and snacks
Day Use Activities	Activities (boating, picnicking, swimming) that visitors participate in for the day only
Designated Swim Beach	Swimming areas that are staffed by lifeguards; currently available at Boulder Beach and Katherine
Destination Resort/Area	A resort or development that offers a full range of services to visitors who may be a considerable distance away from their homes and/or plan to stay at the resort overnight or for an extended time
Developed Areas	Areas that contain visitor services and facilities (areas with only restrooms, launch ramps, and roads are not considered developed)
Development Concept Plan	A plan that defines specific kinds, sizes, and locations of park developments and facilities
Flat-Wake Zones	Buoyed-off areas with low-speed requirements for watercraft (5 m.p.h.)
Flood Mitigation	Actions that eliminate flooding or make the effects of flooding less severe
Structural Flood Mitigation	Flood mitigation measures that involve major construction, such as dams, channels, diversions, or flood walls

Nonstructural Flood Mitigation	The most feasible combination of flood mitigation measures that do not involve major construction - relocation, warning systems, evacuation plans, closures, information, etc.
Floodplain	Land that may be submerged by flood waters
Full Service	The highest or greatest degree of development where a complete range of services is offered
General Management Plan	A parkwide plan for meeting park management objectives; it divides the park according to future management emphasis and presents short-term and long-range strategies for resource management, visitor use, and park development
Improved Access Point	Improvements that consist of upgrading the quality of gravel/dirt roads that lead to the water so that most vehicles are accommodated, providing a concrete two or three lane launch ramp, primitive camping area, graded parking, and about $\frac{1}{4}$ mile of dirt road above high water paralleling the shoreline for access to the shoreline
Improved Road	A road that is upgraded through widening or realigning of curves
Long-Term Trailer Site	A trailer site that may be occupied for more than 30 days within a year
Major New Development	A development that offers a full range of visitor services and facilities to accommodate many people; these developments will be phased in gradually, in response to public demand and park funding priorities
Primitive Access	Dirt roads that four-wheel-drive vehicles usually use for access to the water
Primitive Campground	Campsites having no amenities, such as water, restrooms, picnic tables, or grills
Ready Lane	A lane that is usually striped on the launch ramp, which is used to prepare a boat for launching so that boating activities do not tie up the launching area; it is also used for unloading boats after being removed from the water
Rehabilitation	Restoration of a structure or area to a condition of greater usefulness

Relocation	Moving to a new location within the same developed area, unless otherwise specified
Restrooms	Facilities that may range from pit or chemical toilets to flush toilets and sinks
Short-Term Trailer Site	A trailer site that may only be occupied for less than 30 days within a year

APPENDIX F: OTHER FLOOD MITIGATION METHODS CONSIDERED

The following discussion summarizes those additional flood mitigation methods that were considered for each developed area and the reasons they were rejected.

Katherine - Several different methods of channeling flows and lining the channels were investigated, but all were rejected because of high cost (\$1-8 million).

Cottonwood Cove - One additional structural mitigation method was investigated, which consisted of a network of dams and diversion channels placed in or above the development. This alternative was rejected because of high cost (\$20 million).

- Willow Beach - A series of detention dams, diversion dams, diversion canals, and channeling was investigated in 1979 for 100-year flood protection. Costs for implementing these measures were in excess of \$40 million. These measures were reevaluated in October 1980 for protection against the probable maximum flood and again found to be infeasible. At that time additional diversion measures suggested by the public were investigated but were also found to be infeasible. All of the above solutions were rejected because of high cost.

Las Vegas Wash - Additional structural methods investigated included channeling of flow around the dry boat storage and boat launch areas, channeling around the dry boat storage area only, and protection of the entire area with an earthen dam above the highway. These methods ranged in cost from \$0.5-1 million. Because all methods were more expensive than relocation, they were rejected.

Overton - No structural measures were investigated.

Temple Bar - Additional channeling through the area was investigated to protect the dry boat storage area, but relocation was less expensive.

APPENDIX G: EVALUATION OF MINERAL RESOURCES

AN EVALUATION OF MINERAL RESOURCES
LAKE MEAD NATIONAL RECREATION AREA
ARIZONA AND NEVADA


Robert O'Brien
Professional Mining Engineer
Registered State Washington 8800

PURPOSE:

The purpose of this assessment of the occurrence and significance of minerals in Lake Mead National Recreation Area is to set forth in a useable format the mineral resource data necessary to guide the planning, development and management of the Lake Mead National Recreation Area.

DEFINITIONS:

In correlating, assessing, and evaluating the considerable number of U.S. Geological Survey, Nevada Bureau of Mines, Arizona Bureau of Mines and other professional source data covering the mineral resources of southeastern Nevada and northwestern Arizona, it was found necessary to utilize a generally acceptable measure for mineral resource estimating--one that would adequately define mineral resource terminology. The Department of Interior News Release headed: "Office of the Secretary, for release April 15, 1974, entitled, 'New Mineral Resource Terminology Adopted,'" has been used as common reference point and "measuring stick" in the following summary of such source data.

The definitions covered in the Secretary's release were particularly directed for the use of the Bureau of Mines and the Geological Survey in their assessment of the nation's mineral resources. The more essential definitions used to bring available source data "into focus" in the preparation of this evaluation, follow:

"Mineral Resources - Are defined as concentrations of naturally occurring solids, liquids, or gases, discovered or only surmized that are or might become economic sources of mineral raw materials."

"Mineral Reserves - Are that portion of mineral resources that have actually been identified, and can be legally and economically extracted."

"Identified-Subeconomic Resources - Known deposits not now mineable economically."

"Submarginal - The portion of subeconomic resources which would require a substantially higher price or a major cost reducing advance in technology."

"Speculative Resources - Undiscovered materials that may occur either in known types of deposits in a favorable geologic setting where no discoveries have been made, or in as yet unknown types of deposits that remain to be recognized."

MINERAL RESOURCES, LAKE MEAD NATIONAL RECREATION AREA

Mineral resources will be subdivided, for the purpose of this assessment as handled by the U. S. Geological Survey, The Arizona (State) Bureau of Mines, and the Nevada (State) Bureau of Mines, into metallics, non-metallics, and energy. Uranium, a metallic mineral will be handled under energy, if worthy of mention. The categories in which those identified minerals are placed is my best judgement at this time.

METALLIC RESOURCES

GOLD - Gold in lode deposits has been found in several locations along the westside of Lake Mohave in the Newberry Mountains and the Eldorado Mountains in Nevada and near Davis Dam in Arizona.¹ These deposits are identified on the map accompanying this report. Free milling gold and silver were mined in association with oxides of copper, lead and zinc. The references to these mining districts were written in 1960, but the period of greatest production occurred prior to 1940. When the mines reached depths below the oxidation zone the veins apparently became barren or lensed out.

A portion of the Gold Butte Mining District extends South into T21S, R70E. which is within Lake Mead National Recreation Area.² Only the Lake Shore Mine in Section 5, T21S, R70E has had any recorded production and that was prior to 1940.

There has been no successful placer gold mining with the boundaries of Lake Mead National Recreation Area. In 1967 under the Heavy Metals Program the U.S. Geological Survey identified, examined and sampled placer deposits in Gold Basin and Lost Basin. To the best of my knowledge these areas are outside the Recreation Area.

The lode gold-silver mines are, in my opinion, worked out. Periods of high prices bring periods of increased prospecting. Paradoxically, periods of hard times also bring spurts in the prospecting activity for gold and silver. Prices for gold and silver are adequate, at this time, for mine operations if there is ore in place. These minerals have been placed in a speculative category because new and better ore shoots must be found to begin production.

The placer gold deposits south of the Recreation Area have

¹ See Area 1 on Index Map.

² See Area 2 on Index Map.

been placed in speculative category because of the marginal grade at this price (\$400 per ounce) and because of the quantity of water needed to recover the gold. A placer gold operation would require approximately 60 gallons per minute for each cubic yard of production capacity.

MANGANESE

Low grade manganese ores are present in the³Recreational Area in the Black Mountains north of Lake Mead. These ores are sub-marginal in character in that they require a high degree of concentration to produce a product only partially acceptable in the market. These manganese deposits were mined in response to a U. S. Government buying and stockpiling program which terminated in approximately 1959. No mining has been done since that time.

There would have to be a substantial increase in price, and a substantial improvement in concentrating technology to make these ores attractive for production again. These improvements could happen if the foreign supply of manganese was cut off. Future operations, if any, would be open pit operations as they were when last operated.

MOLYBDENUM

Molybdenum has been reported in the Recreation Area around Capital Camp⁴ in the Eldorado Mountains. These occurrences were drilled several years ago by Placer Amex Corporation and subsequently abandoned. Other reports of molybdenum deposits have not been substantiated.

Both of these rumored deposits can only be categorized as speculative since no orebody has been delineated. A molybdenum orebody is normally low grade 0.20% to 0.40% (4lbs. - 8lbs. per ton) and very large, in the range of 100,000 tons and more. Open pit would be the preferred mining procedure. Problems would entail water supply for a large mill in the 10,000 to 20,000 tons/day range with water needed at approximately 240 gallons/ton/day. Another problem would be tailings disposal. The ore at 8 lbs/ton would generate 1992 lbs of waste per ton.

NON-METALLIC RESOURCES

SILICA - Silica is being mined just outside the boundary of the Recreation Area near Overton, Nevada. There are no reported deposits within the Recreation Area.

³ See Index Map Area 3

⁴ See Area No. 4 Index Map

SALT - Large deposits of salt were mined near St. Thomas wash and Overton Beach, prior to the completion of Boulder Dam in the 1930's. Those deposits were inundated by the creation of the Dam and mining ceased.

There are subsurface deposits of salt under both Detrital Valley and Hualapai Valley outside of the Recreation Area. Since those deposits are from 300 to 1200 feet below the surface, their actual extent has not been determined. Extraction of these salts would probably be accomplished by solution extraction and precipitation (evaporation). Solution extraction would consist of drilling wells into the salt and injecting a fluid (water), then pumping the solution out and to evaporation ponds. To get any sort of production, more than one well would have to be activated. Each well would require from 500 g.p.m., all or most of which would be lost in the evaporite ponds. Extractions from those deposits would only be a factor to visitors on an access road.

PUMICE - A deposit of pumice has been found in the River Moun- taines west of Lake Mead. This deposit is not block pumice, but has been classified as a common variety. As a common variety mineral, this pumice is not subject to leasing and should be in a speculative category.

BASE METALS

Base metals such as lead, zinc, and copper have been mined at several locations on the west side of Lake Mohave up to within a few miles of Lake Mead.⁵ The base minerals produced have generally been by-products (of lesser value) of gold and silver productions. Presence of known contemplated operations in this area give some indication of being more in the nature of promotional activities and therefore fall in the speculative-submarginal category. The operations have been for the most part outside of the boundary of the National Recreation Area.

There are a number of mineral leases and applications for mineral leases within Lake Mead National Recreation Area. The leases are an attempt to find ore of a value to produce (prospecting only). These leases can only be called speculative at this time.

Withdrawal from leasing of any mineral or area within Lake Mead National Recreation Area would have an impact only upon the individual attempting to obtain the lease.

⁵See Map No. 2

In 1980, G. Thomas Server, Jr., James P. Calzia, and Barry J. Solomom identified the occurrence of minerals in the region of Lake Mead National Recreation Area in their publication, "A Summary of Mineral Occurrences in the Region of Lake Mead National Recreation Area." This publication was a Pre-Publication copy for Government Use Only. It should be noted that the two authors denote these as occurrences and do not indicate whether the minerals are or ever will be economical to produce. They should be placed in a speculative category.

ENERGY RESOURCES

OIL and GAS - The proliferation of oil and gas leases along the west side of Overton Arm in Nevada and along the east side of the Black Canyon and Lake Mohave leads one to speculate on the reasons for such interest. In Clark County, Nevada⁶ thirteen holes have been drilled north of the Recreation Area and all have been abandon. Hole No. 62 is not within the Recreation Area, but is on the border. In Mohave County, Arizona^{7 & 8} there have been no holes drilled for oil or gas within Lake Mead National Recreation Area.

Speculation apparently revolves around a deep hole (19, 562 feet) drilled in 1980 by the Mobil Oil Corporation. Reliable information on the results of that drilling is not available. Conjecture would point to a quest for stratigraphic information which could locate the trend of the Overthrust Belt. The Overthrust Belt is a region in northwest Utah, southwest Wyoming, and northwestern Colorado, which has been productive of oil and gas in the past five years. Production has been attained at depths below 13,000 feet, in general. Another look at this activity might have to be made when more information is available.

There are no known oil or gas fields within Lake Mead National Recreation Area. There have been no oil and gas wells drilled within the Recreation Area. This leasing activity within Lake Mead National Recreation Area falls into the speculative category.

URANIUM - Deposits of uranium either large or small have not been proven in the Lake Mead Recreation Area. The Copper Mountain Mine⁹ on the East side of Andrus Canyon was mined

⁶ See Map No. 3

^{7 & 8} See Maps No. 4 and No. 5

⁹ See Area No. 5, Index Map

in the 1960s for copper. Uranium is suspected as a companion mineral with the copper, but has not been proven. There has been no record of production since the 1960's. Uranium mines or mining should be placed in a speculative category since no deposits have been identified to quantity or quality.

The market for uranium is down at this time. Quite a number of mines which were producers 4 or 5 years ago have closed. If and when the price goes up, there will certainly be mining companies and prospectors wanting to look at old mines and prospect for new mining possibilities. The majority of uranium mining operations in the Arizona area would be underground operations.

Uranium ores require concentration. There are only a few concentration plants available and these few are long distances from Northern Arizona. The economics of mining and then hauling crude ore long distances are not good unless the deposit is high grade. The nearest buying plant at this time for uranium ores is at Blanding, Utah. The economics of building a concentration plant in or close to the uranium deposits in Lake Mead National Recreation Area are not good due to the lack of volume for processing.

Future leases for uranium ores should consider carefully the problems of water usage and disposal, waste disposal and truck traffic.

SUMMARY

This report is a complete inventory and evaluation of the known mineral resources within the Lake Mead National Recreation Area. There are no minerals within the Recreation Area which are the sole supply or a major source of supply for the United States at this time. The greatest impact of a withdrawal from leasing of any mineral would be upon the individual attempting to get the lease.

If additional drilling near the Mobil Oil Company deep hole proves the existence of the Overthrust Belt in the area there will be pressures to drill along the West side of Overton Arm. While off-set drilling is possible, the drilling companies will be very reluctant to add that much additional drilling footage to an already very deep hole. It should be pointed out that the greatest impact on the environment of oil and gas production would happen during the drilling (exploration) phase.

The only minerals which could have relative importance to other values within Lake Mead National Recreation Area are oil and gas, and uranium, which are still in the speculative category. Manganese operations could also have a very remote possibility of causing problems, but only if five or six happenings coincided, such as: Cut off of foreign supplies, improvement in the uses of manganese in the steel furnaces, and exhaustion of current stockpiles.

CONCLUSIONS

- * The inventory indicates no mineral reserves in the Lake Mead NRA.
- * All possible mineral resources are classified as economically submarginal and geologically speculative, the lowest possible classification according to the USGS system.
- * Any restriction on mineral exploration or mineral leasing, including the exception of any portion of Lake Mead NRA from mineral leasing can be expected to have no measurable impact on present or future production.
- * Consideration of mineral values is secondary to other resource values in preparing the General Management Plan for the NRA.



Robert O'Brien

1/20/83

SELECTED REFERENCES

- (1) Arizona Bureau of Mines in conjunction with the U.S. Geological Survey and the U.S Bureau of Reclamation, 1969, Mineral and Water Resources of Arizona: Bulletin 180.
- (2) Longwell, C. R., E. H. Pampeyan, Ben Bowyer, and R. J. Roberts, 1965, Geology and Mineral Deposits of Clark County, Nevada: Nevada Bureau of Mines Bulletin No. 62.
- (3) Garside, Jarry J., and John H. Schilling, 1977, Wells Drilled for Oil and GAs in Nevada through 1976, Map No. 56: Nevada Bureau of Mines and Geology.
- (4) _____, 1982, List of Wells Drilled for Oil and Gas. (Update to Map 56): Nevada Bureau of Mines and Geology.
- (5) Conley, J. R., and O. A. Stacey, 1981, Well Location Map Four: Arizona (State) Oil and Gas Conservation Commission, October 1977, (Revised 1981)
- (6) Corrections and Additions to Table 2 of above Publication up to June 1982
- (7) Swapp, Cloyd W., Geologist, 1961, The Geology and Gas and Oil Possibilities of Northwestern Arizona: Published by Arizona Board for the Arizona Oil and Gas Conservation Commission.
- (8) G. Thomas Server, Jr., James P. Calzia, and Barry Solomon, 1980, A Summary of Mineral Occurrences in the Region of the Lake Mead National Recreation Area. Pre-publication copy, For Government Use Only.

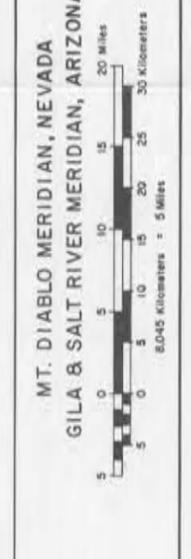


DEED	TRACT	OWNER	ACRES	INT

LAKE MEAD NATIONAL RECREATION AREA
 CLARK COUNTY, NEVADA
 MOHAVE COUNTY, ARIZONA
Map 16.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE
 DIVISION OF LAND ACQUISITION

DN. BY: [Signature] CE. BY: [Signature]
 APPR. BY: [Signature]
 REGION: WESTERN
 DRAWING NO. 8360
 80,500
 SHEET: 1 OF 30



MT. DIABLO MERIDIAN, NEVADA
 GILA & SALT RIVER MERIDIAN, ARIZONA

DATE	REVISIONS	DATE	REVISIONS

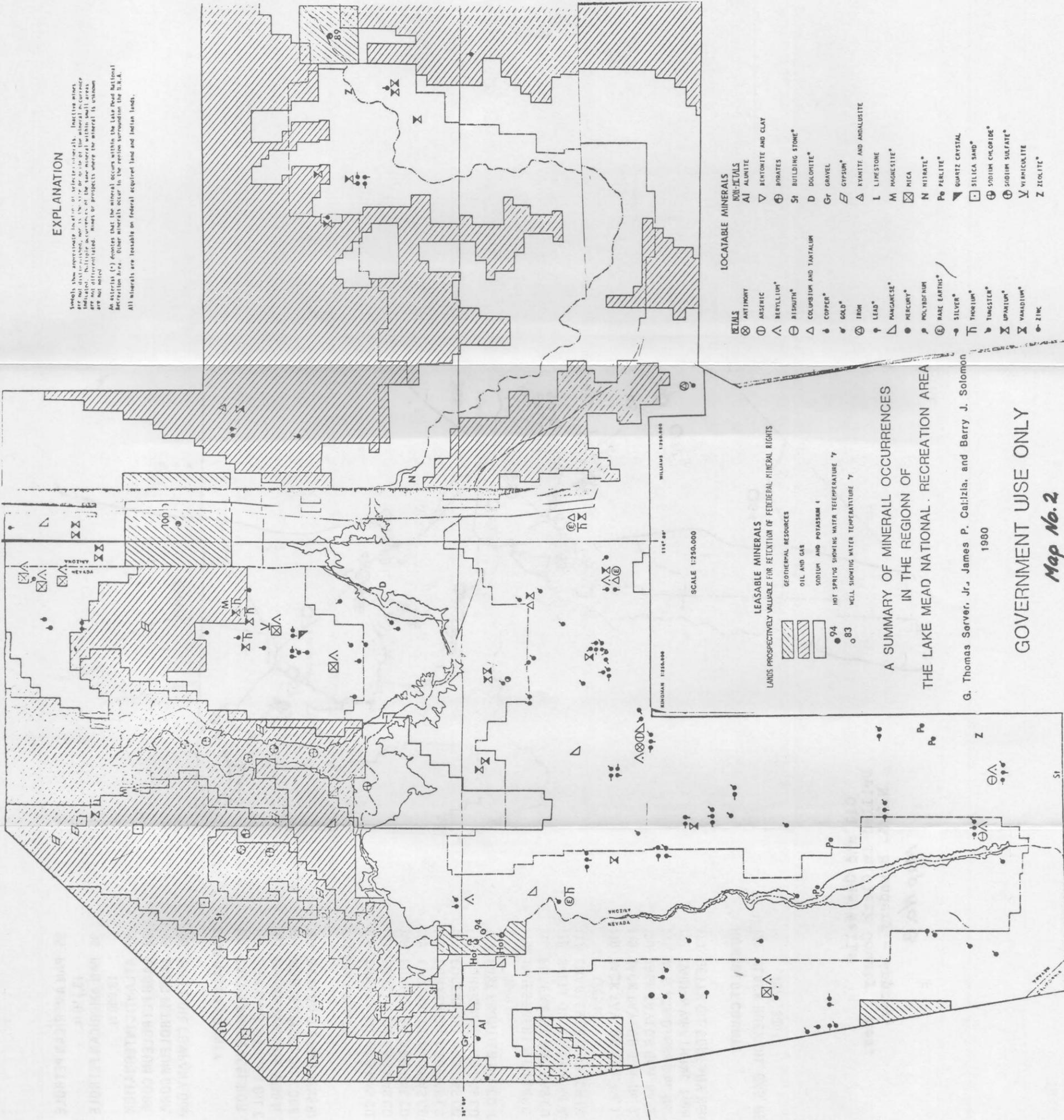
ESTABLISHED: OCTOBER 8, 1964
 BOUNDARY CHANGE: JANUARY 3, 1975
 BASIC DATA: U. S. G. S. 15' QUADRANGLE
 DATE: MAY 1975
 COMPILED BY
 DENVER SERVICE CENTER, COLORADO

TITLE

EXPLANATION

Shaded areas approximate location of metallic minerals. Inactive mines are not distinguished, nor is the size or type of the mineral occurrence indicated. Areas with no mineral occurrence are not shaded. Areas with mineral occurrence are not shaded. Areas with mineral occurrence are not shaded. Areas with mineral occurrence are not shaded.

All minerals are leasable on federal acquired land and Indian lands.



- LOCATABLE MINERALS**
- | | |
|-------------------------|--------------------------|
| METALS | NON-METALS |
| ⊗ ANTIMONY | ⊙ ALUMITE |
| ⊙ ARSENIC | ▽ BENTONITE AND CLAY |
| △ BERYLLIUM* | ⊕ BORATES |
| ⊖ BISMUTH* | ⊕ BUILDING STONE* |
| △ COLUBIUM AND TANTALUM | ⊕ DOLOMITE* |
| ⊕ COPPER* | ⊕ GRAVEL |
| ⊕ GOLD* | ⊕ GYPSUM* |
| ⊕ IRON | △ KYANITE AND ANDALUSITE |
| ⊕ LEAD* | ⊕ LIMESTONE |
| △ MANGANESE* | ⊕ MAGNESITE* |
| ⊕ MERCURY* | ⊕ MICA |
| ⊕ MOLYBDENUM | ⊕ NITRATE* |
| ⊕ RARE EARTHS* | ⊕ PERLITE* |
| ⊕ SILVER* | ⊕ QUARTZ CRYSTAL |
| ⊕ THORIUM* | ⊕ SILICA SAND* |
| ⊕ TUNGSTEN* | ⊕ SODIUM CHLORIDE* |
| ⊕ URANIUM* | ⊕ SODIUM SULFATE* |
| ⊕ VANADIUM* | ⊕ VERMICULITE |
| ⊕ ZINC | ⊕ ZEOCLITE* |

- LEASABLE MINERALS**
- LANDS PROSPECTIVELY VALUABLE FOR RETENTION OF FEDERAL MINERAL RIGHTS
- GEOTHERMAL RESOURCES**
- Oil and Gas
 - Sodium and Potassium
 - Hot Spring Showing Water Temperature > 94
 - Well Showing Water Temperature > 83

**A SUMMARY OF MINERAL OCCURRENCES
IN THE REGION OF
THE LAKE MEAD NATIONAL RECREATION AREA**

G. Thomas Server, Jr., James P. Caliztia, and Barry J. Solomon
1980

GOVERNMENT USE ONLY
Map No. 2

- 95. PAN AMERICAN PETROLE
13,116 ft.
- 96. PAN AMERICAN PETROLE
13,600 ft.
- 97. ATLANTIC INTERNATION
- 98. LADD PETROLEUM CORP.
- 99. LADD PETROLEUM CORP.
- 100. SHELL OIL COMPANY Gosh

ESMERALDA COUNTY

- 101. CALIFORNIA EXCELSIOR
- 102. FISH LAKE MERGER OIL C
- 103. Coaldale Well, 1925, 5280 ft.
- 104. MONTE CRISTO OIL CORP.
- 105. NEVADA OIL AND MINER/

EUREKA COUNTY

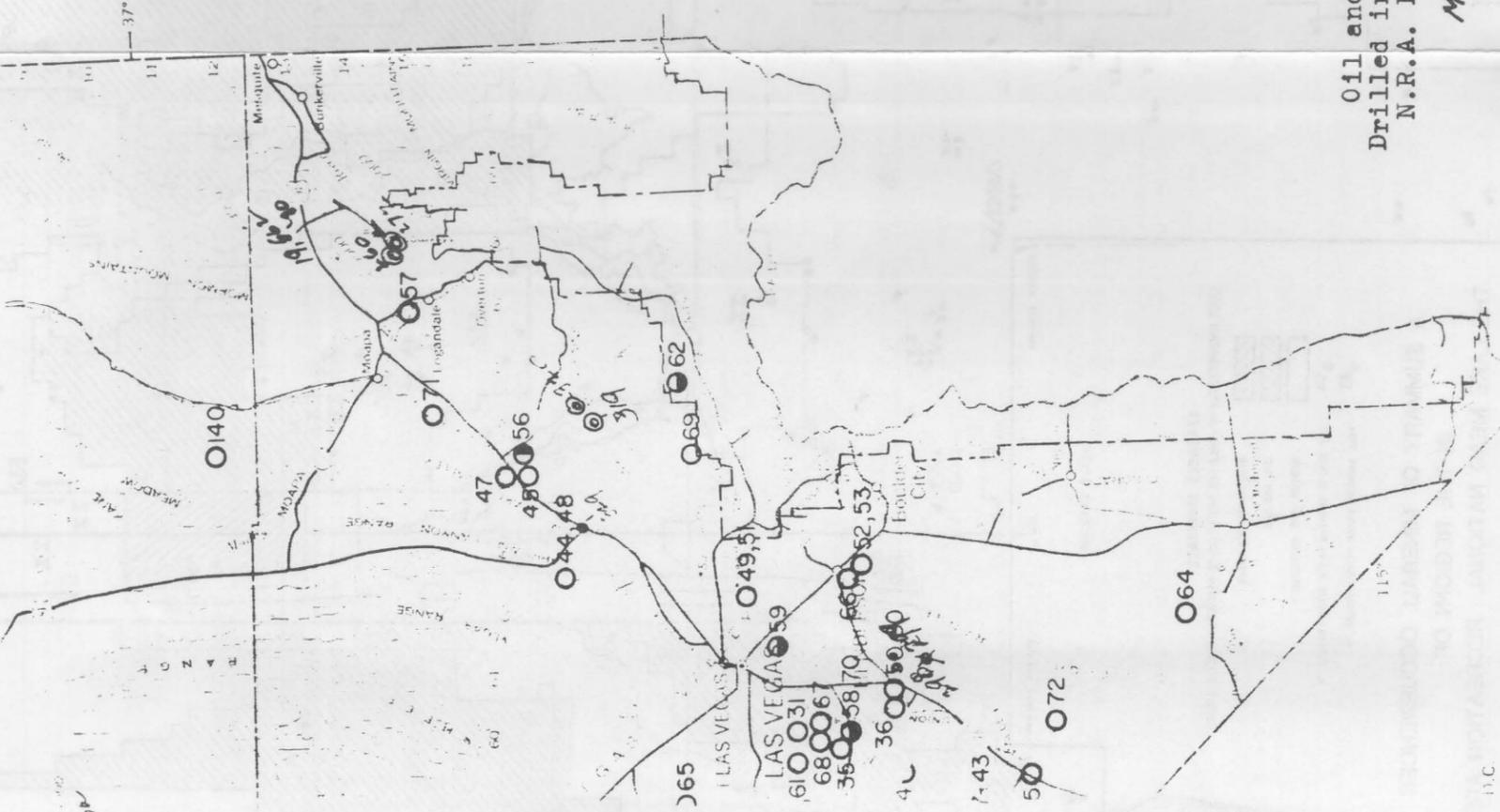
- 106. EUREKA OIL AND GAS CO
- 107. EUREKA OIL AND GAS CO
- 108. EUREKA OIL AND GAS CO
- 109. EUREKA OIL AND GAS CO
- 110. EUREKA OIL AND GAS CO
- 111. EUREKA OIL AND GAS CO
- 112. EUREKA OIL AND GAS CO
- 113. LAST FRONTIER OIL CO. I
3549 ft.

- 114. JAMES EBERT & EDWARD
- 115. EUREKA OIL AND GAS CO
- 116. SHELL OIL CO. Diamond Va
- 117. CHARLES BEYERBACH (MI)
1205 ft.

- 118. JACK TAYLOR Govt. No. 1,
- 119. JACK TAYLOR Govt. No. 2,
- 120. JACK TAYLOR Govt. No. 3,
- 121. W. F. ASH Damele Bros. No.
- 122. CARR & WRATH INC. Feder
- 123. GETTY OIL COMPANY Nost

HUMBOLDT COUNTY

- 124. BLACK ROCK OIL, GAS, RE
1921, 800 ft.



Oil and Gas Wells
Drilled in Clark County, Nev.
N.R.A. Boundary - Approx.

Map No. 3

CLARK COUNTY

260. MOBIL OIL CORP. Virgin River USA No. 1, 1100', 1979.
(SE/4, SW/4, S9, T15S, R6E)
272. MOBIL OIL CORP. Virgin River USA No. 1-A, 19,562', 1980.
(SE/4, SW/4, S9, T15S, R6E)
298. FLEETWOOD OIL & GAS CORP. Fleetwood Federal Her #1, 933', 1981
(SE/4, SE/4, S10, T23S, R6E)✓
299. FLEETWOOD OIL & GAS CORP. Fleetwood Federal Eva Garten #1, 2850', 1981.
(SW/4, SW/4, S11, T23S, R6E)✓
319. CHEVRON U.S.A., INC. Colerick Quarry No. 1,
(SE/4, SW/4, SE/4, S22, T23S, R6E)✓
320. CHEVRON U.S.A., INC. Burlington Pocket No. 1,
(SE/4, NW/4, NE/4, S14, T15S, R6E)✓
329. GRACE PETROLEUM CORP. Arrow Canyon No. 1,
(NW/4, SW/4, S14, T15S, R6E)

30. MICHEL T. HALBOUTY Federal No. 1, 1976, 7060 ft.

CLARK COUNTY

31. E. W. BANNISTER No. 1, 1929, 522 ft.
32. COMMONWEALTH OIL CO. No. 1, 1933, 1897 ft.
33. L. M. HATFIELD No. 1, 1935, 707 ft.
34. RED STAR OIL CO. J. B. Nelson No. 1, 1943, 2210 ft.
35. RED STAR OIL CO. J. B. Nelson No. 2, 1943, 3767 ft.
36. NEVADA EXPLORATION CO. Porter No. 1, 1947, 2002 ft.
37. NEW HAVEN OIL CO. No. 1, 1947, 716 ft.
38. NEW HAVEN OIL CO. No. 2, 1947, 405 ft.
39. NEW HAVEN OIL CO. No. 3, 1947, 200 ft.
40. NEW HAVEN OIL CO. No. 4, 1947, 226 ft.
41. NEW HAVEN OIL CO. No. 5, 1947, 40 ft.
42. GOODSPRINGS OIL CO. No. 1, 1948(?), 370 ft.
43. NEW HAVEN OIL CO. No. 6, 1948, 130 ft.
44. UNITED PETROLEUM CORP. Apex No. 1, 1948, 1247 ft.
45. G & G EXPLORATION CO. No. 1, 1949, 1130 ft.
46. BLACK GOLD OIL AND GAS EXPLORATION CO. Golden Spike No. 1, 1950, 950 ft.
47. LAST CHANCE OIL CO. Crystal No. 1, 1950, 1002 ft.
48. SOUTHERN NEVADA OIL INVESTORS CO. Apex No. 1, 1950, 1455 ft.
49. McAULEY ASSOCIATES No. 1, 1952, 1970 ft.
50. BIG BASIN OIL CO. Govt. No. 1, 1953, 2000(?) ft.
51. McAULEY ASSOCIATES No. 2, 1953, 3000 ft.
52. LEONARD WILSON Govt. No. 1, 1953, 810 ft.
53. LEONARD WILSON Govt. No. 1A, 1953, 1466 ft.
54. INTERMOUNTAIN ASSOCIATES INC. (Arden Dome) No. 1 (No. 1X), 1954, 3293 ft.
55. INTERMOUNTAIN ASSOCIATES INC. (Jean) No. 1, 1954, 2273 ft.
56. SOUTHERN GREAT BASIN OIL & GAS INC. Govt. No. 1, 1954, 5085 ft. (redrilled as JOHN A. HAEBER Adam No. 1, 1973, 3496 ft.)
57. MOAPA NEVADA OIL & GAS CO. Logandale No. 1, 1955, 575 ft.
58. U. S. OIL CO. (MATADOR OIL CO.) Wilson No. 1X, 1955, 2020 ft.
59. JOE W. BROWN Wilson Govt. No. 1, 1956, 8508 ft.
60. W. T. SMITHDEAL JR. U. S. Lease No. 1, 1956, 300 ft.
61. BONANZA OIL CORP. Arden Dome No. 1 (Consolidated Govt. No. 1), 1959(?), 3260 ft. (redrilled as TIME PETROLEUM INC. Federal No. 31-1, 1971, 3260 ft.)
62. SHELL OIL CO. Bowl of Fire Unit No. 1, 1959, 5919 ft.
63. TRI-STATE OIL EXPLORATION CO. Miskell-Govt. No. 1, 1959, 2602 ft.
64. OSCAR BRAY No. 1, 1961(?), 840 ft.
65. C. J. LICHTENWALTER & C. M. TURPIN Turpin No. 1, 1961, 777 ft.
66. TRANS-WORLD OIL CO. (LEONARD WILSON) Houssels-Wilson-Milka No. 1, 1962, 2300 ft.
67. EQUALITY OIL CO. (ARDEN DOME OIL CO.) Chadek No. 1, 1964, 1627 ft.
68. JACK F. GRIMM (MINERALS DRILLING INC.) Wilson No. 1, 1965, 5686 ft.
69. ROSEN OIL CO. Muddy Dome (Federal) No. 1, 1965, 5666 ft.
70. KAMARDEN OIL & GAS LTD. KOG-1, 1969, 6755 ft.
71. C. P. PHELPS No. 1, 1970, 1625 ft.
72. SANDIA INTERNATIONAL METALS CORP. Duff No. 1, 1971, 438 ft.

ELKO COUNTY

73. BULL RUN OIL AND GAS CO. No. 1, 1922, 800 ft.
74. ELKO OIL DEVELOPMENT & IMPROVEMENT CO. No. 1, 1924, 3337 ft.

147. SHELL OIL CO
148. SHELL OIL CO
149. SHELL OIL CO.
150. SHELL OIL CO.
151. SHELL OIL CO.
152. WEST END OPO
153. SHELL OIL CO.
154. SHELL OIL CO.
155. SHELL OIL CO.
156. TEXOTA OIL CO
157. STEVE GOSE G
LANDS INC. I
158. W. C. CO. No. 1,
159. WESTERN OIL L
160. PENNINGTON O
1505 ft.
161. TEXOTA OIL CO
162. TEXOTA OIL CO
163. TRANS WESTER
No. 1, 1966, 44
164. WESTERN OIL LA
165. GULF OIL CORP.
166. GULF OIL CORP.
167. GULF OIL CORP.
168. GULF OIL CORP.
169. GULF OIL CORP.
170. GULF OIL CORP.
171. GULF OIL CORP. I
172. GULF OIL CORP. I
173. GULF OIL CORP. I
174. GULF OIL CORP. I
175. GULF OIL CORP. P
176. GULF OIL CORP. F
177. GULF OIL CORP. S
178. PAN AMERICAN PE
1968, 8355 ft.
179. PAN AMERICAN PE
No. 1, 1968, 2943
180. WM. N. PENNINGT
American Big Was
181. TEXOTA OIL CO. E.
182. WESTERN OIL LAN
183. TENNECO OIL CO. I
184. A. PAUL SUTHERL
185. TENNECO OIL CO. I
186. NORTHWEST EXPL
9040 ft.
187. NORTHWEST EXPL
1976
188. NORTHWEST EXPL
10,473 ft.
- E. EAGLE SPRINGS FIE
SHELL OIL COMP,
SHELL OIL COMP,
SHELL OIL COMP,
SHELL OIL COMP/

100

NEVADA

36°

34

33

31

30

29

28

27

26

25

24

23

22

21

20

19

18

17

16 1/2

16

15

14

13

12

11

MOHAVE

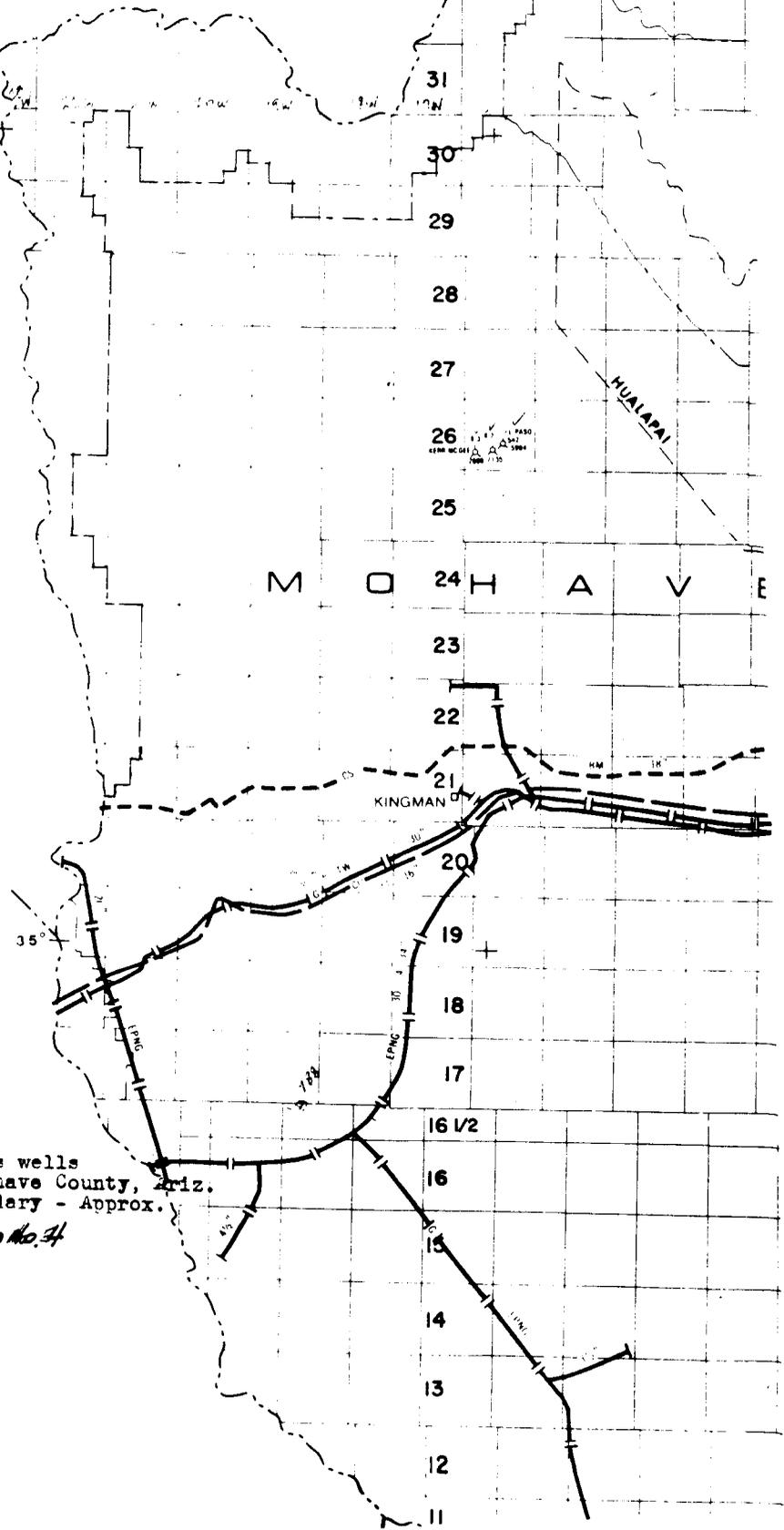
HUALAPAI

KINGMAN

35°

Oil and Gas wells
Drilled in Mohave County, Ariz.
N.R.A. Boundary - Approx.

Map No. 34



CHISE COUNTY

14	20S-20E-16	NE NE	Phillips Huachuca Al State (strat)	4261	GL	6/82	D	8513	Confider
16	20S-23E-14	SW SW	Phillips Tombstone Al State	4790	KB	9/81	D	10561	
33	23S-29E-14	NW NW	Phillips Douglas Al State (strat)	4295	GL	6/82	D	7058	Confider
4	23S-30E- 8	NE SW	Union Oil 80-1 State (geothermal)	4210	GL	11/80		715	Confider

ONINO COUNTY

-	41N- 1W-24	SE NE	Shields Exploration 8-24 Fed (strat)	5040	GL		L		
2	-24	NE SW	J. M. Shields 4-24 Federal (strat)	5043	GL			750	
+	-24	NE SW	J. M. Shields 5-24 Federal (strat)	5037	GL			4	
5	-24	NW SE	J. M. Shields 1-24 Federal (strat)	5062	GL	1/82		482	Confider
0	-24	NW SE	J. M. Shields Travis 1-24 Federal	5068	GL			900	
1	-24	NW SE	J. M. Shields 2-24 Federal (strat)	5072	GL			50	
5	-24	NW SE	J. M. Shields 6A-24 Federal (strat)	5066	GL			491	

HAM COUNTY

6	9S-26E-16	NW NE	Phillips Safford Al State (strat)	3562	GL	4/82		8509	Confider
---	-----------	-------	-----------------------------------	------	----	------	--	------	----------

attached list of 8 heat flow test wells, Bureau of Geology & Mineral Technology

COPIA COUNTY

5	2N- 7W-27	SW SW	Gemini Oil, Gas & Mineral 1 Heisler	1130	GL	10/81	D	2040	
3	5N- 3W-28	SE SE	Tri Oil 78-28 State	1613	GL		A		
3	-34	SW NW	Salt River Basin Fletcher 1 Federal	1600	GL	10/81	D	3980	

attached list of Phillips Petroleum temperature gradient wells

MOMAVE COUNTY

78	16½N-19W-20	SW NE	O'Brien Resources AZ-1 (geothermal)	1600	GL	12/81		325	
706	36N- 9W-30	NE SW	Gulf Oil 1 Federal	6350	KB	11/80	D	5961	Precambri
705	38N-10W-17	SW NE	Home Petroleum 17-1A Federal	4565	GL	6/80	D	3125	Pennsylv
813	40N- 6W-26	NW NW	Brooks Exploration 1-26 Federal	5070	GL		A		
676	41N- 9W-28	NW SE	Pyramid Oil 1 Federal	4743	KB	12/77	D	4150	Mississi
704	-33	NW NW	Pyramid Oil Rock Creek 2 Federal	5009	KB	4/81	W	3530	
726	42N-11W-35	SE NW	Kolob Petroleum 35-1 Federal	2890	GL	3/82	D	1432	

NAVAJO COUNTY

2	9N-22E-35	SE NE	Gail W. Sponseller 1 Sponseller	6500	GL		L		
+	-36	NE SE	Gail W. Sponseller Lakeside Al Fed	6500	GL		L		

PIMA COUNTY

9	15S-14E- 4	SE NW	Decker Properties 1 Decker (geotherm)				L		Confider
7	17S- 8E-36	NW SE	Phillips Redondo Al State (strat)	3278	KB	3/82	D	9021	Confider
5	17S-15E-10	SW NE	Phillips Mtn View Al State (strat)	3141	GL	7/82	D	8333	Confider
9	12S- 6W- 9	SE NE	NANO'LTEX JPAZA 1 Federal	1680	GL	12/80	D	1044	Volcanic

attached list of Phillips Petroleum temperature gradient wells

PINAL COUNTY

2	7S-10E- 2	NW SE	Anschutz Texoma 1-10-2 State (Phillips Petroleum 1 State-A)	2044	KB	1/81	D	18013	Precambri
---	-----------	-------	--	------	----	------	---	-------	-----------

PI COUNTY

5	14N- 6W-32	SE SE	Phillips Kirkland Al State (strat)	3628	GL		A		Confider
---	------------	-------	------------------------------------	------	----	--	---	--	----------

PIA COUNTY

attached lists of Phillips Petroleum temperature gradient wells

APPENDIX H: FLOOD MITIGATION COMPLIANCE

Executive Order 11988 was developed "in order to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative" (EO 11988; 42 FR 26951).

National Park Service "Floodplain Management and Wetland Protection Guidelines" (Federal Register vol. 45, no. 104, May 28, 1980) list procedures for complying with the executive order. These procedures require identification of floodplain, flood-hazard, and wetland areas potentially subject to public use and/or development, where the magnitude of hazard and impact of human activities is likely to be greatest; determination if the proposed action is in, or could affect, a floodplain or wetland; public review; identification and evaluation of practicable alternatives to locating in the base floodplain or wetland; identification of impacts; minimization of impacts; restoration, preservation, and enhancement of floodplain values; and findings and public explanation.

In preparation for development of the Draft General Management Plan, 100-year floodplains, probable maximum floodplains, flood-hazard areas, and wetlands within Lake Mead National Recreation Area were identified. Input was obtained from the public in the development of alternatives and determination of impact topics. For each alternative of the plan, the facilities that would remain in the floodplain and flood-hazard areas are shown in chart form in the document. Estimates are provided for numbers of people expected to be in the floodplain. The alternatives include those that would remove development in some areas from the floodplain. (Alternatives that were considered and rejected are listed in appendix F.) Impacts on natural and beneficial floodplain values are not discussed in the DEIS because the flash-flood areas at Lake Mead do not contain the elements normally associated with floodplains such as wetlands, groundwater recharge areas, and diverse riparian ecological communities; the flash floodplains at Lake Mead NRA have already been disrupted by their use as developed areas; protecting life and property already in the floodplain was judged to be a higher priority than restoring the natural qualities of the flash floodplain which are the very qualities that endanger life and property; and Lake Mead has been set aside as a recreation area with access to the lakes a primary service. Some tradeoffs in the area of natural values are necessary to provide this access. Although impacts on natural and beneficial values of floodplains are not assessed in the DEIS, the planning team has located no new developed areas in flash-flood areas. Therefore, the plan already exhibits compliance with most of the requirements of the executive order and implementing guidelines. All that remains to be done to complete the compliance process is public review of the DEIS and development and approval of a statement of findings. The statement of findings will be included in the final environmental impact statement.

The steps required for public review are as follows: Treat the issue in an environmental document that complies with public involvement requirements of CEQ; provide public notice to individuals and groups

affected by, or with a direct interest in, the proposed action and allow them to assist in development of alternatives; circulate NEPA and decision documents to at least the following: Environmental Protection Agency, Federal Emergency Management Agency, U.S. Fish and Wildlife Service, U.S. Geological Survey, Water and Power Resources Service (Bureau of Reclamation), U.S. Army Corps of Engineers, U.S. Soil Conservation Service, state and area clearinghouses, coastal or river basin commissions, and state coastal zone management administrations as appropriate; make the DEIS available for public and agency comment for a minimum of 60 days from the date it is filed with the EPA; indicate in the Federal Register notice of availability and on the cover sheet of the EIS that the DEIS is also to serve as a compliance instrument for the orders; and include above agencies in distribution of DEIS.

The first two of these requirements were met before publication of this document. The remaining requirements for public review are being fulfilled in the process of publishing, distributing, and considering comments on this DEIS.

BIBLIOGRAPHY

ARIZONA BUREAU OF MINES

- 1969 Mineral and Water Resources of Arizona. Prepared in conjunction with the U.S. Geological Survey and U.S. Bureau of Reclamation. Bulletin 180.

ARIZONA STATE OIL AND GAS CONSERVATION COMMISSION

- 1977 "Well Location Map Four." Prepared by J.R. Conley and O.A. Stacey (Revised 1981).

DEACON, JAMES E.

- 1977 Lake Mead Monitoring Program. Prepared for Clark County Sanitation District No. 1. Las Vegas: University of Nevada.

FLOOD LOSS REDUCTION ASSOCIATES

- 1982 "Preliminary Evaluation of Nonstructural Flood Loss Reduction Measures - Lake Mead NRA." Report for National Park Service.
- 1983 "Flood Mitigation Alternatives for Temple Bar, Cottonwood Cove, and Katherine Landing - Lake Mead NRA." Report for National Park Service.

MORRISON-KNUDSEN ENGINEERS, INC.

- 1985 Oil and Gas and Mining Development Scenarios. Lake Mead and Glen Canyon National Recreation Areas, Nevada, Arizona, and Utah. Draft prepared for National Park Service.

NEVADA BUREAU OF MINES AND GEOLOGY

- 1965 Geology and Mineral Deposits of Clark County, Nevada, by C.R. Longwell, E.H. Pampeyan, Ben Bowyer, and R.J. Roberts. Bulletin No. 62.
- 1977 "Wells Drilled for Oil and Gas in Nevada through 1976," by Jarry J. Garside and John H. Schilling. Map No. 56.
- _____, 1982, Lists of Wells Drilled for Oil and Gas (update to map 56).

NORTHERN ARIZONA COUNCIL OF GOVERNMENT, PLANNING AND DEVELOPMENT DIVISION

- 1982 "Arizona Clean Lake Classification Study - Final Report," by William L Towler.

O'BRIEN, ROBERT D.

- 1982 "An Evaluation of Mineral Resources, Lake Mead NRA, Arizona and Nevada." Under contract to Department of the Interior, National Park Service, Contract #PX8000 2 0506.

- SERVER, THOMAS G. JR., JAMES P. CALZIA, AND BARRY SOLOMON
 1980 "A Summary of Mineral Occurrences in the Region of the Lake Mead National Recreation Area." Pre-publication copy for government use only.
- SWAPP, CLOYD W.
 1961 The Geology and Gas and Oil Possibilities of Northwestern Arizona. Arizona Board for the Arizona Oil and Gas Conservation Commission.
- U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY
 1979 Potential Hazards from Floodflows and Debris Movement in the Furnace Creek Area, Death Valley National Monument, California-Nevada. Open-file report 79-991. John Crippen, Menlo Park, CA.
- U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE
 1974 Lower Colorado River Land Selection Program. Report by Intra-Agency Field Task Force, Phoenix, Arizona.
- 1977 Environmental Assessment-Management Options for Exxon Uranium Leases: Lake Mead National Recreation Area, Arizona-Nevada. Denver Service Center, Denver Colorado.
- 1979 Carrying Capacity Study: Lake Mead National Recreation Area. Denver Service Center. Denver, Colorado.
- 1979 "Threatened and Endangered Plants of Lake Mead National Recreation Area - A Report on Candidate Species," by James S. Holland and Dennis Schramm. Denver Service Center, Denver, Colorado.
- 1980a Historic Resources Study: Lake Mead National Recreation Area, by Mike Belshaw. Denver Service Center, Denver, Colorado.
- 1980b Land Acquisition Plan: Lake Mead National Recreation Area. Lake Mead National Recreation Area, Boulder City, Nevada.
- 1980c Mines and Mining Districts in the Lake Mead National Recreation Area: Supplement to the Lake Mead National Recreation Area Historic Resources Study, by Mike Belshaw. Denver Service Center, Denver, Colorado.
- 1980d The Archeology of Lake Mead National Recreation Area: An Assessment," by Carole McClellen, David Phillips, and Mike Belshaw. Western Archeological and Conservation Center, Publications in Anthropology, No. 9. Tucson, Arizona.
- 1981a "Natural Resources Management Program: An Addendum to the Natural Resources Management Plan." Western Regional Office. San Francisco, California.

- 1981b "Statement for Management: Lake Mead National Recreation Area." Western Regional Office. San Francisco, California.
- 1982a "Lake Mead National Recreation Area: Visitor Survey Analysis." Denver Service Center, Branch of Concessions Management. Denver, Colorado.
- 1982b "Lake Mead--Indian Relationships Consultations: A Preliminary Report," by John G. Herron. Denver Service Center, Denver, Colorado.
- 1982c "Flood Hazard Studies--Katherine, Cottonwood Cove, Willow Beach, Boulder Beach, Las Vegas Wash, Overton Beach, Temple Bar, and Other Minor Washes." Included analysis of 100-year and probable maximum floodplains and alternative designs of structural flood mitigation measures.
- 1983 "Historic Sites Within Lake Mead National Recreation Area Deemed Ineligible for National Register Nomination," by Nick Scattish. Denver Service Center, Denver, Colorado.

LIST OF PREPARERS

- Bill Burke, Resource Management Specialist, Lake Mead NRA, NPS.
Responsible for providing much baseline information and assisting in production of several natural resource sections.
- Felton Brunson, Civil Engineer, Denver Service Center (DSC), NPS.
Responsible for development of structural flood mitigation alternatives.
- Bonnie Campbell, Interpretive Planner, DSC, NPS. Responsible for interpretation and visitor use proposals.
- Denis Davis, Outdoor Recreation Planner, DSC, NPS. Responsible for coordination of outside consultants and related studies, project schedule and budget, coordination of the GMP/EIS production, supervision of planning team, and production and revision of some visitor use and natural resource sections.
- Terry Goodrich, Outdoor Recreation Planner, DSC, NPS. Responsible for natural resource portions of Description of Alternatives and Recreation Area, Affected Environment, and Environmental Consequences sections
- Jon Haman, Senior Environmental Specialist, DSC, NPS. Responsible for sections related to soils and geology.
- Dan Hamson, Ecologist, Energy, Mining and Minerals Division (EMM), NPS. Responsible for sections related to minerals management.
- Linda Hugie, Landscape Architect, DSC, NPS. Responsible for development concept plan proposals and graphics.
- Dan Kimball, Water Resources Specialist, Water Resources Division, NPS.
Responsible for some water resource and water quality sections.
- John Latscher, Cultural Resource Management Specialist, DSC, NPS.
Responsible for cultural resources management proposals, impacts, and compliance.
- Anne Livingston, Concessions Analyst, DSC, NPS. Responsible for concessions management, visitor use proposals, and public involvement evaluations.
- Mary Magee, Environmental Specialist, DSC, NPS. Responsible for several portions of "Environmental Consequences" section and the impacts summary.
- Dan Overzet, Civil Engineer, DSC, NPS. Responsible for assisting in development of structural flood mitigation alternatives.

Alan Robinson, Environmental Specialist, DSC, NPS. Responsible for general land protection and acquisition proposals.

Dennis Schramm, Ecologist, EMM, NPS. Responsible for sections related to minerals management.

Nancy Adams Simonds, Outdoor Recreation Planner, DSC, NPS. Responsible for general development proposals.

Mike Strunk, Landscape Architect, DSC, NPS. Responsible for development concept plan proposals and graphics.

Don Tiernan, Ecologist, DSC, NPS. Responsible for supervising planning team; coordinating production of workbooks, newsletters, draft EIS; final EIS; and production of some natural resource and flood mitigation sections, and the management zoning alternatives.

James D. Vanderford, Landscape Architect, Lake Mead NRA, NPS. Park coordinator for GMP process.

CONTRIBUTORS

John Adams, Assistant Regional Director, Planning and Environmental Compliance, Western Region, NPS.

Howard Chapman, Regional Director, Western Region, NPS.

Cynthia deFranceaux, Planning Coordinator, Washington Office, NPS.

Jack Heron, Anthropologist, DSC, NPS.

Betty Janes, Planning Branch Chief, DSC, NPS.

Maurice Miller, Transportation Planner, DSC, NPS.

Park Staff, Lake Mead NRA, NPS.

Joe Scarborough, Lands Division, Western Region, NPS.

Nick Scratish, Research Historian, DSC, NPS.

George Teague, Archeologist, Western Archeological and Conservation Center, NPS.

Jerry Wagers, Superintendent, Lake Mead NRA, NPS.

INDEX

- Administrative constraints, 5-6
- Adverse impacts, 313-14
- Affected environment, 205-50
- Air quality, 31, 240-41
- Alternatives
 - A, 67, 79, 108, 136, 161, 170, 179, 188
 - impacts of, 337-49
 - B, 80, 85-86, 108, 120, 136, 161, 171, 180, 188
 - impacts of, 351-66
 - No-action, 66-75, 93, 107, 135, 161, 170, 179, 188
 - impacts of, 315-335
 - Proposed Action, 13-65, 92, 106-07, 118-19, 132, 135
 - impacts of, 276-309
 - Workbook, 373-75
- Alternative development concept actions, 11, 89-192
- Archeology, 19, 42, 160-61, 170, 178, 188, 192, 247
- Bighorn sheep, 24, 26, 30, 299-300, 326-27, 344-45, 358
- Boating capacities, 42-45
- Boundary revisions, 48-53
- Boulder Basin Zone, 14, 66, 76, 85, 132-35, 199, 316
- Boulder Beach. See Boulder Basin Zone
- Boxcar Cove, 14, 135
- Cabin sites, 18, 56, 301, 328-29, 345-46, 359-60
- Callville Bay, 46, 69, 134, 200
- Carrying capacities, 42-44
- Climate, 205
- Concession operations, 45, 118, 272, 303, 329, 347, 361
- Contemporary native concerns, 41, 42
- Costs
 - concession development, 65, 98, 113, 122, 138, 148, 152, 156, 173, 183, 190, 193, 195
 - flood mitigation, 64-65, 93-95, 107-109, 119-20, 132-36, 148, 152, 156, 173, 183, 190, 193-94
 - NPS development, 64, 98, 113, 122, 138, 148, 152, 156, 173, 188, 190, 193, 194-95
- Cottonwood Zone, 13, 46, 59, 66, 76, 80, 110-13, 199, 316
- Cultural resources, 19, 39-42, 247-48, 273
- Desert spring ecological communities, 270, 291, 319-20, 340, 354
- Developed areas. See Alternative development concept actions
- Ecological communities, 219-26
- Echo Bay Zone, 14, 37, 46, 59, 66, 76, 85, 160-64, 200
- Environmental constraints, 203-04
- Environmental impacts, 276-367
- Excepted areas, 70, 75
- Facility analysis, 264-66
- Fire Mountain developed area, 13, 107, 112
- Flat-wake zoning, 46, 47
- Flood mitigation, 4, 14-18, 64, 69, 79, 85, 90, 92-95, 106-09, 118-20, 132-36, 160, 170-71, 178-80, 194
- Floodplain, 14, 230-36, 269-70, 276-83, 339-40, 353-54
- Four-wheel-drive vehicles, 32, 34, 192
- Geographic planning zones, 199-202
- Geology, 205-07
- Gregg Basin/Grand Wash Zone, 14, 44, 69, 79, 85, 188-89, 201
- Hemenway Harbor, 133
- Historic resources, 39-42, 247-48
- Illegal vehicle use, 4, 32-34, 135
- Impact topics, 269-75
- Information, 54-57
- Interpretation, 19, 54-57
- Irreversible and irretrievable commitments of resources, 311-12
- Katherine Zone, 13, 66, 76, 80, 92-95, 199, 315
- Land protection, 48-53, 274
- Lake use management, 42-47
- Landownership, 48-51
- Las Vegas Wash, 14, 134, 147-48, 200
- Legislative constraints, 5-6
- Legislative constraints, 5-6
- Lower Mohave, 93, 98

Management
 actions, 75, 79, 86
 objectives, 11
 resources, 274
 strategy, 11
 zones, 12, 18-20, 25-29, 69-75, 85

Mineral
 leasing, 5, 18, 25, 37-39, 70, 269, 272, 305-07, 311, 314, 329, 347-49, 363
 management plan, 7, 269
 resources, 207-11

Native American, 42
 Natural environment, 205-44
 No-action alternative. See Alternatives, no-action
 Northshore Area Road, 14, 60-62, 135, 156

Off-road use, 32, 135, 292-93, 313, 340, 354-55
 One-hundred-year flood. See Flood mitigation
 Orientation, 55
 Overton Beach Zone, 14, 37, 60-62, 76, 85, 170-71, 201

Parkwide alternative actions, 11, 13-86
 Pearce Ferry, 14, 188-89
 Plan implementation, 63
 phasing, 64
 priorities, 64
 Planning issues, 3-5
 Probable maximum flood. See Flood mitigation
 Property, 17, 282-83, 317, 339-40, 353-54
 Proposed action. See Alternatives, proposed action
 Public meetings, 372-73
 Public safety, 269, 275-82, 315-17, 337-39, 351-53

Recreation, 12, 23-26, 243-44, 254-57
 Redstone picnic area, 55, 161
 Resources management, 25-42, 274-75
 Roads, 264-66
 approved, 19
 improvements, 58-61
 safety, 4, 58-59, 275

Saddle Cove, 135
 Shivwits Plateau Zone, 14, 31, 37, 51, 69, 79, 85, 192-93, 201

Shoreline pollution, 46-48, 289-90
 Short-term versus long-term productivity of the environment, 312-13
 Significant natural features, 241-44, 271, 295, 322-23, 342, 356
 Six-Mile Cove, 13, 107, 109
 Socioeconomic environment, 251-52
 Soils, 32-34, 271, 291, 321-22, 340-41, 354-55
 South Cove, 14, 188
 Stewarts Point, 14, 60, 160-61, 164

Temple Bar. See Virgin/Temple Zone
 Threatened or endangered species, 31-32, 296-98, 323-24, 342-43, 356-57
 Trailer villages, 58, 301-02, 346-47, 360-61

Utilities, 265-66

Vegetation, 203, 219-225, 271, 298-99, 325-26, 343, 357-58
 Virgin/Temple Zone, 69-76, 85, 178-83, 201, 316
 Visitor
 crowding/congestion, 272, 300-01, 327-28, 358-59
 experience, 4, 54-56, 188
 increasing number of, 3, 13-14, 52, 64, 300, 327
 safety, 4, 54, 59-61. See also Public safety survey, 254, 371
 use analysis, 254-57
 use and development, 13, 45, 47, 54, 76, 80, 85, 272
 Visual quality, 241

Water quality, 30-31, 46-47, 237-40, 270, 289-91, 318-19, 340, 354
 Wetlands, 230-36, 270
 Wetlands Trail, 148
 Wilderness, 4, 7, 38, 211-19, 273, 307-11, 349-50, 331-36, 363-66
 Wildlife, 218, 272
 Willow Beach Zone, 14, 60, 66, 76, 80, 118-22, 199, 316

As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the graphics and editorial staffs of the Denver Service Center. NPS D-84A, July 1986