U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Las Vegas Field Office
4765 Vegas Drive
Las Vegas, NV 89108

May 1998

PROPOSED
LAS VEGAS RESOURCE MANAGEMENT PLAN AND FINAL ENVIRONMENTAL IMPACT STATEMENT

Volume II: Appendices, Glossary, References, and Maps

MISSION STATEMENT

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, project, and improve these lands in a to manner to serve the needs of the American people for all times. Management in based upon the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation, rangelands, timber, minerals, watershed, fish and wilderness, air and scenic, scientific and cultural.

BLM/LV/PL-98/012+1791

APPENDIX A

SPECIES LIST FOR CLARK AND SOUTHERN NYE COUNTIES

(Source: This lists was developed from a variety of sources and is not intended to be a comprehensive list. Sources include: Burt and Grossenheider 1976, Hall 1946, Peterson 1961, Stebbins 1966, USDI, BLM 1978 and USDI, BLM 1993)

I. BIRDS

Gaviidae (Loons)

Common loon	Gavia immer
Red-throated loon	Gavia Stellata

Podicipedidae (grebes)

Western Grebe	Aechmophorus occidentalis
Horned Grebe	Podiceps auritus
Eared grebe	Podiceps nigricollis
Pied-billed grebe	Podilymbus podiceps

Pelecanidae (pelicans)

White pelican	Pelecanus erythrorhynchos
Brown pelican	Pelecanus occidentalis

Phalacrocoracidae (cormorants)

Double-crested cormorant	Phalacrocorax auritus

Ardeidae (herons and bitterns)

Great blue heron	Ardea herodias
Green-backed heron	Butorides striatus
Little-blue heron	Egretta caerulea
Louisiana heron	Egretta tricolor
Black-crowned night heron	Nycticorax nycticorax
American bittern	Botaurus lentiginosus
Common egret	Casmerodius albus
Snowy egret	Egretta thula
Least bittern	Ixobrychus exilis
Cattle egret	Bubulcus ibis

Threskiornithidae (ibises and spoonbills)

Wood ibis	Mycteria americana
White-faced ibis	Plegadis chihi

Anatidae (Swans, ducks and geese)

Trumpeter swan	Cygnus columbianus
Canada goose	Branta canadensis
White-fronted goose	Anser albifrons
Snow goose	Chen caerulescens
Ross' goose	Chen rossii
Mallard	Anas platyrhynchos
Gadwall	Anas strepera
Pintail	Anas acuta

Green-winged teal	Anas crecca
Blue-winged teal	Anas discors
Cinnamon teal	Anas cyanoptera
American wigeon	Anas americana
Northern shoveler	Spatula clypeata
Wood duck	Aix sponsa
Redhead	Aythya americana
Ring-necked duck	Aythya collaris
Canvasback	Aythya valisineria
Greater scaup	Aythya marila
Lesser scaup	Aythya affinis
Common goldeneye	Bucephala clangula
Barrow's goldeneye	Bucephala islandica
White-winged scoter	Melanitta fusca
Surf scoter	Melanitta perspicillata
Bufflehead	Bucephala albeola
Ruddy duck	Oxyura jamaicensis
Common merganser	Mergus merganser
Red-breasted merganser	Mergus serrator
Hooded merganser	Lophodytes cucullatus
Fulvous whistling duck	Dendrocygna bicolor

Cathartidae (American vultures)

Turkey Vulture	Cathartes aura

Accipitridae (hawks, kites, harriers and eagles)

Northern goshawk	Accipiter gentilis
Sharp-shinned hawk	Accipiter striatus
Cooper's hawk	Accipiter cooperii
Red-tailed hawk	Buteo jamaicensis
Swainson's hawk	Buteo swainsoni
Rough-legged hawk	Buteo lagopus
Ferruginous hawk	Buteo regalis
Red-shouldered hawk	Buteo lineatus
Northern harrier	Circus cyaneus
Golden eagle	Aquila chrysaetos
Bald eagle	Haliaeetus leucocephalus
Osprey	Pandion haliaetus

Flaconidae (falcons)

Prairie falcon	Falco mexicanus
American kestrel	Falco sparverius
Peregrine falcon	Falco peregrinus
Merlin	Falco columbarius

Phasianidae (quail, partridge and pheasant)

Gambel's Quail	Callipepla gambelii
Chukar	Alectoris chukar

Meleagrididae (turkey)

Turkey	Meleagris gallopavo

Gruidae (Cranes)

Sandhill crane	Grus canadensis

Rallidae (rails, coots, and gallinules)

Virginia rail	Rallus limicola
Sora rail	Porzana carolina
American coot	Fulica americana
Common moorhen	Gallinula chloropus

Charadriidae (plovers, turnstones and surfbirds)

Snowy plover	Charadrius alexandrinus
Killdeer	Charadrius vociferus
Black-bellied plover	Pluvialis squatarola
Ruddy turnstone	Arenaria interpres
Semipalmated plover	Charadrius semipalmatus

Scolopacidae (snipe and sandpipers)

Long-billed curlew	Numenius americanus
Whimbrel	Numenius phaeopus
Spotted sandpiper	Actitis macularia
Willet	Catoptrophorus semipalmatus
Greater yellowlegs	Tringa melanoleuca
Lesser yellowlegs	Tringa flavipes
Baird's sandpiper	Calidris bairdii
Dunlin	Calidris alpina
Least sandpiper	Calidris minutilla
Long-billed dowitcher	Limnodromus scolopaceus
Stilt sandpiper	Calidris himantopus
Western sandpiper	Calidris mauri
Marbled godwit	Limosa fedoa
Sanderling	Calidris alba

Recurvirostridae (avocets and stilts)

American avocet	Recurvirostra americana
Black-necked stilt	Himantopus mexicanus
Wilson's phalarope	Phalaropus tricolor

Laridae (gulls and terns)

Herring gull	Larus argentatus
California gull	Larus californicus
Ring-billed gull	Larus delawarensis
Bonaparte's Gull	Larus philadelphia
Forster's tern	Sterna forsteri
Least tern	Sterna antillarum
Caspian tern	Sterna caspia

Black tern	Chlidonias niger
Columbidae (pigeons and doves)	
Band-tailed pigeon	Columba fasciata
White-winged dove	Zenaida asiatica
Mourning dove	Zenaida macroura
Ground dove	Columbina passerina
Inca dove	Columbina inca
Rock dove	Columba livia
Cuculidae (cuckoos and roadrunners)	
Yellow-billed cuckoo	Coccyzus americanus
Roadrunner	Geococcyx californianus
Tytonidae (owls)	
Barn owl	Tyto alba
Screech owl	Otus kennicottii
Great Horned owl	Bubo virginianus
Burrowing owl	Athene cunicularia
Long-eared owl	Asio otus
Short-eared owl	Asio flammeus
Northern Saw whet owl	Aegolius acadicus
Flammulated owl	Otus flammeolus
Northern pygmy owl	Glaucidium gnoma
Caprimulgidae (goatsuckers)	
Poor-will	Phalaenoptilus nuttallii
Common nighthawk	Chordeiles minor
Lesser nighthawk	Chordeiles acutipennis
Apodidae (swifts)	
White-throated swift	Aeronautes saxatalis
Vaux's swift	Chaetura vauxi
Trochilidae (hummingbirds)	
Black-chinned hummingbird	Archilochus alexandri
Costa's hummingbird	Calypte costae
Calliope hummingbird	Stellula calliope
Anna's hummingbird	Calypte anna
Broad-tailed hummingbird	Selasphorus platycercus
Rufous hummingbird	Selasphorus rufus
Alcedinidae	
Belted kingfisher	Ceryle alcyon
Picidae (woodpeckers)	
Northern flicker	Colaptes auratus

Gila woodpecker	Melanerpes uropygialis
Lewis woodpecker	Melanerpes lewis
Yellow-bellied sapsucker	Sphyrapicus varius
Red-breasted sapsucker	Sphyrapicus ruber
Williamson's sapsucker	Sphyrapicus thyroideus
Ladder-backed woodpecker	Picoides scalaris
Hairy woodpecker	Picoides villosus

Mimidae (mockingbirds and thrashers)

Bendire's thrasher	Toxostoma bendirei
LeConte's thrasher	Toxostoma lecontei
Crissal thrasher	Toxostoma dorsale
Sage thrasher	Oreoscoptes montanus
Mockingbird	Mimus polyglottos

Muscicapidae (thrushes and bluebirds)

Robin	Turdus migratorius
Hermit thrush	Catharus guttatus
Swainson's thrush	Catharaus ustulatus
Western bluebird	Sialia mexicana
Mountain bluebird	Sialia currucoides
Townsend's solitaire	Myadestes townsendi

Sylviidae (gnatcatchers and kinglets)

Black-tailed gnatcatcher	Polioptila melanura
Blue-gray gnatcatcher	Polioptila caerulea
Ruby-crowned kinglet	Regulus calendula
Golden-crowned kinglet	Regulus satrapa

Motacillidae (water pipit)

Water pipit	Anthus spinoletta

Bombycillidae (waxwings)

Cedar waxwing	Bombycilla cedrorum

Ptilogonatidae (phainopepla)

Phainopepla	Phainopepla nitens

Laniidae (shrikes)

Loggerhead shrike	Lanius ludovicianus

Sturnidae (starling)

Starling	Sturnus vulgaris

Vireonidae (vireos)

Bell's vireo	Vireo bellii
Gray vireo	Vireo vicinior
Solitary vireo	Vireo solitarius
Warbling vireo	Vireo gilvus
Hutton's vireo	Vireo huttoni

Emberizidae (warblers)

Orange-crowned warbler	Vermivora celata
Virginia's warbler	Vermivora virginiae
Lucy's warbler	Vermivora luciae
Yellow warbler	Dendroica petechia
Yellow-rumped warbler	Dendroica coronata
Black-throated gray warbler	Dendroica nigrescens
Nashville warbler	Vermivora ruficapilla
Townsend warbler	Dendroica townsendi
Hermit warbler	Dendroica occidentalis
Northern waterthrush	Seiurus noveboracensis
MacGillivray's warbler	Oporornis tolmiei
Yellowthroat	Geothlypis trichas
Yellow-breasted chat	Icteria virens
Wilson's warbler	Wilsonia pusilla
American redstart	Setophaga ruticilla
Painted redstart	Myioborus pictus
Black and White warbler	Mniotilta varia

Ploceidae (old world sparrows)

House sparrow	Passer domesticus

Icteridae (meadow larks, blackbirds, and orioles)

Western meadow lark	Sturnella neglecta
Yellow-headed blackbird	Xanthocephalus xanthocephalus
Red-winged blackbird	Agelaius phoeniceus
Scott's oriole	Icterus parisorum
Brewer's blackbird	Euphagus cyanocephalus
Brown-headed cowbird	Molothrus ater
Great-tailed grackel	Quiscalus mexicanus
Hooded oriole	Icterus cucullatus

Thraupidae (tanagers)

Western tanager	Piranga ludoviciana
Hepatic tanager	Piranga flava
Summer tanager	Piranga rubra

Fringillidae (grosbeaks, finches, sparrows and buntings)

Black-headed grosbeak	Pheucticus melanocephalus
Blue grosbeak	Guiraca caerulea
Indigo bunting	Passerina cyanea
Lazuli bunting	Passerina amoena

Evening grosbeak	Coccothraustes vespertinus
Cassin's finch	Carpodacus cassinii
House finch	Carpodacus mexicanus
Pine siskin	Carduelis pinus
American goldfinch	Carduelis tristis
Lesser goldfinch	Carduelis psaltria
Red crossbill	Loxia curvirostra
Green-tailed towhee	Pipilo chlorurus
Rufous-sided towhee	pipilo erythrophthalmus
Abert's towhee	Pipilo aberti
Lark bunting	Calamospiza melanocorys
Savannah sparrow	Passerculus sandwichensis
Grasshopper sparrow	Ammodramus savannarum
Vesper sparrow	Pooecetes gramineus
Lark sparrow	Chondestes grammacus
Black-throated sparrow	Amphispiza bilineata
Sage sparrow	Amphispiza belli
Dark-eyed junco	Junco hyemalis
Tree sparrow	Spizella arborea
Chipping sparrow	Spizella passerina
Brewer's sparrow	Spizella breweri
Blacked-chinned sparrow	Spizella pusilla
White-crowned sparrow	Zonotrichia leucophrys
Golden-crowned sparrow	Zonotrichia atricapilla
Fox sparrow	Passerella iliaca
Lincoln's sparrow	Melospiza lincolnii
Song sparrow	Melospiza melodia
Swamp sparrow	Melospiza georgiana

Tryannidae (tyrant flycatchers)

Western kingbird	Tyrannus verticalis
Cassin's kingbird	Tyrannus vociferans
Ash-throated flycatcher	Myiarchus cinerascens
Olive-sided flycatcher	Contopus borealis
Western wood pewee	Contopus sordidulus
Black phoebe	Sayornis nigricans
Say's pheobe	Sayornis saya
Vermillion flycatcher	Pyrocephalus rubinus
Brown-crested flycatcher	Myiarchus tyrannulus

Empidonax flycatchers

Gray flycatcher	Empidonax wrightii
Dusky flycatcher	Empidonax oberholseri
Western flycatcher	Empidonax difficilis
Hammond's flycatcher	Empidonax hammondii
Willow flycatcher	Empidonax traillii

Alaudidae (larks)

Horned lark	Eremophila alpestris

Hirundinidae (swallows)

Tree swallow	Tachycineta bicolor
Violet-green swallow	Tachycineta thalassina
Purple martin	Progne subis
Cliff swallow	Hirundo pyrrhonota
Northern rough-winged swallow	Stelgidopteryx serripennis
Bank swallow	Riparia riparia
Barn swallow	Hirundo rustica

Corvidae (jays, crows and magpies)

Scrub jay	Aphelocoma coerulescens
Pinyon jay	Gymnorhinus cyanocephalus
Steller's jay	Cyanocitta stelleri
Clark's nutcracker	Nucifraga columbiana
Common raven	Corvus corax
American crow	Corvus brachyrhynchos

Paridae (titmice, verdins and chickadees)

Plain titmouse	Parus inornatus
Mountain chickadee	Parus gambeli
Verdin	Auriparus flaviceps
Bushtit	Psaltriparus minimus

Certhiidae (creepers)

Brown creeper	Certhia americana

Sittidae (nuthatches)

White-breasted nuthatch	Sitta carolinensis
Red-breasted nuthatch	Sitta canadensis
Pygmy nuthatch	Sitta pygmaea

Troglodytidae (wrens)

House wren	Troglodytes aedon
Rock wren	Salpinctes obsoletus
Bewick's wren	Thryomanes bewickii
Marsh wren	Cistothorus palustris
Canyon wren	Catherpes mexicanus
Cactus wren	Campylorhynchus brunneicapillus
Winter wren	Troglodytes troglodytes

II. REPTILES

LIZARDS

Banded Gecko	Coleonyx variegatus
Gilbert's Skink	Eumeces gilberti
Western Skink	Eumeces skiltonianus
Desert Iguana	Dipsosaurus dorsalis
Zebra-tailed lizard	Callisaurus draconoides
Collared lizard	Crotaphytus collaris
Chuckwalla	Sauromalus obesus
Gila monster	Heloderma suspectum
Long-nosed leopard lizard	Gambelia wislizenii
Desert spiny lizard	Sceloporus magister
Western fence lizard	Sceloporus occidentalis
Eastern fence lizard	Sceloporus undulatus*
Sagebrush lizard	Sceloporus graciosus
Side-blotched lizard	Uta stansburiana
Desert horned lizard	Phyrnosoma platyrhinos
Desert night lizard	Xantusia vigilis
Western whiptail	Cnemidophorus tigris
Long-tailed brush lizard	Urosaurus graciosus
Tree lizard	Urosaurus ornatus

SNAKES

Ringneck snake	Diadophis punctatus
Striped whipsnake	Masticophis taeniatus
Coachwhip	Masticophis flagellum
Western patch-nosed snake	Salvadora hexalepis
Spotted leaf-nosed snake	Phyllorhynchus decurtatus
Western shovel-nosed snake	Chionactis occipitalis
Black-headed snake	Tantilla planiceps
Racer	Coluber constrictor
Glossy snake	Arizona elegans
Gopher snake	Pituophis melanoleucus
Common kingsnake	Lampropeltis getulus
Long-nosed snake	Rhinocheilus lecontei
Western ground snake	Sonora semiannulata
Night snake	Hypsiglena torquata
Western blind snake	Leptotyphlops humilis
Sonoran Mountain kingsnake	Lampropeltis pyromelana
Speckled rattlesnake	Crotalus mitchelli
Mojave rattlesnake	Crotalus scutulatus
Sidewinder	Crotalus cerastes
Western diamondback	Crotalus atrox
Western garter snake	Thamnophis elegans
Sonora lyre	Trimorphodon biscutatus lambda

TORTOISES AND TURTLES

Desert tortoise	Gopherus agassizi
Texas softshell turtle	Trionyx spiniferus

III. AMPHIBIANS

TOADS

Great Basin spadefoot	Scaphiopus intermontanus
Southwestern toad	Bufo microscaphus microscaphus
Red-spotted toad	Bufo punctatus
Great-Plains toad	Bufo cognatus
Woodhouse's toad	Bufo woodhousei
Western toad	Bufo boreas

FROGS

Vegas Valley leopard frog	Rana pipiens fisheri Possibly extinct
Bullfrog	Rana catesbeiana
Pacific treefrog	Hyla regilla
Leopard frog	Rana pipiens

IV. MAMMALS

Bovidae (mountain sheep)

Desert bighorn sheep	Ovis canadensis nelsoni

Cervidae (deer and elk)

Mule deer	Odocoileus hemionus hemionus
Rocky mountain elk	Cervus canadensis

Canidae (coyote, foxes, wolves)

Coyote	Canis latrans
Kit fox	Vulpes macrotis
Gray fox	Urocyon cinereoargenteus

Felidae (cats)

Bobcat	Lynx rufus
Mountain lion	Felis concolor

Mustelidae (skunks, racoons, weasels, otters, badgers)

Spotted skunk	Spilogale gracilis
Striped skunk	Mephitis mephitis
Badger	Taxidea taxus
Southwestern otter	Lutra canadensis sonorae

Procyondidae (racoons)

Racoon	Procyon lotor
Ringtail	Bassariscus astutus

Rodentia (squirrels, rats and mice)

Round-tailed ground squirrel	Citellus tereticaudus

Townsend's ground squirrel	Citellus townsendii	
Rock squirrel	Citellus variegatus	
Cliff chipmunk	Eutamias dorsalis	
Plamer's chipmunk	Eutamias palmeri	
Panamint chipmunk	Eutamias panamintinus	
White-tailed antelope ground squirrel	Ammospermophilus leucurus	
Golden-mantled ground squirrel	Citellus lateralis	

Geomyidae (pocket gophers)

Botta's pocket gopher	Thomomys bottae	

Heteromyidae (kangaroo rats, kangaroo mice, pocket mice)

Merriam's kangaroo rat	Dipodomys merriami	
Desert kangaroo rat	Dipodomys deserti	
Panamint kangaroo rat	Dipodomys panamintinus	
Great basin pocket mouse	Perognathus parvus	
Long-tailed pocket mouse	Perognathus formosus	
Little pocket mouse	Perognathus longimembris	

Castoridae (beaver)

Beaver	Castor canadensis	

Cricetidae (rats, mice, lemmings and voles)

Bushy-tailed woodrat	Neotoma cinerea	
Desert woodrat	Neotoma lepida	
Western harvest mouse	Reithrodontomys megalotis	
Canyon mouse	Peromyscus crinitus	
Cactus mouse	Peromyscus eremicus	
Deer mouse	Peromyscus maniculatus	
Brush mouse	Peromyscus boylii	
Pinon mouse	Peromyscus truei	
Southern grasshopper mouse	Onychomys torridus	
Muskrat	Ondatra zibethicus	
Ash Meadows vole	Microtus montanus nevadensis	possibly extinct

Muridae (Old World Rats and Mice)

House mouse	Mus musculus	
Norway rat	Rattus norvegicus	

Erethizontidae (porcupines)

Porcupine	Erethizon dorsatum	

Lagomorpha (rabbits and hares)

Black-tailed jackrabbit	Lepus californicus	
Desert cottontail	Sylvilagus audubonii	
Nuttall's cottontail	Sylvilagus nuttallii	

Chiroptera (bats)

Big brown bat	Eptesicus fuscus pallidus
Leaf-nosed bat	Macrotus californicus
Yuma myotis	Myotis yumanensis
Long-eared myotis	Myotis evotis chrysonotus
Fring-tailed myotis	Myotis thysanodes thysanodes
Long-legged myotis	Myotis volans interior
California myotis	Myotis californicus pallidus
Small-footed myotis	Myotis subulatus
Silver-haired bat	Lasionycteris noctivagans
Western pipistrell	Pipistrellus hesperus hesperus
Red bat	Lasiurus borealis
Hoary bat	Lasiurus cinereus
Spotted bat	Euderma maculatum
Townsend's big-eared bat	Plecotus townsendi
Mexican big-eared bat	Plecotus phyllotis
Pallid bat	Antrozous pallidus pallidus
Mexican free-tailed bat	Tadarida brasiliensis
Pocketed free-tailed bat	Tadarida femorosacca
Big free-tailed bat	Tadarida macrotis
Western mastiff bat	Eumops perotis

Soricidae (Shrews)

Inyo shrew	Sorex tenellus
Desert shrew	Notiosorex crawfordi

V. FISHES

Species	Distribution	Status
Clupeidae (herring and shad)		
Threadfin shad Dorosoma petenense atchafalayae	Colorado River drainage	introduced
Salmonidae (salmon and trout)		
Rainbow trout Oncorhynchus mykiss	Colorado River drainage	introduced
Lahontan cutthroat trout Oncorhynchus clarki ssp.	Colorado River drainage	introduced
Catostomidae (suckers)		
Razorback sucker Xyrauchen texanus	Lake Mead and Mohave	endangered
Flannel-mouth sucker Catostomus latipinnis	Colorado River drainage	sensitive
Catfish		
Channel catfish Ictalurus punctatus	Colorado River drainage	introduced
Black bullhead catfish Ictalurus melas	Colorado River drainage	introduced
Centrarchidae (sunfishes)		
Largemouth bass Micropterus salmoides	Colorado River drainage	introduced
Bluegill sunfish Lepomis macrochirus	Colorado River drainage	introduced
Green sunfish Lepomis cyanellus	Colorado River drainage	introduced
Black crappie Pomoxis nigromaculatus	Colorado River drainage	introduced

Species	Distribution	Status
Percichthyidae (temperate basses)		
Striped bass Morone saxitilis	Colorado River drainage	introduced
Cyprinodontidae (killifish, springfish, and pupfish)		
Ash Meadows Amaragosa pupfish Cyprinodon nevadensis mionectes	Ash Meadows	endangered
Warm spring pupfish Cyprinodon nevadensis pectoralis	Ash Meadows	endangered
Devils Hole pupfish Cyprinodon diabolis	Ash Meadows	endangered
Moapa White River springfish Crenichthys baileyi moapae	Muddy River	sensitive spp
Pahrump killifish Empetrichthys latos	Corn Creek springs Spring Mountain State Park	endangered
Poeciliidae (livebearers)		
Mosquito fish Gambusia affinis	Colorado River drainage	introduced
Shortfin molly Poecilia mexicana	Colorado River drainage	introduced
Black mollies Mollienesia latipinna	Colorado River drainage	introduced
Guppies Lebistes reticulatus	Colorado River drainage	introduced
Swordtails Xiphophorus helleri	Colorado River drainage	introduced
Platys Xiphophorus maculatus	Colorado River drainage	introduced
Cyprinidae (minnows)		
Fathead minnow Pimephales promelas**	Colorado River drainage	introduced

Species	Distribution	Status
Colorado River roundtail chub Gila robusta robusta	Colorado River drainage	native
Virgin River roundtail chub Gila robusta seminuda	Virgin River Muddy River	endangered sensitive
Bonytail chub Gila elegans	Lake Mohave	endangered
Red shiner Notropis lutrensis**	Colorado River drainage	introduced
Golden shiner Notemigonus crysoleucas**	Colorado River drainage	introduced
Speckled dace Rhinichthys osculus	Colorado River drainage	native
Ash Meadows speckled dace Rhinichthys osculus nevadensis	Ash Meadows	endangered
Meadow Valley Wash specked dace Rhinichthys osculus spp.	Muddy River	sensitive
Moapa dace Moapa coriacea	Muddy River	endangered
Asiatic carp Cyprinus carpio	Colorado River drainage	introduced
Goldfish Carassius auratus	Colorado River drainage	introduced
Virgin River spinedace Lepidomeda mollispinis mollispinis	Virgin River	sensitive
Big Spring spinedace Lepidomeda mollispinis pratensis	Ash Meadows	threatened
Woundfin Plagopterus argentissimus	Virgin River	endangered
Grass carp Ctenopharyngodon idella Val.	Colorado River drainage	introduced

APPENDIX B

Special Status Species

Special status species include those federally listed as threatened, endangered or candidates for listing, State listed species and BLM sensitive species. BLM sensitive species are species designated by the BLM State Director, in cooperation with the State of Nevada Department of Conservation and Natural Resources, that are not already included as BLM Special status species under (1) Federally listed, proposed or candidate species; or (2) Species listed by the State of Nevada because of potential endangerment or extinction.

The Nevada BLM Sensitive Species list was updated in March 1997. However, because Nevada Revised Statute 501.110 is not clear on which species are listed for reasons of endangerment or extinction, several species of concern were not included on the most recent Nevada BLM Sensitive Species list. This list is currently being revised by the State Director. The revised list will include several species which are not included on the tables below. The BLM sensitive species list will be reviewed annually and revised as appropriate.

Table B-1. Federally listed species.

Species expected to occur on BLM managed lands in the Las Vegas District	
Threatened	Desert tortoise, *Gopherus agassizii*
Endangered	Woundfin minnow, *Plagopterus argentissimus*
Endangered	Virgin River chub, *Gila robusta*
Endangered	Ash Meadows Amaragosa pupfish, *Cyprinodon nevadensis mionectes*
Endangered	Warm springs pupfish, *Cyprinodon nevadensis pectoralis*
Endangered	Ash Meadows speckled dace, *Rhinichthys osculus nevadensis*
Threatened	Ash Meadows naucorid, *Ambrysus amaragosus*
Endangered	Peregrine falcon, *Falco peregrinus anatum*
Endangered	Southwest willow flycatcher, *Empidonax traillii extimus*
Species that occur on state, private and other Federal lands and probably do not occur on BLM managed lands in the Las Vegas District	
Endangered	Bald eagle, *Haliaeetus leucocephalus*
Endangered	Moapa dace, *Moapa coriacea*
Endangered	Bonytail chub, *Gila elegans*
Endangered	Pahrump killifish, *Empetrichthys latos*
Endangered	Devil's Hole pupfish, *Cyprinodon diabolis*
Endangered	Colorado squawfish, *Ptychocheilus lucius*
Endangered	Razorback sucker, *Xyrauchen texanus*

(Source: USFWS, Reno Field Station, File no. 1-5-95-SP-066, February 9, 1995 and FR Vol. 61, No. 25, 2/6/96)

Table B-2. BLM sensitive species potentially occurring within the Las Vegas District

Species likely to occur on BLM managed lands

Invertebrates
Oasis Valley springsnail, *Pyrgulopsis micrococcus*
Red Rocks springsnail #1, *Pyrgulopsis* sp.
Red Rocks springsnail #2, *Pyrgulopsis* sp.
Giuliani's dune scarab beetle, *Pseudocotalpa giulianii*
Big Dune aphodius scarab beetle, *Aphodius* sp.
Large aegialian scarab beetle, *Aegialia magnifica*
Rulien's miloderes weevil, *Miloderes rulieni*

Mammals
Greater western mastiff-bat, *Eumops perotis californicus*
Allen's big-eared bat, *Idionycteris phyllotis*
California leaf-nosed bat, *Macrotus californicus*
Small-footed myotis, *Myotis ciliolaburm*
Long-eared myotis, *Myotis evotis*
Fringed myotis, *Myotis thysanodes*
Cave myotis, *Myotis velifer*
Long-legged myotis, *Myotis volans*
Yuma myotis, *Myotis yumanensis*
Big free-tailed bat, *Nyctinomops macrotis*
Pale Townsend's big-eared bat, *Plecotus townsendii pallescens*

Birds
Phainopepla, *Phainopepla nitens*

Amphibians
Arizona toad, *Bufo microscaphus microscaphus*

Reptiles
Chuckwalla, *Sauromalus obesus*

Fish
Virgin spinedace, *Lepidomeda mollispinis mollispinis*

(Source: BLM Sensitive Species list, March 1997).

APPENDIX C

WILD AND SCENIC RIVERS
ELIGIBILITY, CLASSIFICATION, AND SUITABILITY

STUDY PROCESS

The wild and scenic river study process has three steps:

1. Determine if the river segment(s) is eligible for wild and scenic river designation.
2. Determine the potential classification of the river segment(s) as wild, scenic, recreational, or any combination thereof.
3. Conduct a suitability study/legislative EIS to determine if the river segment(s) is suitable for designation to the Wild and Scenic Rivers System.

Specific study procedures are found in BLM Manual 8351 and in the final revised U.S. Department of Agriculture and Interior guidelines found in *Federal Register* Vol. No. 173, September 7, 1982. The guidance recommends that all three steps be completed during the RMP process. If circumstances make this impossible, the study/EIS step may be deferred for up to 5 years. Minimum determination in an RMP involving a potential wild and scenic river must include decisions on eligibility and classification.

This appendix completes the first two steps of the process for the Virgin River. The Stateline Resource Area has elected to defer the suitability study for the Virgin River due to the abbreviated RMP schedule and the intensive coordination which would be required. Funding limitations also influenced this decision.

The suitabiltiy study/legislative EIS for the Virgin River will be a joint effort involving the BLM Cedar City District, Utah, the BLM Arizona Strip District, and the BLM Las Vegas District, Nevada.

STUDY CRITERIA

To be eligible for inclusion in the national system, a river segment must be free-flowing. The river and its adjacent land area must possess at least one outstandingly remarkable value. Length or flow of an eligible river segment are not specifically defined and are considered sufficient if they sustain or compliment the outstandingly remarkable values for which the river would be designated. The minimum study corridor includes the river and the adjacent lands to .025 miles from the river's edges. A wider corridor may be studied if inclusion could facilitate resource management in the river area. If a river segment is determined to be non-eligible during the planning process, futher study should be discontinued. Planning records must document the basis for the non-eligibility determination.

A river segment's potential classification depends on the condition of the river and adjacent lands at the time of the study. The Wild and Scenic Rivers Act specifies three classifications for eligible rivers: wild, scenic and recreational.

To be classified wild, a river must be free of impoundments and generally inaccessible except by trail. Watersheds or shorelines must be essentially primitive and the waters unpolluted.

To be classified scenic, a river segment must be free of impoundments, with shorelines or watersheds still largely primitive. Shorelines should be largely undeveloped, but accessible by some roads. The area must not show substantial evidence of human activity.

To be classified recreational, a river segment may be readily accessible by road or railroad and may have some development along the shoreline. The river segment may also have undergone some

impoundment or diversion in the past.

INTERIM MANAGEMENT

BLM guidance provides for interim protection of a river segment after it is determined eligible and subsequently classified as wild, scenic, and/or recreational. Management activities will not be allowed to damage the existing elibility, classification, or suitablitity. The outstandingly remarkable values of the river area must be protected and, to the extent practicable, enhanced. The free-flowing characteristics of the river segment cannot be modified.

VIRGIN RIVER OVERVIEW

The following sections address the eligibilty and classification steps of a study on the Virgin River in Nevada for potential Wild and Scenic River designation. The river was on the 1982 National Rivers Inventory but was later removed from that list. Public interest expressed during the RMP process indicated that the river should be studied for potential designation. The Nevada section is classified as recreational.

Introduction

The Virgin River flows through three states, originating north and east of Zion National Park and flowing through southwestern Utah, the Virgin River Gorge in Arizona, and finally into Lake Mead in Nevada. The total river segment covers 76 miles, from just above Hurricane, Utah to Lake Mead. This eligibility and classification determination covers only the 30 miles in Nevada. Although the river was removed from the National Rivers Inventory (NRI), the values for which it was originally included are considered in this eligibility and classification process. The Virgin River was identified as having outstandingly remarkable scenic, geologic, fisheries, and wildlife values.

ADMINISTRATION

The Nevada section of the Virgin River has been determined non-mavigable. The river bed, use on the river, and the area within the corridor included in this study are controlled by the landowner. Of the approximately 30 miles of river in Nevada, 16 miles are under BLM administration, 11 miles are privately owned, and 3 miles are state-owned.

RIVER DESCRIPTION

The Virgin River traverses lands valuable for agricultural uses, as well as important riparian habitat. The woundfin minnow, an endangered species, and the Virgin River chub, a candidate for endangered status, are found in the river. This riparian corridor also provides important habitat for waterfowl, upland game, nongame, and other fish. These adjacent lands possess opportunities for nature study, interpretation, hunting, and non-consumptive recreational activities.

The river corridor to be studied consists of the river itself and a strip of land 0.25 miles from the high water mark on each side of the river. The corridor starts where the river crosses the Arizona-Nevada state line and ends where the river enters the Lake Mead National Recreation Area. The 30 mile section has been divided into three segments:

1. Arizona-Nevada state line (Mile 0) to the bridge at Riverside (approximately 14 river miles).

2. The Riverside Bridge to the Overton State Wildlife Management Area (approximately 10 river miles).

3. The Overton State Wildlife Management Area to the Lake Mead National Recreation Area border (approximately 6 river miles).

Segment 1

This segment of the Virgin River lies between the municipalities of Mesquite and Riverside, Nevada. The segment runs through approximately 4 miles of private land used for agriculture and approximately 10 miles of BLM administered land; 5 of which are within the boundaries of the Virgin River Recreation Lands. The recreation lands were designated to preserve waterfowl habitat and rare and unusual plants along the river, as well as developing wildlife and recreational values. The shoreline is primarily sandy and includes riparian vegetation. There are several access points scattered along the shoreline, human development (houses and agricultural fields) is visible as well as several diversions that feed water to nearby fields.

Segment 2

This segment of the Virgin River lies between the municipality of Riverside, Nevada and the Overton State Wildlife Management Area. The segment runs through approximately 5 miles of private land used for agriculture and approximately 5 miles of BLM administered land; 4 of which are within the boundaries of the Virgin River Recreation Lands. The shoreline is primarily sandy and includes riparian vegetation. There are several access points scattered along the shoreline, human development (houses and agricultural fields) is visible as well as several diversions that feed water to nearby fields.

Segment 3

This segment of the Virgin River lies between the Overton State Wildlife Management Area and Lake Mead National Recreation Area. The segment runs through approximately 3 miles of land managed by the State of Nevada Division of Wildlife and approximately 3 miles of private land used for agriculture. There are several access points scattered along the shoreline, human development (houses and agricultural fields) is visible as well as several diversions that feed water to nearby fields.

ELIGIBILITY

The river meets the definition of a free-flowing stream from the Arizona-Nevada state line to the Lake Mead National Recreation Area. All three segments have outstandingly remarkable desert aquatic riparian values. Therefore, all three segments are determined eligible for inclusion in the Wild and Scenic Rivers System.

POTENTIAL CLASSIFICATION

All three segments meet the recreation criteria because of bridges, river channel modifications access points and noticeable human devlopments.

INTERIM MANAGEMENT

Interim management for the Virgin River will require that the potential classification as determined in this document be considered when an action is proposed that may affect these classifications. Especially important is segment 1 from the Arizona-Nevada state line to the Riverside bridge because of the human population growth and related demands on natural resources.

APPENDIX D

PUBLIC LAND CLASSIFICATIONS

Recreation and Public Purposes Classifications

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 13 S., R. 47 E.				
Nev-057750	sec. 26,	S½S½;			
(Lease)	sec. 35,	NE¼NE¼, NW¼NW¼,	Waste Site		Public Land Laws
		S½N½.	Buffer Zone	560	1872 Mining Law
	T. 16 S., R. 49 E.				
N-45126	sec. 16,	NW¼NE¼.	Comm. Park	40	Public Land Laws
(Lease)					1872 Mining Law
N-20003	sec. 9,	S½SE¼SW¼SE¼.	Not Specific	5	Public Land Laws
(Classification)					1872 Mining Law
	Clark County -				
	T. 16 S., R. 56 E.				
N-38127	sec. 8,	Lot 8.	Church	2.22	Public Land Laws
(Lease)					1872 Mining Law
N-25225	sec. 8,	Lot 7.	VFW Post	2.23	Public Land Laws
(Lease)					1872 Mining Law
Nev-064225	sec. 15,	W½SW¼SW¼,			Public Land Laws
(Lease)	sec. 16,	E½SE¼SE¼.	Sanitary Landfill	40	1872 Mining Law
N-41004	sec. 8,	Lot 6.	Park/Complex	40	Public Land Laws
(Lease)					1872 Mining Law
	T. 24 S., R. 57 E.				
N-7838	sec. 27,	SE¼SW¼SW¼,			Public Land Laws
(Lease)		SW¼SE¼SW¼.	Sanitary Landfill	20	1872 Mining Law
N-56715	sec. 32	N½SE¼NE¼SW¼.	School Site	5	Public Land Laws
(Lease)					1872 Mining Law
	T. 22 S., R. 58 E.				
Nev-066747	sec. 12,	SW¼NE¼.	Disposal Site	40	Public Land Laws
(Lease)					1872 Mining Law
	T. 24 S., R. 58 E.				
N-47565	sec. 26,	SE¼SE¼NE¼NW¼.	Goodsprings Fire Station	2.5	Public Land Laws
(Lease)					1872 Mining Law
N-57882	sec. 26,	N½NE¼NW¼, SW¼NE¼NW¼,			
(Lease)		N½SE¼NE¼NW¼,			Public Land Laws
		SW¼SE¼NE¼NW¼.	Park Site	37.5	1872 Mining Law
	T. 18 S., R. 59 E.				
N-41567	sec. 23,	SE¼NW¼NW¼;			
(Lease)	sec. 32,	SW¼NE¼NW¼;			Public Land Laws
	sec. 33,	SW¼NE¼SW¼.	School Site	30	1872 Mining Law
N-41568	sec. 28,	SW¼NE¼NW¼,			Public Land Laws
(Lease)		E½NW¼SW¼.	School Site	30	1872 Mining Law
	T. 22 S., R. 59 E.				
N-10151	sec. 7,	S½SW¼NE¼NW¼,			Public Land Laws
(Classification)		SE¼NW¼.	Horse Corrals	45	1872 Mining Law
	T. 19 S., R. 60 E.				
N-36876	sec. 2,	Lots 1,2,3,4, S½N½,S½;			
(Lease)	sec. 3,	Lots 3,4, S½NE¼, S½NW¼, NE¼SW¼, SE¼;			
	sec. 4,	Lots 1,2, SE¼NE¼;			Public Land Laws
	sec. 11,	NW¼.	State Park	1,360.89	1872 Mining Law
N-37057	sec. 5,	Lot 11.	Fire Station	2.45	Public Land Laws
(Lease)					1872 Mining Law
N-37125	sec. 5,	Lot 19.	Park Site	10.27	Public Land Laws
(Lease)					1872 Mining Law

N-37056 (Lease)	sec. 13,	N½NW¼NW¼NE¼.	Fire Station	5	Public Land Laws 1872 Mining Law
N-37108 (Lease)	sec. 13,	E½NW¼NE¼, S½NW¼NW¼NE¼, SW¼NW¼NE¼.	Park Site	35	Public Land Laws 1872 Mining Law
N-37109 (Lease)	sec. 24,	W½NE¼SE¼.	Park Site	20	Public Land Laws 1872 Mining Law
N-37111 (Lease)	sec. 28,	SW¼SW¼NW¼.	Park Site	10	Public Land Laws 1872 Mining Law
N-41567-11 (Lease)	sec. 21,	W½NE¼NE¼.	School Site	20	Public Land Laws 1872 Mining Law
N-37055 (Lease)	sec. 17,	Lot 10.	Fire Station	2.5	Public Land Laws 1872 Mining Law
N-37123 (Lease)	sec. 17,	Lot 10.	Park Site	7.5	Public Land Laws 1872 Mining Law
N-37122 (Lease)	sec. 20,	W½NE¼NE¼.	Park Site	20	Public Land Laws 1872 Mining Law
N-56125 (Lease)	sec. 20,	NE¼NE¼.	Good Shepherd Campus	40	Public Land Laws 1872 Mining Law
N-58886 (Classification)	sec. 29,	NWSE¼NE¼.	Church	10	Public Land Laws 1872 Mining Law
	T. 20 S., R. 60 E.				
N-41567-30 (Lease)	sec. 7,	SW¼NE¼NE¼.	School Site	10	Public Land Laws 1872 Mining Law
N-41567-13 (Lease)	sec. 9,	E½NE¼SW¼NE¼, W½NE¼SE¼NE¼, NW¼SE¼NE¼.	School Site	20	Public Land Laws 1872 Mining Law
N-50827 (Lease)	sec. 10,	NW¼NE¼NE¼NW¼, N½SW¼NE¼NE¼NW¼, N½NW¼NE¼NW¼, N½S½NW¼NE¼NW¼, N½NE¼NW¼NW¼, NE¼NW¼NW¼NW¼.	Park Site	18.75	Public Land Laws 1872 Mining Law
N-51565 (Lease)	sec. 15,	W½NE¼NW¼, SE¼NE¼NW¼, S½NE¼NE¼NW¼, NW¼NW¼, S½NW¼, N½NW¼SW¼.	Corporate Yard University Br. Campus Flood Detention Basin	175	Public Land Laws 1872 Mining Law
N-37129 (Lease)	sec. 22,	SE¼NW¼NW¼, NE¼SW¼NW¼.	Park Site	20	Public Land Laws 1872 Mining Law
N-51517 (Lease)	sec. 22,	SE¼SW¼SE¼.	Park Site	10	Public Land Laws 1872 Mining Law
N-37128 (Lease)	sec. 27,	NW¼SE¼NW¼.	Park Site	10	Public Land Laws 1872 Mining Law
N-41565-26 (Lease)	sec. 27,	SW¼NE¼NW¼.	School Site	10	Public Land Laws 1872 Mining Law
N-37127 (Lease)	sec. 28,	E½NW¼NE¼.	Park Site	20	Public Land Laws 1872 Mining Law
N-58750 (Lease)	sec. 28,	E½NE¼SE¼SW¼, SE¼SE¼SW¼.	Church	15	Public Land Laws 1872 Mining Law
Nev-054655 (Lease)	sec. 29,	E½.	Park Site	320	Public Land Laws 1872 Mining Law
N-37126 (Lease)	sec. 33,	Lots 4,5,6.	Park Site	15	Public Land Laws 1872 Mining Law
	T. 21 S., R. 60 E.				
N-37119 (Lease)	sec. 3,	Lots 72,73,97.	Park Site	15.86	Public Land Laws 1872 Mining Law
N-58742 (Classification)	sec. 3,	SW¼NE¼SW¼, E½SE¼NW¼SW¼.	Church	15	Public Land Laws 1872 Mining Law
N-7301-E (Lease)	sec. 10,	SE¼NE¼SW¼.	School Site	10	Public Land Laws 1872 Mining Law

N-29498 (Lease)	sec. 11,	Lots 127,128,128,130.	Park Site	10	Public Land Laws 1872 Mining Law
N-20095 (Lease)	sec. 12,	Lots 91,92.	School Site	5	Public Land Laws 1872 Mining Law
N-41565-30 (Lease)	sec. 15,	W½W½NE¼NW¼SW¼, NW¼NW¼SW¼.	Maintenance Facility	12.5	Public Land Laws 1872 Mining Law
N-51437 (Lease)	sec. 15,	E½NE¼NW¼SW¼, E½W½NE¼NW¼SW¼, S½NW¼SW¼, W½W½SW¼SW¼, NE¼NW¼SW¼SW¼, W½SE¼NW¼SW¼SW¼, W½E½SW¼SW¼SW¼.	Multi-Use Civic Site	43.75	Public Land Laws 1872 Mining Law
N-56734 (Classification)	sec. 15,	SE¼SW¼SW¼.	Church	10	Public Land Laws 1872 Mining Law
N-41568-29 (Lease)	sec. 16,	SE¼NE¼SW¼.	School Site	10	Public Land Laws 1872 Mining Law
N-41279 (Lease)	sec. 16,	NW¼, N½NE¼SW¼, SW¼NE¼SW¼, W½SW¼, SE¼SW¼.	Park Site	310	Public Land Laws 1872 Mining Law
N-54133 (Lease)	sec. 16,	E½SE¼SW¼.	DMV Building	20	Public Land Laws 1872 Mining Law
N-21490 (Lease)	sec. 17,	NE¼SW¼NE¼, E½NW¼SW¼NE¼.	Reservoir Site	15	Public Land Laws 1872 Mining Law
N-52317 (Lease)	sec. 17,	W½NW¼SE¼SE¼, NE¼SW¼SE¼, E½NW¼SW¼SE¼.	School Site	20	Public Land Laws 1872 Mining Law
N-54237 (Lease)	sec. 17,	N½NE¼NE¼NE¼.	Church	20	Public Land Laws 1872 Mining Law
N-57387 (Classification)	sec. 17,	SE¼SW¼SE¼.	Police Station	10	Public Land Laws 1872 Mining Law
N-59504 (Lease)	sec. 17,	E½NW¼SE¼NW¼.	Church	5	Public Land Laws 1872 Mining Law
N-41568-24 (Apln)	sec. 23,	NW¼NE¼NE¼, W½NE¼NE¼NE¼, SW¼SE¼NE¼.	School Site	45	Public Land Laws 1872 Mining Law
N-7301-I (Lease)	sec. 24,	SW¼SE¼NW¼.	School Site	10	Public Land Laws 1872 Mining Law
	T. 21 S., R. 61 E.				
N-44619 (Lease)	sec. 13,	W½NE¼NE¼SE¼.	School Site	5	Public Land Laws 1872 Mining Law
N-29566 (Lease)	sec. 13,	Lot 20.	Church School Site	5.22	Public Land Laws 1872 Mining Law
N-13084 (Lease)	sec. 32,	NW¼NE¼NE¼, S½NE¼NE¼, NW¼NE¼, N½SW¼NE¼, N½S½SW¼NE¼, SE¼NE¼.	Golf Course	140	Public Land Laws 1872 Mining Law
	T. 22 S., R. 61 E.				
N-7473 (Lease)	sec. 7,	NW¼SE¼.	Park Site	40	Public Land Laws 1872 Mining Law
N-55370 (Lease)	sec. 14,	NE¼NE¼SW¼, N½SE¼NE¼SW¼, W½SE¼SE¼NE¼SW¼, SW¼SE¼NE¼SW¼.	School Site	18.75	Public Land Laws 1872 Mining Law
N-57698 (Lease)	sec. 14,	NE¼NW¼NE¼NW¼, E½NW¼NW¼NE¼NW¼, E½SW¼NW¼NE¼NW¼, W½SE¼NW¼NE¼NW¼.	Church	5	Public Land Laws 1872 Mining Law
N-10138 (Lease)	sec. 17,	N½NE¼NE¼SW¼NE¼.	Transfer Station	1.25	Public Land Laws 1872 Mining Law

	T. 19 S., R. 62 E.				
N-43395	sec. 5,	All;			
(Lease)	sec. 8,	W½;			
	sec. 15-17	All;			
	sec. 21,	N½, SW¼, N½SE¼, SW¼SE¼;	National Guard		Public Land Laws
	sec. 22,	N½, E½SW¼.	Armory Complex	3,883.24	1872 Mining Law
	T. 20 S., R. 62 E.				
N-50714	sec. 11,	NE¼.	Driver Training Course	160	Public Land Laws
(Lease)					1872 Mining Law
N-37028	sec. 13,	S½SW¼.	Shooting Range	80	Public Land Laws
(Lease)					1872 Mining Law
	T. 21 S., R. 62 E.				
Nev-046208	sec. 1,	SE¼;			Public Land Laws
(Lease)	sec. 12,	E½, E½NW¼, SW¼.	Sanitary Landfill	720	1872 Mining Law
N-10405	sec. 28,	S½NW¼NE¼SW¼.	School Site	5	Public Land Laws
(Lease)					1872 Mining Law
	T. 21 S., R. 63 E.				
N-24417	sec. 25,	E½E½SE¼SW¼, W½W½SW¼SE¼;			Public Land Laws
(Lease)	sec. 36,	NW¼SW¼NE¼.	Sludge Disposal(2)	30	1872 Mining Law
Nev-060170	sec. 28,	S½NW¼SW¼, SW¼SW¼;			Public Land Laws
(Lease)	sec. 29,	S½SE¼.	Disposal Site	140	1872 Mining Law
	T. 22 S., R. 63 E.				
N-48691	sec. 9,	NE¼SW¼SE¼.	School Site	10	Public Land Laws
(Lease)					1872 Mining Law
N-59106	sec. 9,	E½W½NW¼NW¼.	Park Site	10	Public Land Laws
(Classification)					1872 Mining Law
	T. 28 S., R. 63 E.				
N-21747	sec. 22,	Lot 22, S½SW¼SE¼, W½W½SE¼SE¼;			
(Lease)	sec. 27,	Lots 1,2.	Well Site and Roadside Park		Public Land Laws
		(actual R&PP area is within the above legal description)		56	1872 Mining Law
	T. 14 S., R. 66 E.				
N-24441	sec. 19,	W½SW¼SE¼.	Sanitary Landfill	20	Public Land Laws
(Lease)					1872 Mining Law
N-36907	sec. 36,	W½SW¼SW¼,	Equipment		Public Land Laws
(Lease)			Storage Site	20	1872 Mining Law
	T. 16 S., R. 66 E.				
N-3836	sec. 26,	E½, SE¼NW¼, E½SW¼;			Public Land Laws
(Classification)	sec. 35,	All.	State Park	1,080	1872 Mining Law
N-4202	sec. 12,	E½E½;			
(Classification)	sec. 13,	E½NE¼, E½SE¼, SW¼SE¼;			
	sec. 24,	E½.			
	T. 17 S., R. 66 E.				
	sec. 11,	All;			
	sec. 12,	Lots 2,3, S½NW¼, SW¼;			
	sec. 13,	Lots 4,5,6,7,12,13,14,15;			
	sec. 14,	All;			
	sec. 23,	All;			
	sec. 24,	Lots 3,4,5,6,7,8;			
	sec. 25,	Lot 1;			
	sec. 26,	Lots 1,2,3,4,5,6,7,8,9,10,11.			
	T. 15 S., R. 67 E.				
	sec. 31,	E½NE¼, E½SE¼SW¼, SE¼;			
	sec. 32,	All;			
	sec. 33,	W½.			
	T. 16 S., R. 67 E.				
	sec. 4,	Lots 3,4, S½NW¼, SW¼;			
	sec. 5,	Lots 1,2,3,4, S½N½,			

		W½W½SW¼, SE¼;			
	sec. 6-8	All;			
	sec. 9,	W½;			
	sec. 16,	W½;			
	sec. 17-21	All;			
	sec. 28,	All;			Public Land Laws
	sec. 29,	E½, E½W½.	State Park	12,454.79	1872 Mining Law
	T. 32 S., R. 66 E.				
N-39878	sec. 8,	NE¼NE¼.	Sanitary Landfill	40	Public Land Laws
(Lease)					1872 Mining Law
N-59989	sec. 9,	NW¼NW¼.	Sanitary Landfill		Public Land Laws
(Classification)			Expansion	40	1872 Mining Law
N-36589	sec. 14,	SE¼.	Sewage Facility	160	Public Land Laws
(Classification)					1872 Mining Law
N-37132	sec. 14,	SW¼.	Sewage Facility	160	Public Land Laws
(Classification)					1872 Mining Law
N-46521	sec. 14,	N½.	Park/Golf Course	160	Public Land Laws
(Classification)					1872 Mining Law
N-30016	sec. 15,	SE¼.	Sewage Facility	160	Public Land Laws
(Classification)					1872 Mining Law
N-41262	sec. 15,	S½NW¼.	School Site	80	Public Land Laws
(Lease)					1872 Mining Law
N-50031	sec. 15,	N½SW¼SW¼, SE¼SW¼SW¼,			Public Land Laws
(Classification)		SE¼SW¼.	Sewage Facility	70	1872 Mining law
N-50460	sec. 15,	NE¼.	Sewage Facility	160	Public Land Laws
(Classification)					1872 Mining Law
N-50912	sec. 15,	N½NW¼.	Community College		Public Land Laws
(Lease)			Facility	80	1872 Mining Law
N-57242	sec. 15,	SW¼SW¼SW¼.	American Legion		Public Land Laws
(Classification)			Building	10	1872 Mining Law
	T. 15 S., R. 67 E.				
N-36866	sec. 26,	N½NE¼, E½NW¼,			
(Lease)		E½NW¼NW¼,			Public Land Laws
		SW¼NW¼NW¼.	Fairgrounds	190	1872 Mining Law
	T. 16 S., R. 68 E.				
N-11193	sec. 6,	SW¼SW¼NE¼,			Public Land Laws
(Classification)		NW¼NW¼SE¼.	Sanitary Landfill	20	1872 Mining Law
N-37137	sec. 20,	NW¼NW,SE¼NW¼.	Sewage Facility	80	Public Land Laws
(Lease)					1872 Mining Law

Small Tract Classifications

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 25 S., R. 59 E.				
BLM Order 02-18-1963					Public Land Laws
	sec. 11,	W½SW¼SW¼SE¼.	Public Sale	5	1872 Mining Law
	T. 20 S., R. 60 E.				
Nev-028671	sec. 28,	E½SW¼NE¼SE¼.	Public Sale	5	Public Land Laws
					1872 Mining Law
	T. 22 S., R. 60 E.				
Nev-049805	sec. 32,	N½.	Public Sale	160	Public Land Laws
					1872 Mining Law
	T. 28 S., R. 63 E.				
N-12575	sec. 27,	Lot 7. (within)	Car Wrecking	5	Public Land Laws
			Yard Lease		1872 Mining Law

Airport Lease Classifications

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 15 S., R. 49 E.				
Nev-057637 (Lease)	sec. 13,	SW¼SW¼, S½SE¼SW¼;	Lathrop Wells Airport	860	All
	sec. 24,	All;			
	sec. 25,	N½N½.			
	T. 18 S., R. 50 E.				
Nev-046697 (Lease)	sec. 25,	NW¼NW¼, S½N½, S½.	Ash Meadows Airport	520	All
	T. 17 S., R. 52 E.				
N-19646 (Lease)	sec. 8,	W½SE¼NW¼, W½E½SW¼.	Public Airport	60	All
	Clark County -				
	T. 25 S., R. 56 E.				
N-13238 (Lease)	sec. 1,	Lots 1,2,3,4,5,6.			
	T. 25 S., R. 57 E.				
	sec. 6,	Lots 10,11;			
	sec. 7,	Lots 4,5;	Sandy Valley		
	sec. 8,	Lots 6,7.	Airport	266.37	All
	T. 23 S., R. 61 E.				
N-5826 (Lease)	sec. 10,	S½SE¼NE¼NE¼, S½NE¼SE¼NE¼, SE¼SE¼NE¼;	Sky Harbor		
	sec. 11,	W½NW¼.	Airport	100	All
	T. 29 S., R. 63 E.				
Nev-065340 (Lease)	sec. 2,	Lots 2,18,19,20, SE¼NE¼, SW¼SE¼, E½SE¼; (within)			
	sec. 11,	E¼; (within)	Searchlight		
	sec. 14,	N½NE¼. (within)	Airport	184	All
	T. 13 S., R. 71 E.				
N-43266 (Lease)	sec. 3,	Lots 6,7,8,9,10, 11,12, SW¼NW¼, W½SW¼;			
	sec. 4,	Lots 5,12, SE¼NE¼, E½SE¼.	Mesquite Airport	516.45	All
	T. 30 S., R. 63 E.				
N-43317 (Lease)	sec. 25, N½.		Kidwell Airport	320	All

Acres Unsuitable For Classification Under The Desert Land Entry Act Or Carey Act

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 24 N., R. 8 E.				
N-22835	sec. 6,	Lots 1,2,15, S½NE¼, N½SE¼, SE¼SE¼.	Agricultural Use	311.49	None

N-22855	sec. 8,	Lot 1, NE¼, E½NW¼, NW¼NW¼.	Agricultural Use	308.38	None
	T. 16 S., R. 48 E.				
(BLM Orders dated 01-31-1983 and 02-07-1983)					
N-23764	sec. 4,	N½;			
N-23727	sec. 5,	E½;			
N-22409					
N-23208	sec. 6,	All;			
N-23726					
N-23728					
N-22191	sec. 9,	N½;			
N-24005	sec. 12,	All;			
N-24007					
N-22973	sec. 13,	W½;			
N-23860	sec. 14,	W½NE¼, W½;			
N-23913					
N-24001					
N-23207	sec. 16,	SW¼NE¼, NW¼, NW¼SW¼,			
N-23208		N½SE¼, SE¼SE¼;			
N-23861					
N-23912	sec. 17,	S½;			
N-23902	sec. 20,	NE¼, E½NW¼, NW¼SW¼, NW¼SE¼, SE¼SE¼;			
N-24099	sec. 21,	W½;			
N-24091	sec. 27,	N½NW¼, SW¼NE¼, NW¼SE¼, SE¼SE¼.	Agricultural Use	4,516.16	None
	T. 17 S., R. 48 E.				
N-23042	sec. 2,	E½.	Agricultural Use	320	None
	T. 15 S., R.49 E.				
(BLM Orders dated 10-10-1979, 01-31-1983, 02-07-1983, 04-26-1983, 05-05-1983, 05-17-1983 and 06-10-1983)					
N-21874	sec. 4,	W½;			
N-22828	sec. 7,	All;			
N-26963					
N-37943					
N-26305	sec. 9,	S½;			
N-26247	sec. 10,	S½;			
N-26245	sec. 11,	S½;			
N-27096	sec. 12,	S½;			
N-27068	sec. 13,	N½;			
N-37944	sec. 14,	S½;			
N-27605	sec. 15,	All;			
N-37946					
N-37945	sec. 16,	All;			
N-37947					
N-23773	sec. 21,	N½;			
N-23765	sec. 22,	All;			
N-23772					
N-22885	sec. 23,	NW¼, S½;			
N-22886					
N-23047					
N-22886	sec. 26,	N½, SW¼;			
N-22906					
N-22888	sec. 27,	E½NW¼, NE¼, S½;			
N-22308					
N-22309					
N-24598					
N-22308	sec. 34,	All;			
N-22309					
N-22887					

N-22309	sec. 35,	All;			
N-22845					
N-22846					
N-22828	sec. 36,	All.	Agricultural Use	8,430.78	None
N-22844					
	T. 16 S., R. 49 E.				
N-22696	sec. 3,	S½;			
N-22695	sec. 7,	E½;			
N-22697	sec. 10,	W½;			
N-23038	sec. 14,	S½;			
N-23027	sec. 15,	S½, SE¼NW¼;			
N-23025	sec. 16,	All;			
N-22975	sec. 17,	All;			
N-22971	sec. 21,	N½;			
N-21979	sec. 22,	N½;			
N-23023	sec. 23,	W½;			
N-23045	sec. 27,	E½;			
N-24019	sec. 32,	W½.	Agricultural Use	4,572.97	None
	T. 17 S., R. 49 E.				
N-23332	sec. 2,	Lots 1,2, S½NE¼, SE¼.	Agricultural Use	318.37	None
N-23031	sec. 5,	Lots 3,4, S½NW¼, SW¼.	Agricultural Use	320.69	None
N-23102	sec. 5,	Lots 1,2, S½NE¼, SE¼.	Agricultural Use	320.55	None
	T. 15 S., R. 50 E.				
N-27933	sec. 8,	W½.	Agricultural Use	320	None
N-27081	sec. 23,	N½.	Agricultural Use	320	None
	T. 18 S., R. 50 E.				
N-22818	sec. 26,	Lots 4,5,6,7,8,9,10, NE¼SW¼.	Agricultural Use	333.98	None
N-22819	sec. 34,	Lots 1,3, N½N½, SW¼NE¼, SE¼NW¼.	Agricultural Use	320.53	None
	T. 16 S., R. 52 E.				
N-26197	sec. 12,	W½.	Agricultural Use	320	None
N-26092	sec. 13,	W½.	Agricultural Use	320	None
	T. 18 S., R. 52 E.				
N-24427	sec. 7,	Lots 1,2, NE¼, E½NW¼.	Agricultural Use	319.72	None
	T. 18 S., R. 53 E.				
N-27626	sec. 8,	W½.	Agricultural Use	320	None
N- 24178	sec. 30,	W½E½, E½W½.	Agricultural Use	320	None
	Clark County -				
	T. 16 S., R. 54 E.				
N-26669	sec. 11,	E½.	Agricultural Use	320	None
N- 26249	sec. 11,	SW¼;			
	sec. 14,	NW¼.	Agricultural Use	320	None
N-26463	sec. 12,	S½.	Agricultural Use	320	None
	T. 23 S., R. 54 E.				
N-24179	sec. 1,	Lots 1,2,3,4,5,7,8,9,10, NE¼NE¼;			
	sec. 2,	All.	Agricultural Use	323.33	None
	T. 16 S., R. 55 E.				
N-25866	sec. 1,	S½.	Agricultural Use	320	None
N-23737	sec. 4,	S½SW¼;			
	sec. 5,	E½SE¼;			
	sec. 8,	N½NE¼;			
	sec. 9,	N½NW¼.	Agricultural Use	320	None

N-23735	sec. 7,	E½.	Agricultural Use	320	None
N-23736	sec. 8,	S½NE¼, N½SE¼, SE¼SE¼;			
	sec. 9,	SW¼NW¼, W½SW¼.	Agricultural Use	320	None
N-23733	sec. 9,	S½NE¼, SE¼NW¼, E½SW¼, N½SE¼, SW¼SE¼.	Agricultural Use	320	None
N-23734	sec. 10,	SW¼NE¼, S½NW¼, SW¼, NW¼SE¼.	Agricultural Use	320	None
N-25547	sec. 10,	S½SE¼.	Agricultural Use	320	None
N-24620	sec. 11,	W½.	Agricultural Use	320	None
N-23858	sec. 11,	E½.	Agricultural Use	320	None
N-23856	sec. 12,	W½.	Agricultural Use	320	None
N-25814	sec. 13,	E½.	Agricultural Use	320	None
N-37697	sec. 13,	W½.	Agricultural Use	320	None
N-25460	sec. 14,	W½.	Agricultural Use	320	None
N-25240	sec. 15,	W½.	Agricultural Use	320	None
N-37703	sec. 17,	All.	Agricultural Use	640	None
N-37172	sec. 18,	All.	Agricultural Use	638.6	None
N-23854	sec. 12,	E½.	Agricultural Use	320	None
	T. 16 S., R. 55½ E.				
N-23857	sec. 1,	N½SW¼, SE¼SW¼;			
	sec. 2,	Lots 3,4, N½SE¼, SW¼SE¼.	Agricultural Use	335.86	None
N-23311	sec. 1,	SE¼SW¼.	Agricultural Use	40	None
N-23802	sec. 11,	Lots 1,2,3,4, W½E½.	Agricultural Use	355.12	None
N-23855	sec. 12,	E½.	Agricultural Use	320	None
N-23310	sec. 12,	Lots 1,2, NE¼, NE¼NW¼, SE¼NW¼.	Agricultural Use	301.25	None
	T. 16 S., R. 56 E.				
N-23835	sec. 9,	SE¼;			
	sec. 10,	SW¼.	Agricultural Use	320	None
N-23849	sec. 10,	E½.	Agricultural Use	320	None
N-23840	sec. 15,	S½.	Agricultural Use	320	None
N-23843	sec. 15,	N½.	Agricultural Use	320	None
N-23990	sec. 16,	W½.	Agricultural Use	320	None
N-30630	sec. 18,	All.	Agricultural Use	640	None
	T. 17 S., R. 58 E.				
N-26462	sec. 10,	W½.	Agricultural Use	320	None
	T. 21 S., R. 59 E.				
N-23450	sec. 3,	S½NE¼, N½SE¼;			
	sec. 4,	S½NE¼, W½SE¼;			
	sec. 14,	SW¼NE¼, S½SW¼;			
	sec. 15,	SE¼NE¼, NE¼SW¼, N½SE¼, SE¼SE¼;			
	sec. 16,	S½NW¼, SW¼, S½SE¼;			
	sec. 21,	NW¼, SE¼;			
	sec. 27,	NW¼;			
	sec. 28,	N½NE¼, SE¼NE¼, E½W½, NW¼NW¼;			
	sec. 33,	E½, E½NW¼, NE¼SW¼.	Agricultural Use	2,200	None
	T. 22 S., R. 59 E.				
(BLM Orders dated 02-16-1983 and 04-05-1983)					
N-29925	sec. 2-3,	All;			
	sec. 4,	Lots 1,2,3,4, S½N½, N½SW¼, N½SW¼SW¼, SE¼SW¼SW¼, SE¼SW¼, SE¼;			
	sec. 5,	W½SW¼, SE¼SW¼, NE¼SE¼, SW¼SE¼;			
	sec. 6,	All;			
	sec. 12,	All;			
	sec. 16,	All;			

N-23316	sec. 18,	N½;			
N-23316	sec. 19,	All;			
N-29925	sec. 20-21,	All;			
N-23316	sec. 22-23,	All;			
	sec. 25,	All.	Agricultural Use	7,531.47	None
N-29925	sec. 16,	All.	Agricultural Use	500	None
	(only 500 acres remain public)				
	T. 22 S., R. 61 E.				
N-22751	sec. 6,	Lots 33,37,38,96,97,99,100,101,			
N-31350		100,101,107,108,110,115,			
		116,117,124,125,128,130.	Agricultural Use	50.17	None
BLM Order	sec. 17,	Parcels A,B,C,D.	Agricultural Use	?	None
	T. 20 S., R. 62 E.				
N-22753	sec. 1,	SE¼;			
	sec. 12,	NW¼.	Agricultural Use	320	None
N-22651	sec. 11,	E½.	Agricultural Use	320	None
	T. 23 S., R. 62 E.				
N-34824	sec. 2,	Lots 1,2, S½NE¼, SE¼.	Agricultural Use	319.24	None
	T. 23 S., R. 63 E.				
N-24166	sec. 3,	W½NE¼, NW¼, N½SW¼.	Agricultural Use	320	None
N-36717	sec. 10,	E½.	Agricultural Use	320	None
N-23833	sec. 14,	N½.	Agricultural Use	320	None
N-23832	sec. 14,	S½.	Agricultural Use	320	None
	T. 25 S., R. 64 E.				
(BLM Orders dated 09-21-1982, 01-26-1983, 01-31-1983 and 10-05-1983)					
N-24779	sec. 7,	E½;			
N-25254					
N-23508	sec. 8,	All;			
N-23756					
N-23826					
N-23831					
N-24779					
N-25254					
N-23507	sec. 9,	All;			
N-23754					
N-23830					
N-23509	sec. 17,	All;			
N-23752					
N-23751	sec. 18,	N½;			
N-27628	sec. 20,	All;			
N-23506	sec. 21,	W½;			
N-22293	sec. 27,	S½;			
N-23505	sec. 28,	All;			
N-26955					
N-22291	sec. 34,	N½, SW¼.	Agricultural Use	4,939.9	None
N-29234					
	T. 26 S., R. 64 E.				
(BLM Orders dated 09-21-1982 and 09-22-1982)					
N-34997	sec. 17,	N½;			
N-34315	sec. 18,	W½;			
N-34280	sec. 34,	E½.	Agricultural Use	960	None
	T. 14 S., R. 65 E.				
(BLM Orders dated 07-26-1982 and 11-13-1984)					
N-23398	sec. 10,	E½SW¼NW¼, W½SE¼NW¼,			
		NE¼SW¼, NE¼NW¼SW¼,			
		N½SE¼SW¼, SE¼SE¼SW¼;			

N-25272	sec. 13,	All;			
N-25298					
N-29642					
N-29642	sec. 14,	SE¼NE¼, NE¼SE¼;			
N-25298	sec. 15,	N½NE¼;			
	sec. 16,	SW¼.	Agricultural Use	1,080	None
	T. 13 S., R. 66 E.				
N-25264	sec. 32,	S½.	Agricultural Use	320	None
N-25274	sec. 33,	S½.	Agricultural Use	320	None
	T. 14 S., R. 66 E.				

(BLM Orders dated 05-23-1983, 06-10-1983, 06-29-1983, 07-14-1983, 08-01-1983 and 04-12-1984)

N-22370	sec. 4,	All;
N-22373		
N-25277		
N-25286		
N-25388		
N-25574		
N-25575		
N-28612		
N-25278	sec. 8,	E½;
N-25368		
N-25573		
N-22655	sec. 9,	All;
N-25356		
N-25369		
N-25371		
N-25388		
N-22365	sec. 10,	W½NW¼, SE¼NW¼, SW¼;
N-22365	sec. 15,	N½, E½SW¼, E½SE¼;
N-24117		
N-25281		
N-25302		
N-25279	sec. 16,	N½, SW¼, W½SE¼;
N-25282		
N-25296		
N-25356		
N-22378	sec. 17,	NE¼, N½NW¼, SE¼NW¼,
N-25280		S½;
N-25282		
N-25346		
N-25370		
N-25292	sec. 19,	NE¼, N½SE¼,
		E½SE¼SW¼,
		SE¼SE¼;
N-27231	sec. 20,	E½SE¼;
N-25268	sec. 21,	S½;
N-25321		
N-22368	sec. 22,	E½E½NE¼NW¼,
N-22378		E½W½NE¼NW¼,
N-25321		W½W½SE¼,
N-25329		E½NW¼SE¼,
		E½NE¼SW¼SE¼,
		S½SW¼SW¼SE¼,
		NE¼SE¼SW¼SE¼,
		S½SE¼SW¼SE¼,
		W½NW¼SE¼SE¼,
		S½SE¼SE¼;
N-22368	sec. 23,	SW¼;
N-25329		
N-22369	sec. 26,	W½W½NE¼, N½NW¼,

N-25329		SE¼NW¼, E½SW¼, W½E½SE¼, W½SE¼.			
N-25262	sec. 27,	SW¼NW¼, SW¼,			
N-25268		NW¼NE¼SW¼SE¼,			
N-25282		S½NE¼SW¼SE¼, W½SW¼SE¼, SE¼SW¼SE¼;			
N-25268	sec. 28,	NE¼, N½NW¼, SE¼NW¼,			
N-27231		NW¼SE¼;			
N-25575	sec. 29,	NE¼NE¼;			
N-25262	sec. 34,	W½NE¼NE¼, W½NE¼;			
N-25282					
N-25304	sec. 35,	NE¼, NE¼NW¼, S½NW¼, NE¼SE¼;			
N-25270	sec. 36,	W½, SW¼SE¼.	Agricultural Use	6,239.04	None
N-25289					
	T. 15 S., R. 66 E.				
N-25270	sec. 1,	W½NE¼, SE¼NW¼, NW¼SE¼, SE¼SE¼.	Agricultural Use	10	None
	T. 15 S., R.67 E.				
N-25311	sec. 22,	N½NE¼NE¼, SW¼NE¼NE¼, SW¼SE¼NE¼.	Agricultural Use	40	None
(BLM Orders dated 06-29-1983, 07-06-1983, 09-22-1983 and 10-06-1983)					
N-25270	sec. 7,	Lot 1,			
N-23391	sec. 9,	SE¼NE¼, E½SE¼;			
	sec. 10,	NW¼NW¼, W½SW¼NW¼, W½SW¼SW¼;			
N-25276	sec. 14,	W¼;			
N-25312					
N-25314					
N-23391	sec. 15,	NE¼, N½NW¼;			
N-25310					
N-25312					
N-25276	sec. 21,	NW¼NE¼;			
N-25276	sec. 22,	E½NE¼;			
N-25314					
N-25318	sec. 23,	NE¼, SE¼NW¼, SE¼;			
N-25323					
N-25276	sec. 26,	N½N½, SE¼NW¼;			
N-25318					
N-25269	sec. 36,	NW¼SE¼, SE¼SE¼.	Agricultural Use	1,559.80	None
	T. 14 S., R. 69 E.				
N-22807	sec. 12,	SE¼SE¼;			
	sec. 13,	NE¼, E½SE¼.	Agricultural Use	280	None
N-22808	sec. 13,	NE¼NW¼, S½NW¼, N½SW¼, SW¼SW¼, W½SE¼.	Agricultural Use	320	None
N-23969	sec. 32,	W½.	Agricultural Use	320	None
	T. 14 S., R. 70 E				
N-22807	sec. 7,	Lot 4.	Agricultural Use	40.06	None
	T. 13 S., R. 71 E.				
N-37498	sec. 9,	W½.	Agricultural Use	320	None

Existing Desert Land Entry Classifications

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 16 S., R. 49 E.				
(No Entry) Nev-060322	sec. 36,	Lots 1,2.	Agricultural Use	62.12	None
	T. 21 S., R. 53 E.				
(No Entry) N-21908	sec. 24,	E½.	Agricultural Use	320	None

Acres Unsuitable For Classification Under The Indian Allotment Act

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 21 S., R. 60 E.				
N-29206	sec. 35,	SE¼SE¼NW¼NE¼, NE¼NE¼SW¼NE¼, N½NW¼SW¼NW¼;			
	sec. 36,	NW¼NE¼NE¼NE¼, S½NE¼NE¼NE¼, NW¼NE¼NE¼, W½SW¼NE¼NE¼, N½SE¼NE¼NE¼, SE¼NE¼SE¼NE¼;			
	T. 21 S., R. 61 E.				
	sec. 30,	NW¼SE¼NW¼NE¼;			
	T. 20 S., R. 62 E.				
	sec. 14,	N½SE¼.	Agricultural Use	122.5	None

Classification and Multiple Use Act Retention Classifications

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 24 N., R. 7 E.				
N-257 (11-10-1966)	sec. 1,	Lot 8.			
	T. 25 N., R. 7 E.				
	sec. 4,	Lot 1;			
	sec. 5,	Lots 1,2,3,4,5,6,7, SW¼NW¼, SW¼, SW¼SE¼;			
	sec. 6,	Lots 1,2,3,4,5,6,8, 11, S½NE¼, SE¼NW¼, NE¼SW¼, SE¼;			
	sec. 7,	Lots 1,3,8,9,11, NE¼NE¼;			
	sec. 8,	Lots 1,5, N½, NE¼SW¼, SE¼;			
	sec. 9,	Lots 1,2,3,4,5,6,7,			

	SW¼NW¼, SW¼, SW¼SE¼;
sec. 10,	Lot 1;
sec. 14,	Lot 1;
sec. 15,	Lots 1,2,3,4,5,6,7, SW¼NW¼, SW¼, SW¼SE¼;
sec. 16,	Lots 1,2,5,6, N½, N½SE¼, SE¼SE¼;
sec. 17,	Lots 3,8, NE¼NE¼;
sec. 21,	Lots 4,5,8;
sec. 22,	Lots 1,3,6,7,9, N½N½, SE¼NW¼, N½SE¼, SE¼SE¼;
sec. 23,	Lots 1,2,3,4,5,6,7, SW¼NW¼, SW¼, SW¼SE¼;
sec. 24,	Lot 1;
sec. 25,	Lots 1,2,3,4,5,6,7, SW¼NW¼, SW¼, SW¼SE¼;
sec. 26,	Lots 1,3,6,7,9, N½N½, SE¼NW¼, N½SE¼, SE¼SE¼;
sec. 27,	Lots 6,9, NE¼NE¼;
sec. 35,	Lots 4,6,8;
sec. 36,	Lots 1,4,5,7,9, N½N½, SE¼NW¼, N½SE¼, SE¼SE¼.
T. 26 N., R. 7 E.	
sec. 31,	Lots 1,2,3,4,5,6,7, W½SW¼, SE¼SW¼.
T. 25 N., R. 8 E.	
sec. 30,	Lot 1;
sec. 31,	Lots 1,2,3, W½NW¼, SE¼NW¼, SW¼, W½SE¼, SE¼SE¼;
sec. 32,	Lot 1.

Clark County -

T. 22 S., R. 57 E.	
sec. 16,	NE¼SE¼.
T. 20 S., R. 58 E. *	
sec. 8-28,	All;
sec. 29,	N½, SW¼, W½SE¼;
sec. 30-31,	All;
sec. 32,	W½NE¼, SE¼NE¼, NW¼, S½;
sec. 33-36,	All;
T. 21 S., R. 58 E. *	
sec. 1,	Lots 2,3,4, SE¼NE¼, W½SE¼NE¼, S½NW¼, SW¼, NW¼NE¼SE¼, NW¼SE¼, S½SE¼;
sec. 2-15,	All;
sec. 16,	SE¼NE¼, SW¼NW¼, N½N½, S½;
sec. 17-23,	All;
sec. 24,	W½W½;
sec. 25,	W½;
sec. 26-33,	All;
sec. 34,	N½, SW¼, N½SE¼,

		SW¼SE¼;			
	sec. 35,	N½, SE¼;			
	sec. 36,	W½.			
	T. 22 S., R. 58 E. *				
	sec. 1,	Lots 1,2,3,4, S½N½, N½SE¼, SE¼SE¼;			
	sec. 2,	Lots 1,2,3, S½N½, N½SW¼, NW¼SE¼;			
	sec. 3,	Lots 3,4, SW¼NW¼, S½SW¼, SE¼;			
	sec. 4-11,	All;			
	sec. 12,	Lots 1,2,3,4,5,6, E½, SE¼SW¼;			
	sec. 13-18,	All;			
	sec. 20,	NE¼;			
	sec. 21-28,	All;			
	sec. 33-36,	All;			
	T. 20 S., R. 59 E. *				
	sec. 7,	All;			
	sec. 18,	All;			
	sec. 19,	N½.			
	T. 21 S., R. 59 E. *				
	sec. 5,	S½SW¼;			
	sec. 6,	Lot 7, SE¼SW¼, N½NW¼SW¼SE¼, S½NE¼SW¼SE¼,			
	sec. 7,	All;			
	sec. 8,	W½;			
	sec. 18,	All.			
	T. 24 S., R. 59 E. *				
	sec. 4,	Lots 1,2,3,4, S½N½.	Multiple Use *designated Red Rock Canyon Recreation Lands	67,189.21	Agricultural Laws Public Land Laws 1872 Mining Law
	Nye County -				
	T. 17 S., R. 50 E.				
N-257 B	sec. 35,	E½NE¼, N½NE¼SE¼;			
(11-10-1966)	sec. 36,	NE¼, W½, N½SE¼, SE¼SE¼.			
(09-25-1970)	T. 18 S., R. 50 E.				
	sec. 1,	N½N½;			
	sec. 2,	NE¼.			
	T. 17 S., R. 51 E.				
	sec. 31,	NE¼NE¼, W½E½, W½.			
	T. 18 S., R. 51 E.				
	sec. 6,	Lots 2,3,4,5,6, SW¼NE¼, SE¼NW¼, NE¼SW¼, SE¼.	Multiple Use	2,009.77	Public Land Laws 1872 Mining Law
	Clark County -				
	T. 21 S., R. 60 E.				
N-1575 A	sec. 11,	Lots 127,128,129,130,			
(09-25-1970)		143,144, SW¼SW¼.			
	T. 14 S., R. 69 E.				
	sec. 14,	E½SW¼, NW¼SW¼;			
	sec. 15,	SE¼SE¼;			
	sec. 22,	All;			
	sec. 27,	All;			
	sec. 28,	NE¼, N½SE¼, N½SW¼, SW¼SW¼;			
	sec. 29,	SW¼;			
	sec. 32,	N½NE¼, SW¼NE¼, E½NW¼, N½SW¼,			

		SW¼SW¼;			
	T. 13 S., R. 70 E. *				
	sec. 27,	Lot 3, SE¼SW¼;			
	sec. 32,	S½NE¼, SE¼;			
	sec. 33,	S½NW¼, SE¼NE¼, SW¼, W½SE¼, NE¼SE¼;			
	sec. 34,	Lots 1,2,3,4,6, NW¼NW¼.			
	T. 14 S., R. 70 E. *				
	sec. 4,	Lots 1,2,3,4, S½N½, N½SW¼, SW¼SW¼;			
	sec. 5,	E½, SW¼;	Multiple Use		
	sec. 6,	S½;	* designated		Agricultural Laws
	sec. 7,	Lot 2, E½NW¼, NE¼;	Virgin River		Public Land Laws
	sec. 8,	N½.	Recreation Lands	5,127.16	1872 Mining Law
	T. 15 S., R. 70 E.				
N-1575	sec. 2,	Lot 4.			
(01-24-1969)	T. 16 S., R. 70 E.				
	sec. 22,	SW¼SW¼;			
	sec. 23,	SE¼.			
	T. 15 S., R. 71 E.				
	sec. 17,	S½SE¼;			Agricultural Laws
	sec. 20,	NE¼, E½NW¼, SW¼NW¼, S½.	Multiple Use	920.27	Public Land Laws 1872 Mining Law
	T. 18 S., R. 51 E.				
N-3319 (12-27-1968) Section 2455 Sale Sale Act of 09-19-1964			Multiple Use Jackrabbit Springs		
	sec. 18,	Lot 2, W½SE¼NW¼.	Pupfish Areas	56.35	1872 Mining Law

PUBLIC LAND WITHDRAWALS

Note: Overlapping withdrawals may result in a different combination of segregation on a particular parcel of land. Therefore, when determining the segregative effect on a parcel of land, it is necessary to consider the segregative effect of all the withdrawals encumbering that land.

FERC Power Project Withdrawals

(The legal descriptions of the FERC Withdrawals are described to the nearest section or aliquot part and in some cases do not represent the actual configurations of the withdrawals. Private lands or lands withdrawn to another agency are not shown.)

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County - T. 13 S., R. 66 E.				
N-50945 (Authorized)	sec. 2,	Lot 4, SW¼NW¼, W½SW¼;			
	sec. 3,	Lots 1,2,3,4, SE¼NE¼, E½SE¼;			
	sec. 10,	E½E½;			
	sec. 11,	W½W½;			
	sec. 14,	W½W½;			
	sec. 15,	E½E½;			
	sec. 22,	E½E½;			
	sec. 23,	W½W½;			
	sec. 26,	W½W½;			
	sec. 27,	E½E½;			
	sec. 34,	E½E½;			

	sec. 35,	W½W½;			
	T. 14 S., R. 66 E.				
	sec. 2,	Lot 4, SW¼NW¼, W½SW¼;			
	sec. 3,	Lot 1, SE¼NE¼, E½SE¼;			
	sec. 10,	E½E½;			
	sec. 11,	W½W½;			
	sec. 14,	W½W½;			
	sec. 22,	E½E½;			
	sec. 23,	W½W½;			
	sec. 26,	W½W½;			
	sec. 27,	E½E½;			
	sec. 34,	E½E½;	Mormon Peak Hydro-		Public Land Laws
	sec. 35,	W½W½, SE¼SW¼.	power Project #10753	3,548	1872 Mining Law
	T. 21 S., R. 59 E.				
N-50948	sec. 20,	S½SE¼;			
(Authorized)	sec. 21,	Lots 13,14,15,16;			
	sec. 26,	N½N½;			
	sec. 27,	N½NE¼;			
	sec. 28,	All;			
	sec. 29,	E½;			
	sec. 33,	N½N½;			
	sec. 34,	N½NW¼.			
	T. 21 S., R. 60 E.				
	sec. 16,	SW¼SW¼;			
	sec. 19,	Lots 25,26,27,28, S½SE¼SW¼, S½SE¼;			
	sec. 20,	E½E½, SW¼SE¼SE¼, S½SE¼, S½SW¼;			
	sec. 21,	W½W½;			
	sec. 29,	N½N½;	Blue Diamond,S. Hydro-		Public Land Laws
	sec. 30,	N½N½.	power Project #10756	1,737	1872 Mining Law
	T. 21 S., R. 59 E.				
N-50949	sec. 3,	Lots 8,9,10;			
(Authorized)	sec. 4,	Lot 8, S½SW¼;			
	sec. 5,	S½;			
	sec. 8,	All;			
	sec. 9,	All;			
	sec. 10,	Lots 8,9;			
	sec. 11,	Lots 9,10,11.			
	T. 21 S., R. 60 E.				
	sec. 17,	S½SW¼SE¼;			
	sec. 18,	Lot 34, E½SW¼SE¼SW¼, SW¼SW¼SE¼;			
	sec. 19,	W½NW¼NW¼NE¼, E½NE¼NE¼NW¼.	Blue Diamond,N. Hydro- power Project #10758	1,382	Public Land Laws 1872 Mining Law
	T. 15 S., R. 63 E.				
N-50950	sec. 13,	SE¼;			
(Authorized)	sec. 24,	All.			
	T. 15 S., R. 64 E.				
	sec. 12,	S½SE¼;			
	sec. 13,	E½, S½;			
	sec. 14,	S½;			
	sec. 15,	S½;			
	sec. 16,	S½;			
	sec. 17,	W½NW¼, S½;			
	sec. 18,	E½E½W½, W½SW¼;			
	sec. 19,	NW¼NW¼.			

	T. 15 S., R. 66 E.				
	sec. 7,	Lot 4, SE¼SW¼, S½SE¼;			
	sec. 8,	S½S½;			
	sec. 9,	S½S½;			
	sec. 10,	NE¼SE¼NW¼, SW¼, N½SE¼, SW¼SE¼;			
	sec. 11,	W½NW¼;			
	sec. 15,	N½NW¼;			
	sec. 16,	N½N½;			
	sec. 17,	N½N½;	Arrow Mtn. Hydro-		Public Land Laws
	sec. 18,	Lot 1, NE¼NW¼, N½NE¼.	power Project #10759	3,141	1872 Mining Law
	T. 16 S., R. 57 E.				
N-50951	sec. 28,	SW¼, SW¼SE¼;			
(Authorized)	sec. 29,	S½NE¼, N½SE¼, SE¼SE¼;			
	sec. 33,	Lot 1, NE¼, NE¼NW¼;			
	sec. 34,	Lots 2,3,4,6,7,8,9,10, NW¼NW¼, S½NW¼.			
	T. 17 S., R. 57 E.				
	sec. 1,	Lots 1,2, SE¼NE¼;			
	sec. 13,	SE¼;			
	sec. 24,	E½NE¼, NW¼NE¼, SE¼;			
	sec. 25,	N½NE¼, SW¼NE¼, E½NW¼, SW¼NW¼, SW¼;			
	sec. 26,	SE¼;			
	sec. 34,	S½NE¼, SE¼NW¼, E½SW¼, SE¼;			
	sec. 35,	N½NE¼, SW¼NE¼, NW¼, NW¼SW¼.			
	T. 17 S., R. 58 E.				
	sec. 6,	Lots 3,4,5, SE¼NW¼, E½SW¼;			
	sec. 7,	E½E½;			
	sec. 18,	Lots 3,4, E½W½;	Lee Canyon Hydro-		Public Land Laws
	sec. 19,	Lots 1,2,3, NE¼NW¼.	power Project #10760	1,801	1872 Mining Law
	T. 19 S., R. 58 E.				
N-50952	sec. 1,	SE¼SE¼;			
(Authorized)	sec. 11,	E½SE¼, SW¼SE¼, SE¼SW¼;			
	sec. 12,	NE¼, E½NW¼, SW¼NW¼, SW¼, N½SE¼, SW¼SE¼;			
	sec. 13,	N½NW¼;			
	sec. 14,	N½SW¼, NW¼SE¼;			
	sec. 15,	SE¼NE¼, S½SW¼, SE¼, NE¼SW¼;			
	sec. 16,	SE¼SE¼;			
	sec. 21,	E½NE¼, NE¼SE¼;			
	sec. 22,	N½NE¼, NW¼, N½SW¼.			
	T. 18 S., R. 59 E.				
	sec. 28,	S½S½;			
	sec. 29,	SE¼SE¼;			
	sec. 32,	E½E½, SW¼SE¼, S½SW¼;			
	sec. 33,	N½N½, SW¼NW¼, W½SW¼.			
	T. 19 S., R. 59 E.				
	sec. 4,	Lot 4;			
	sec. 5,	Lots 1,2,3,4, SW¼NE¼, S½NW¼, SW¼, W½SE¼;			
	sec. 6,	Lots 1,2,6,7, S½NE¼, E½SW¼, SE¼.	Kyle Canyon Hydro- power Project #10761	2,129	Public Land Laws 1872 Mining Law

	T. 20 S., R. 62 E.				
N-50953	sec. 1,	E½SE¼;			
(Authorized)	sec. 12,	E½E½;			
	sec. 13,	E½E½;			
	sec. 14,	SW¼SW¼.			
	T. 20 S., R. 63 E.				
	sec. 7,	SW¼SW¼;			
	sec. 18,	W½W½;			
	sec. 19,	W½NW¼, SE¼NW¼, SW¼;	Frenchman Mtn. Hydro-		Public Land Laws
	sec. 30,	NW¼, N½SW¼.	power Project #10762	1,009	1872 Mining Law
	T. 17 S., R. 56 E.				
N-50954	sec. 12,	SE¼SE¼;			
(Authorized)	sec. 13,	NE¼, E½NW¼, SW¼NW¼, N½SW¼, SW¼SW¼;			
	sec. 14,	S½SW¼, SE¼;			
	sec. 22,	NE¼, N½SE¼;			
	sec. 23,	NW¼NE¼, NW¼, W½SW¼.			
	T. 16 S., R. 57 E.				
	sec. 28,	SW¼, SW¼SE¼;			
	sec. 29,	S½NE¼, N½SE¼, SE¼SE¼;			
	sec. 32,	Lots 1,2,5,6,7,8,10,11, 12, SE¼NE¼.			
	T. 17 S., R. 57 E.				
	sec. 3,	Lot 3;			
	sec. 4,	Lots 1,2,3, S½N½, SW¼;			
	sec. 5,	S½SW¼, SE¼;			
	sec. 7,	Lots 3,4, E½NE¼, SW¼NE¼, E½SW¼, W½SE¼, NE¼SE¼;			
	sec. 8,	N½N½, SW¼NW¼;			
	sec. 9,	NW¼NW¼;	Indian Ridge Hydro-		Public Land Laws
	sec. 18,	Lot 1.	power Project #10763	1,334	1872 Mining Law
	T. 17 S., R. 58 E.				
N-50956	sec. 34,	S½SE¼;			
(Authorized)	sec. 35,	S½S½;			
	sec. 36,	S½SW¼, SE¼.			
	T. 18 S., R. 58 E.				
	sec. 1,	Lots 2,3,4;			
	sec. 2,	Lots 1,2,3,4;			
	sec. 3,	Lots 1,2, S½NE¼, SE¼;			
	sec. 9,	SE¼NE¼, NE¼SE¼;			
	sec. 10,	NE¼, S½NW¼, SW¼, N½SE¼, SW¼SE¼;			
	sec. 15,	NW¼, NW¼SW¼;			
	sec. 16,	SE¼NE¼, SE¼;			
	sec. 21,	NE¼, E½NW¼, SW¼, W½SE¼;			
	sec. 28,	N½NW¼, SE¼NW¼, W½SW¼;	Lucky Strike Hydro-		Public Land Laws
	sec. 29,	E½NE¼, SW¼NE¼, SE¼.	power Project #10765	1,488	1872 Mining Law
	T. 20 S., R. 59 E.				
N-51058	sec. 30,	S½NE¼, SE¼NW¼,	Brownstone Canyon		Public Land Laws
(Authorized)		E½SW¼, SE¼.	Hydro-power Project #10757	187	1872 Mining Law
	T. 21 S. R. 59 E.				
N-55434	sec. 26,	S½N½NE¼, N½S½NE¼, S½NE¼NW¼, SE¼NW¼, N½SW¼, SW¼SW¼;			
(Application)	sec. 27,	S½SE¼;			

	sec. 29,	S½SW¼;		
	sec. 31,	E½NE¼NE¼, N½SE¼NE¼;		
	sec. 32,	N½NW¼, NW¼SW¼NW¼;		
	sec. 33,	S½NE¼, SE¼NW¼, S½N½NE¼, S½NE¼NW¼;		
	sec. 34,	NE¼, S½NE¼, S½N½NW¼, N½N½SE¼;		
	sec. 35,	W½NE¼.		
	T. 21 S., R. 60 E.			
	sec. 29,	W½SW¼NW¼NE¼, SE¼NW¼NE¼, S½NE¼NW¼, SW¼NW¼NW¼, W½SE¼NW¼NW¼, W½NE¼SE¼NW¼, E½NW¼SW¼NW¼, NE¼SW¼NW¼;	Tropicana Hydro-power Project #11221	Public Land Laws 1872 Mining Law
	sec. 30,	Lot 13, E½NW¼SE¼NW¼.		
N-56422 (Application)	T. 21 S., R. 59 E.			
	sec. 32,	Within;		
	sec. 33,	Within;		
	sec. 34,	Within;		
	sec. 35,	Within.		
	T. 22 S., R. 59 E.			
	sec. 3,	Within;	Tropicana Pumped Storage Hydro-power Project #11323	Public Land Laws 1872 Mining Law
	sec. 4,	Within.		
	T. 22 S., R. 60 E.			
N-56892 (Application)	sec. 25,	SW¼NE¼, E½SW¼, SW¼SW¼, NW¼SE¼;		
	sec. 35,	E½NE¼, W½NE¼, SW¼, NW¼SE¼;		
	sec. 36,	NW¼NW¼.		
	T. 23 S., R. 60 E.			
	sec. 2,	Lot 4;		
	sec. 3,	Lot 1, S½NE¼, SE¼SW¼, N½SE¼, SW¼SE¼;		
	sec. 9,	SE¼NE¼, SE¼;		
	sec. 10,	NW¼, NW¼SW¼;		
	sec. 16,	W½NE¼, SW¼, E½NW¼;		
	sec. 21,	W½W½;		
	sec. 28,	W½W½;		
	sec. 32,	E½E½;		
	sec. 33,	W½NW¼.		
	T. 24 S., R. 60 E.			
	sec. 5,	Lots 1,2, S½NE¼, E½SW¼, W½SE¼;		
	sec. 8,	E½NW¼, SW¼NW¼, NE¼SW¼, W½SW¼;		
	sec. 17,	W½NW¼;		
	sec. 18,	E½NE¼, SE¼;		
	sec. 19,	NE¼, E½SE¼;		
	sec. 20,	W½SW¼;		
	sec. 29,	W½NW¼, SW¼;		
	sec. 30,	NE¼NE¼;		
	sec. 32,	W½NE¼, E½NW¼, SE¼.		
	T. 25 S., R. 60 E.			
	sec. 4,	Lot 4;		
	sec. 5,	Lot 1, SE¼NE¼, E½SE¼;		
	sec. 7,	W½E½, E½W½;		

	T. 25 S., R. 60 E.				
	sec. 8,	E½NE¼, SW¼NE¼, NE¼SE¼, W½SE¼;			
	sec. 16,	NW¼;			
	sec. 17,	All;	Sheep Mountain Modular		Public Land Laws
	sec. 18,	E½, E½NW¼.	Pumped Storage Project #11367	5,920	1872 Mining Law
	T. 24 S., R. 61 E.				
N-56894	sec. 20,	S½SE¼;			
(Application)	sec. 21,	SW¼SW¼;			
	sec. 27,	S½NW¼, E½SW¼, SW¼SE¼;			
	sec. 28,	E½NE¼, NW¼NE¼, N½NW¼;			
	sec. 29,	NW¼NE¼, E½NW¼, SW¼NW¼, NW¼SW¼;			
	sec. 30,	Lot 4, SE¼SW¼, N½SE¼, SW¼SE¼;			
	sec. 31,	Lot 1;			
	sec. 34,	S½NE¼, NW¼NE¼, NE¼NW¼;			
	sec. 35,	SW¼NW¼, E½SW¼, NW¼SW¼, S½SE¼;			
	sec. 36,	SW¼SW¼.			
	T. 25 S., R. 61 E.				
	sec. 1,	Lots 3,4, S½NE¼, SE¼NW¼, E½SW¼, SE¼;			
	sec. 12,	N½NE¼, NE¼NW¼.			
	T. 25 S., R. 62 E.				
	sec. 2,	Lots 7,8, S½NW¼;			
	sec. 3,	Lots 5,6,7,8, SW¼NW¼;			
	sec. 4,	Lot 5, S½N½, N½SW¼;			
	sec. 5,	SW¼, N½SE¼, SW¼SE¼;			
	sec. 6,	Lots 15,16,17,18, SE¼SW¼, S½SE¼;			
	sec. 7,	Lots 5,6,7,8, NE¼, E½NW¼, NE¼SW¼, N½SE¼.	Eldorado Modular Pumped Storage Project #11371	3,520	Public Land Laws 1872 Mining Law

Bureau of Land Management Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County - T. 17 S., R. 50 E.				
PLO-5387	sec. 14,	Lot 11;			
(N-7468)	sec. 35,	SW¼NE¼, S½NE¼SE¼, SE¼SE¼.	Ash Meadows Pupfish Area	136.84	Public Land Laws 1872 Mining Law
	Clark County - T. 21 S., R. 58 E.				
PLO-3530	sec. 17,	N½NE¼, NW¼NW¼, N½SW¼NW¼, NW¼SE¼NW¼.	Pine Creek Canyon Natural Areas	150	Public Land Laws 1872 Mining Law
	T. 21 S., R. 59 E.				
EO 2-23-1916 (Nev-047451)	sec. 6,	Lot 7.	Public Water Res.	80.43	Public Land Laws Location of Non-Metalliferous Metals
	T. 21 S., R. 63 E.				
SO 01-07-1929	sec. 12,	S½SE¼;			
(Nev-054523)	sec. 13,	NE¼NE¼, SW¼NE¼;			

T. 21 S., R. 64 E.

Affects all lands at an altitude of less than 1250' above sea level to be interpreted to include when surveyed every smallest legal subdivision any part which lies at altitude within the following sections: 2,3,4,5,6,7,8,9,10,11,12,13,14, 15,16,17,18,20,21,22,23,24,25,26,27,28,29,33,34,35,36.

T. 20 S., R. 65 E.

sec. 34,	SE¼SW¼, SE¼.

T. 22 S., R. 65 E.

sec. 6,	Lots 1,2,3,4,5,6,7,8,9, 10,11,12;
sec. 7,	Lots 1,2,3,4,5, NW¼NE¼, S½NE¼, E½W½, SE¼;
sec. 8,	Lots 1,2,3,4,5, SW¼NW¼, SW¼;
sec. 16,	Lot 1;
sec. 17,	Lots 1,2,3,4,5, W½W½;
sec. 18,	All;
sec. 19,	All;
sec. 20,	Lots 1,2, NE¼NE¼, S½NE¼, NW¼NW¼, S½NW¼, S½;
sec. 21,	SW¼NW¼, NW¼SW¼;
sec. 28,	Lot 1;
sec. 29,	NW¼NE¼, NW¼, N½SW¼, SW¼SW¼;
sec. 30,	Lots 1,2, NE¼, E½NW¼;
sec. 32,	W½NW¼, SW¼.

T. 21 S., R. 66 E.

Affects all lands at an altitude of less than 1250' above sea level within the following sections: 4,25,31,32,33,34,35,36.

T. 16 S., R. 67 E.

sec. 24,	SW¼NE¼, SE¼SE¼.

T. 18 S., R. 67 E.

sec. 25,	Lots 1,2,3,4, SW¼NE¼,

NW¼SE¼.

T. 19 S., R. 67 E.

sec. 1,	SE¼;
sec. 12,	E½NE¼, NW¼NE¼.

T. 20 S., R. 67 E.

Affects all lands at an altitude of less than 1250' above sea level within the township.

T. 16 S., R. 68 E.

sec. 13,	SE¼;
sec. 20,	SW¼NE¼, N½NW¼, SE¼NW¼, E½SE¼;
sec. 21,	SW¼SW¼;
sec. 24,	NE¼, E½SE¼;
sec. 25,	E½NE¼;
sec. 26,	E½SW¼;
sec. 28,	SW¼NE¼, NW¼, W½SE¼, SE¼SE¼;
sec. 30,	Lot 2, E½SW¼;
sec. 31,	W½NE¼, E½SE¼;
sec. 32,	S½SW¼;
sec. 33,	NE¼NE¼;
sec. 34,	S½NW¼, SW¼, W½SE¼, SE¼SE¼;
sec. 35,	E½, E½NW¼, NE¼SW¼, SW¼SW¼;
sec. 36,	S½NW¼SW¼, S½SE¼.

T. 17 S., R. 68 E.,

sec. 1,	Lots 1,2,3,4, S½N½, NE¼SW¼, S½SW¼, SE¼;
sec. 2,	Lots 1,2,3,4, SW¼NE¼, S½NW¼, E½SW¼, W½SE¼;
sec. 3,	Lots 1,2, SE¼NE¼;

sec. 4,	Lot 4, SW¼NW¼, SW¼, SW¼SE¼;
sec. 5,	Lots 1,2,3,4, SE¼NE¼;
sec. 9,	N½N½, S½NE¼, SE¼NW¼, E½SE¼;
sec. 10,	SW¼NW¼, SW¼, SW¼SE¼;
sec. 11,	NE¼;
sec. 12,	N½, N½SW¼, SW¼SW¼, E½SE¼;
sec. 13,	E½NE¼, SW¼NE¼, E½NW¼, N½SE¼, SE¼SE¼;
sec. 14,	SW¼NW¼, SW¼, S½SE¼;
sec. 15,	All;
sec. 16,	E½;
sec. 23,	NE¼, E½NW¼, E½SE¼;
sec. 24,	W½NE¼, S½NW¼, SW¼;
sec. 25,	N½N½, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 26,	N½N½, SW¼NE¼, NW¼, N½SW¼, SW¼SW¼;
sec. 27,	N½SW¼, SE¼SE¼SE¼;
sec. 34,	Lots 2,5,9,12,13, E½NE¼NE¼, W½NW¼SE¼, SE¼NW¼SE¼;
sec. 36,	NE¼, E½NW¼, S½.
T. 15 S., R. 69 E.	
sec. 31,	Lots 3,4, E½SW¼.
T. 16 S., R.69 E.	
sec. 7,	Lots 1,2,3,4, E½W½;
sec. 19,	Lots 1,2,3,4;
sec. 30,	Lots 1,2,3,4, SE¼SW¼;
sec. 31,	Lots 1,2,3,4, E½W½, S½SE¼.
T. 17 S., R. 69 E.	
sec. 5	Lot 4, SW¼NW¼;
sec. 6,	Lots 1,2,3,4,5,6,7, S½NE¼, SE¼NW¼, E½SW¼, N½SE¼, SW¼SE¼;
sec. 7,	Lots 1,2,3,4, NW¼NE¼, E½W½, SE¼;
sec. 17,	E½NE¼, NW¼;
sec. 18,	Lots 1,2,3,4, NE¼, E½NW¼, SE¼SW¼;
sec. 19,	Lots 1,4, NW¼NE¼, S½NE¼, E½W½, SE¼;
sec. 20,	W½SW¼;
sec. 29,	W½W½, SE¼SW¼, SW¼SE¼;
sec. 30,	All;
sec. 31,	All;
sec. 32,	W½NE¼, W½, NW¼SE¼.

T. 21 S., R. 69 E.
All Township Included.

T. 14 S., R. 70 E.
Affects All Lands Lying Below 1250' Above Sea Level.

T. 21 S., R. 70 E.
Affects Sections 12,13,14,23,26,35 Lying Within Unsurveyed Portions of Sections 12,13,14,23,24,25,26,35,36 Lying Between 1229' Contour Line and the Colorado River. (GLO Order June 30, 1945)

T. 22 S., R. 70 E.
Affects All Lands Lying Below 1250' Above Sea Level.

T. 20 S., R. 71 E.
Affects All Lands Lying Below 1250' Above Sea Level.

T. 21 S., R. 71 E.
All Township Included. PSC #210 23,436.47 Public Land Laws

	T. 21 S., R. 58 E.				
EO 04-17-1926	sec. 4,	Lot 3.			
(Nev-047449)	T. 22 S., R. 58 E.				
	sec. 14,	Lot 8, NE¼SW¼;			
	sec. 22	NE¼SE¼.			
	T. 18 S., R. 67 E.				
	sec. 12,	Lot 4.	Public Water Reserve #107	200.21	Public Land Laws Location of Non-Metalliferous Minerals
	T. 21 S., R. 63 E.				
PL 73 Nev-061168	sec. 35,	Lots 8,9, S½SW¼, SW¼SE¼.	Henderson Sale Area	187.65	Public Land Laws 1872 Mining Law 1920 Mineral Leasing Act
	T. 21 S., R. 63 E.				
PL 522 Nev-044337	sec. 33,	NE¼NE¼, E½NW¼NW¼, N½SE¼NE¼.	Henderson Sale Area	80.00	Public Land Laws 1872 Mining Law 1920 Mineral Leasing Act
	T. 22 S., R. 64 E.				
SO 05-29-1933	sec. 1-2,	All;			
(Nev-054528)	sec. 3,	Lots 5,6,7,11,12, S½N½, S½;			
	sec. 10-14,	All;			
	sec. 15,	N½, NE¼SW¼, SE¼;			
	sec. 22,	NE¼NE¼;			
	sec. 23,	N½, NE¼SW¼, N½SE¼, SE¼SE¼;			
	sec. 24,	Lots 1,2,3,4,5,6, W½NE¼, NW¼, N½SW¼, SW¼SW¼, NW¼SE¼;			
	sec. 25,	Lots 1,2,3,4,5,6,7, SW¼NE¼, NW¼NW¼, NW¼SE¼.			
	T. 21 S., R. 65 E.				
	sec. 3,	Lots 6,7,8, W½SE¼, SW¼;			
	sec. 4,	Lots 5,6, E½SW¼, SE¼;			
	sec. 9,	NE¼, N½NW¼, SE¼NW¼, N½SE¼, SE¼SE¼;			
	sec. 10,	W½, S½SE¼;			
	sec. 11,	S½SW¼;			
	sec. 12,	Lot 7;			
	sec. 13,	Lots 1,2,3,4, W½E½, S½NW¼, SW¼;			
	sec. 14,	S½NE¼, W½SE¼;			
	sec. 15,	All;			
	sec. 16,	S½NE¼, E½W½, SE¼;			
	sec. 17,	SW¼NE¼, S½NW¼, S½;			
	sec. 18,	E½SE¼;			
	sec. 19,	Lots 10,17, S½NE¼, S½;			
	sec. 20,	Lots 4,5,6,7,8,9,10,11,			
	sec. 21,	Lots 1,2,3,4,5,6,7,8, S½N½, S½;			
	sec. 22,	Lots 1,2,3,4,5,6,7,8,9, 10, S½N½, SW¼, N½SE¼;			
	sec. 23,	Lots 1,2,3,4,5,6,7,8, S½N½;			
	sec. 24,	Lots 1,2,3,4,5,6,7;			
	sec. 27,	Lots 1,2;			
	sec. 28,	Lots 1,2,3,4;			
	sec. 29,	Lots 1,2,3,4, N½NE¼, NW¼, NW¼SW¼;			
	sec. 30,	All;			

sec. 31,	Lots 9,10,11,12, W½NE¼, W½.

T. 23 S., R. 65 E.

Includes All Township. Affects Land Below 700' Above Sea Level In Sections 5,8,9,16,21,27,28 and 34.

T. 23½ S., R. 65 E.

Affects All Lands Lying Below 700' Above Sea Level In Sections 34 and 35.

T. 24 S., R. 65 E.

Affects All Lands Lying Below 700' Above Sea Level In Township.

T. 25 S., R. 65 E.

sec. 11,	Lots 1,2,3,4, W½SW¼;
sec. 14,	Lots 1,2,3,4;
sec. 23,	Lots 1,2,3,4;
sec. 26,	Lots 1,2,3,4;
sec. 35,	Lots 1,2,3,4, SW¼NW¼;
sec. 34,	SE¼NE¼, E½SE¼.

Affects All Lands Lying Below 700' Above Sea Level in Sections 2 and 3.

T. 26 S., R. 65 E.

sec. 2,	Lots 1,2,3,4;
sec. 3,	Lot 1, SE¼NE¼, E½SE¼;
sec. 10,	E½NE¼;
sec. 11,	Lots 1,2,3,4,5, NW¼SW¼, SE¼SW¼, SW¼SE¼;
sec. 12,	Lot 1;
sec. 13,	Lots 1,2,3,4;
sec. 14,	N½NE¼, SE¼NE¼;
sec. 23,	NE¼NE¼;
sec. 24,	Lot 1;
sec. 25,	Lot 1;
sec. 26,	SW¼NE¼, W½SE¼;
sec. 35,	N½NE¼, SE¼NE¼, NE¼SE¼;
sec. 36,	SW¼NW¼, N½SW¼, SE¼SW¼, SW¼SE¼.

T. 27 S., R. 65 E.

sec. 1,	Lots 1,2,5, SW¼NE¼, E½SE¼;
sec. 13,	SE¼SE¼;
sec. 23,	E½SE¼;
sec. 24,	Lots 1,2,3,4,5, NW¼NE¼, W½, SW¼SE¼;
sec. 25,	NE¼, N½NW¼, E½SE¼;
sec. 36,	E½E½, SW¼SE¼.

T. 28 S., R. 65 E.

sec. 1,	Lots 1,2, S½NE¼, N½SE¼, SE¼SE¼;
sec. 12,	Lots 1,2,3, N½NE¼, SW¼NE¼, NE¼SW¼, S½SW¼;
sec. 13,	Lots 1,2,3,4, W½W½;
sec. 24,	Lot 1, Lots 2,3,(within) Lot 4, W½W½;
sec. 25,	Lots 1,2,3,4, N½NW¼, SE¼NW¼, E½SW¼;
sec. 36,	W½E½, E½W½.

T. 29 S., R. 65 E.

sec. 1,	Lots 1,2, S½NE¼, SE¼;
sec. 12,	E½, NE¼NW¼;
sec. 13,	NE¼, N½SE¼, SE¼SE¼.

T. 27 S., R. 66 E.

Affects All Lands Lying Below 100' Above Sea Level In Township.

T. 29 S., R. 66 E.

sec. 8,	Lot 1;
sec. 17,	Lots 1,2,3,4, SW¼SW¼;

sec. 18,	Lot 4;
sec. 19	Lot 1, S½NE¼, E½NW¼, N½SE¼, SE¼SE¼;
sec. 20,	Lots 1,2,3, W½, NW¼SE¼, S½SE¼;
sec. 21,	Lots 1,2;
sec. 28,	Lots 1,2,3,4,5, NW¼NW¼; S½NW¼, SW¼, NW¼SE¼;
sec. 29,	N½, NE¼SW¼, SE¼;
sec. 30,	NE¼NE¼;
sec. 32,	E½NE¼;
sec. 33,	Lot 1,2,3, NW¼, N½SW¼, SE¼SW¼, NW¼SE¼, S½SE¼;
sec. 34,	Lots 1,2.
T. 30 S., R. 66 E.	
sec. 2-4,	Within;
sec. 10-11,	Within;
sec. 14-15,	Within;
sec. 22-23,	Within;
sec. 26-27,	Within;
sec. 34-35,	Within;
T. 31 S., R. 66 E.	
sec. 2,	Lots 1,2,3,4, W½SW¼;
sec. 3,	Lot 1;
sec. 11,	Lots 1,2,3,4, W½NW¼;
sec. 14,	Lots 1,2,3,4, NW¼NW¼, W½SW¼;
sec. 23,	Lots 1,2,3,4, N½NW¼, SE¼NW¼, NE¼SW¼;
sec. 26,	Lots 1,2,3,4, SW¼NE¼, W½SE¼;
sec. 35,	Lots 1,2,3,4,10, NW¼NE¼;
sec. 36,	Lots 1,2,3, SW¼SW¼.
T. 18 S., R. 68 E.	
sec. 1,	All;
sec. 2,	Lots 1,2,3,4, S½N½, SE¼SW¼, SE¼;
sec. 3,	Lots 2,3,4, SW¼NE¼, S½NW¼, SW¼, W½SE¼;
sec. 4-5,	All;
sec. 8,	NE¼SE¼, S½SE¼;
sec. 9,	N½, SW¼, W½SE¼;
sec. 10,	N½, N½SW¼, SE¼;
sec. 11-12,	All;
sec. 13,	W½;
sec. 14,	All;
sec. 15,	E½NE¼, S½SW¼, SE¼;
sec. 16,	All;
sec. 17,	E½, NE¼SW¼, S½SW¼;
sec. 18,	SE¼SE¼;
sec. 19,	Lots 3,4, E½NE¼, SW¼NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 20,	N½, SW¼, S½SE¼;
sec. 21,	N½, SW¼, W½SE¼;
sec. 22,	N½N½, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 23,	All;
sec. 24,	N½NW¼, SW¼NW¼;
sec. 26,	N½, SW¼, NW¼SE¼;
sec. 27,	E½, E½NW¼, SW¼NW¼, SW¼;

sec. 28,	W½, SE¼;
sec. 29-30,	All;
sec. 31,	Lots 1,2,3,4, NE¼, E½W½, W½NE¼SE¼, W½SE¼;
sec. 32,	Lots 1,2,3,4,5,6,7,8,9,10,11,13,15,16,17;
sec. 33-34,	All;
sec. 35,	NW¼, W½SW¼.
<u>T. 19 S., R. 68 E.</u>	
sec. 2,	Lots 3,4, S½NW¼, SW¼;
sec. 3-4,	All;
sec. 5,	Lots 1,2,3,5, S½NE¼, S½NW¼NW¼, S½NW¼, SW¼, S½NE¼SE¼, W½SE¼, SE¼SE¼;
sec. 6,	Lots 2,3,4,5,6,7,9, S½NE¼NE¼, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 7,	Lots 1,2, NE¼, E½NW¼;
sec. 8-10,	All;
sec. 11,	W½;
sec. 14,	W½;
sec. 15,	All;
sec. 16,	Within;
sec. 17,	All;
sec. 20,	All;
sec. 21,	Within;
sec. 22,	All;
sec. 23,	W½;
sec. 26,	W½;
sec. 27-29,	All;
sec. 31,	SE¼;
sec. 32-34,	All;
sec. 35,	W½.
<u>T. 20 S., R. 68 E.</u>	
sec. 3,	All;
sec. 4,	Within;
sec. 5,	All;
sec. 6,	Lot 1, S½NE¼, E½SW¼, SE¼;
sec. 7-10,	All;
sec. 15-19,	All;
sec. 20,	N½, SW¼, N½SE¼, SW¼SE¼;
sec. 21-22,	All;
sec. 26,	W½W½, SE¼SW¼, S½SE¼;
sec. 27-28,	All;
sec. 29,	E½NE¼, SW¼NE¼, NW¼, S½;
sec. 30-31,	All;
sec. 32,	N½, NE¼SW¼, N½SE¼, SE¼SE¼;
sec. 33-35,	All;
sec. 36,	S½NW¼, SW¼, SW¼SE¼.
<u>T. 21 S., R. 68 E.</u>	
sec. 1,	All;
sec. 2,	Lots 1,2,3,4, S½N½, N½SE¼;
sec. 3,	Lots 1,2,3,4, S½NE¼;
sec. 6,	Lots 1,2,3, S½NE¼, SE¼NW¼.
<u>T. 18 S., R. 69 E.</u>	
sec. 5,	Lots 2,3,4, SW¼NE¼, S½NW¼, N½SW¼, SW¼SW¼,

		NW¼SE¼;			
	sec. 6,	All;			
	sec. 7,	Lots 1,2,3,4, NE¼, E½W½, NW¼SE¼;			
	sec. 18,	Lot 1.	PSC #272	79,846.48	Public Land Laws
	T. 21 S., R. 65 E.				
EO 11-17-1913	sec. 24,	Lots 8,9,10.			
(Nev-054532)	T. 20 S., R. 67 E.				
	Affects All Lands Lying Within ¼ Mile of the Colorado River.				
	T. 21 S., R. 68 E.				
	sec. 5,	Lots 1,2,3,5,6;			
	sec. 6,	Lots 6,7,8,9, E½SW¼, NW¼SE¼.			
	sec. 7,	Lots 1,2,3.	PSR #407	6,266.27	Public Land Laws
	T. 21 S., R. 68 E.				
EO 09-05-1914	sec. 2,	Lots 5,6,7,8;			
(Nev-054534)	sec. 3,	Lots 1,2,5,6,7;			
	sec. 12,	Lots 1,2,3,4.			
	T. 21 S., R. 69 E.				
	Affects All Lands Lying Within ¼ Mile of the Colorado River.				
	T. 21 S., R. 70 E.				
	Affects All Lands Lying Within ¼ Mile of the Colorado River. Affects Sections 12,13,14,23,26,35 Lying Within Unsurveyed Portions of Sections 12,13,14,23,24,25,26,35,36. Lying Between 1229' Contour Line and the Colorado River. (GLO Order June 30, 1945).				
	T. 22 S., R. 70 E.				
	Affects All Lands Lying Within ¼ Mile of the Colorado River.				
	T. 21 S., R. 71 E.				
	All Township Included.		PSR #446	12,064.39	Public Land Laws
	T. 21 S., R. 65 E.				
EO 12-03-1913	sec. 23,	Lots 9,10,11,12, N½SE¼;			Public Land Laws
(Nev-054535)	sec. 24,	Lots 11,12, SW¼NW¼.	PSC #462	325.38	1872 Mining Law
	T. 13 S., R. 63 E.				
PL 100-275	sec. 1,	Lot 2 (W½),3,4,			
(N-48281)		W½SW¼NE¼, S½NW¼, SW¼, W½W½SE¼;			
	sec. 2,	All;			
	sec. 3,	Within;			
	sec. 10,	Within;			
	sec. 11-14,	All;			
	sec. 15,	Within;			Public Land Laws
	sec. 22,	Within;			1872 Mining Law
	sec. 23,	Within;	Aerojet Buffer		1920 Mineral Leasing Act
	sec. 24,	Within.	Zone Lease Agreement	6,110	1970 Geothermal Steam Act
	T. 13 S., R. 70 E.				
N-45233	sec. 12,	S½;			
	sec. 13,	N½, SW¼, N½SE¼;			
	sec. 14,	S½;			
	sec. 23,	Lots 1,2, N½, SW¼, NW¼SE¼;			
	sec. 24,	Lots 2,6, W½NW¼;			
	sec. 26,	Lot 2, N½NW¼.			
	T. 13 S., R. 71 E.				
	sec. 7,	All;			
	sec. 8,	Lots 1,2,3, N½, N½S½, SW¼SW¼;			
	sec. 9,	Lots 1,5,6,7,8,10, 11,13,15,16,17,19,			

		21, N½, N½SW¼, N½NW¼SE¼;			Public Land Laws
	sec. 10,	Lots 5,6,7,8,9, NW¼, N½SW¼;			1872 Mining Law
	sec. 17,	Lot 1;			1920 Mineral Leasing Act
	sec. 18,	Lots 5,6,7,9, NW¼NE¼, N½NW¼.	Mesquite Legislation Public Lands Sale Area	4,417.49	1970 Geothermal Steam Act
	T. 13 S., R. 70 E.				
PL 99-548 (N-45240)	sec. 24,	Lot 3. (within)			
	sec. 26,	Lots 1,3,4. (within)			
	T. 13 S., R. 71 E.				
	sec. 15,	Lots 5,6,7,8, SW¼; (within)			
	sec. 16,	Lots 1,2,3,4,5, S½SE¼; (within)			
	sec. 17,	Lot 2;			Public Land Laws
	sec. 19,	Lot 6; (within)			1872 Mining Law
	sec. 20,	Lots 1,2,6, SW¼NE¼; (within)	Mesquite Legislation		1920 Mineral Leasing Act 1970 Geothermal
	sec. 21,	N½NW¼. (within)	Public Lands Retention Areas	637.52	Steam Act
	T. 13 S., R. 70 E.				
PL 104-208, Sec. 121 (N-61259)	sec. 1,	Lots 5,6,7,8,9,10,11,12, S½N½, S½;			
	sec. 11,	E½SE¼;			
	sec. 12,	All;			
	sec. 13,	W½;			
	sec. 14,	E½NE¼, S½;			
	sec. 23,	Lots 1,2, N½, SW¼, NW¼SE¼;			
	sec. 24,	Lots 2,6, W½NW¼;			
	sec. 26,	Lots 1,2,3,4, N½NW¼;			
	T. 13 S., R. 71 E.				
	sec. 4,	Lots 6,7,8,9,10,11, SW¼NE¼, S½NW¼, W½SE¼, SW¼;			
	sec. 5,	Lots 5,6,7,8,9,10,11,12, S½N½, S½;			
	sec. 6,	Lots 8,9,10,11,12,13,14,15, S½N½, S½;			Public Land Laws
	sec. 7,	N½.	Mesquite Land Sale Act	5,642.30	1872 Mining Law
	T. 20 S., R. 57 E.				
HR 4559 (10-26-1990)	sec. 24,	All;			
	sec. 25,	All;			
	sec. 36,	All.			
	T. 21 S., R. 57 E.				
	sec. 1,	All;			
	sec. 12-13,	All;			
	sec. 24-25,	All;			
	sec. 36,	All.			
	T. 20 S., R. 58 E.				
	sec. 8-36,	All;			
	T. 21 S., R. 58 E.				
	sec. 1,	Lots 2,3,4, SW¼NE¼, W½SE¼NE¼, S½NW¼, SW¼, W½NE¼SE¼, SE¼NE¼SE¼, W½SE¼, SE¼SE¼;			
	sec. 2-15,	All;			
	sec. 16,	N½N½, SE¼NE¼, SW¼NW¼, S½;			
	sec. 17-23,	All;			
	sec. 24,	E½NE¼, E½W½NE¼,			

	NW¼NW¼NE¼, N½NW¼, SW¼NW¼, N½SE¼NW¼, SW¼SE¼NW¼, W½SW¼, W½SE¼SW¼, E½NE¼SE¼, NE¼SW¼SE¼, SE¼SE¼;
sec. 25,	W½NW¼NE¼, SE¼NW¼NE¼, SW¼NE¼, W½, W½E½SE¼, W½SE¼;
sec. 26-33,	All;
sec. 34,	N½, SW¼, N½SE¼, SW¼SE¼;
sec. 35,	E½, NW¼;
sec. 36,	W½E½NE¼, W½NE¼, W½, N½SE¼, SW¼SE¼, W½SE¼SE¼.
<u>T. 22 S., R. 58 E.</u>	
sec. 1,	Lots 1,2,3,4, S½N½, N½SE¼, SE¼SE¼;
sec. 2,	Lots 1,2,3, S½NE¼, S½NW¼, N½SW¼, NW¼SE¼;
sec. 3,	Lots 3,4, SW¼NW¼, S½SW¼, SE¼;
sec. 4-11,	All;
sec. 12,	Lots 1,2,3,4,5,6, E½, SE¼SW¼;
sec. 13-18,	All;
sec. 20,	NE¼;
sec. 21-28,	All;
sec. 33-36,	All;
<u>T. 23 S., R. 58 E.</u>	
sec. 1,	Lots 1,2,3,4, S½N½, S½;
sec. 2,	Lots 1,2,3,4, S½N½, S½;
sec. 3,	Lots 1,2,3,4, S½N½, S½;
sec. 4,	Lots 1,2,3,4, S½N½, S½;
sec. 9-12,	All;
<u>T. 20 S., R. 59 E.</u>	
sec. 7-9,	All;
sec. 16,	N½;
sec. 17,	Lots 1,2,3,4,5,6,7,8,9,10,11,12;
sec. 18-19,	All;
sec. 20,	Lots 1,2,3,4;
sec. 30-31,	All;
sec. 32,	S½. (within)
<u>T. 21 S., R. 59 E.</u>	
sec. 3,	S½NW¼, * SW¼;
sec. 4,	Lots 3,4 (within), Lots 5,6,7,8, NW¼, SW¼, * E½SE¼;
sec. 5,	Lots 1,2,3,4, S½N½, S½;
sec. 6,	Lots 1,2, S½NE¼, * NE¼NW¼, * N½SE¼NW¼, * SW¼SE¼NW¼, * N½SE¼SE¼NW¼, S½SE¼SE¼NW¼, * N½NE¼SW¼, * N½S½NE¼SW¼, S½S½NE¼SW¼, S½SW¼, * NW¼SE¼, * N½NE¼SW¼SE¼, S½NE¼SW¼SE¼, N½NW¼SW¼SE¼, * S½NW¼SW¼SE¼, * S½SW¼SE¼,

		E½SE¼;			
	sec. 7-9,	All;			
	sec. 10,	Lots 15,16,17,18, NW¼ (minerals only);			
	sec. 16,	Lots 3,4, N½NW¼;			
	sec. 17,	Lots 1,2,3,4,5,6, 7, N½N½;			
	sec. 18-19,	All;			
	T. 22 S., R. 59 E.				
	sec. 6,	All;			
	sec. 7,	Lots 1,2,3,4, N½NE¼, N½SW¼NE¼, E½NW¼, E½SW¼, S½NE¼SW¼SE¼, W½SW¼SE¼, SE¼SE¼;			Public Land Laws
	sec. 8,	NW¼, SW¼, SW¼SE¼;	Red Rock Canyon		1872 Mining Law
	sec. 17,	W½NE¼, NW¼;	National Con-		1920 Mineral Leasing Act
	sec. 18	Lots 1,2, NE¼.	servation Area	83,100	1970 Geothermal Steam Act

* Denotes federal ownership of mineral estate only - surface estate has been transferred into private ownership.

	T. 17 S., R. 63 E.	
PL 101-67	sec. 32,	Within;
(N-49779)	sec. 33,	Within;
	T. 18 S., R. 63 E.	
	sec. 3-5,	Within;
	sec. 8,	Within;
	sec. 9,	All;
	sec. 10,	Within;
	sec. 11,	Within;
	sec. 13,	Within;
	sec. 14,	NE¼, NW¼, N½SW¼, SW¼SW¼, N½SE¼SW¼, SW¼SE¼SW¼;
	sec. 15-16,	All;
	sec. 17-19,	Within;
	sec. 20-22,	All;
	sec. 23,	E½NE¼, E½NW¼NE¼, E½SW¼NE¼, SW¼SW¼NE¼, W½NE¼NW¼, W½NW¼, W½SW¼ SE¼SE¼SW¼, E½SE¼, N½NW¼SE¼, SE¼NW¼SE¼, SW¼SE¼;
	sec. 24,	All;
	sec. 26,	E½NE¼, N½NW¼NE¼, N½SW¼NW¼NE¼, SE¼NW¼NE¼, E½SW¼NE¼, E½NE¼NW¼, N½SE¼NW¼, W½W½NW¼, NW¼NW¼SW¼, S½NE¼SW¼, SE¼SW¼, E½SE¼, NE¼NW¼SE¼, S½NW¼SE¼, SW¼SE¼;
	sec. 27-30,	All;
	sec. 31,	E½, SE¼SW¼;
	sec. 32-34,	All;
	sec. 35,	E, E½NW¼, E½NW¼NW¼, SW¼NW¼NW¼, SW¼NW¼, SW¼.
	T. 19 S., R. 63 E.	
	sec. 2,	All;
	sec. 3,	Lots 1,2,3,4, S½NE¼, N½SW¼NW¼, SE¼SW¼NW¼, SE¼NW¼, NE¼SW¼, E½NW¼SW¼, SW¼NW¼SW¼, S½SW¼, SE¼;
	sec. 4,	Lots 1,2,3,4, S½N½, SW¼,

		NW¼SE¼, S½SE¼;			
	sec. 5-8,	All;			
	sec. 9,	N½, N½SW¼.			
	T. 18 S., R. 64 E.				
	sec. 7,	Lots 9,10,11, SE¼SW¼, SE¼;			
	sec. 18,	Lots 5,6,7,8,9,10, 11,12,13,14,15, N½NE¼, E½NW¼;			
	sec. 19,	Lots 5,6,7,8,9,10, 11,12, E½NE¼, E½SW¼, SE¼;			All Except R&PP and Applicable
	sec. 20,	N½.	Apex Project	21,000	Sale Authorities

Department of Energy Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 26 S., R. 64 E.				
(N-2385) PLO 4662	sec. 4,	SE¼NE¼NW¼SW¼.	Atomic Seismic Station	2.5	Public Land Laws 1872 Mining Law
	T. 23 S., R. 63 E.				
PLO 4250 (Nev-067001)	sec. 22,	SW¼;			
	sec. 23,	Lots 3,6, S½NW¼, NE¼SW¼, E½SE¼SW¼;			
	sec. 24,	Lots 5,6,7,8, S½.			
	T. 23 S., R. 63½ E.				
	sec. 25,	NE¼, N½SE¼.			
	T. 23 S., R. 64 E.				
	sec. 27-29,	All;			
	sec. 30,	Lots 5,6,7, NE¼, E½NW¼, NE¼SW¼, SE¼;			
	sec. 33,	N½NE¼, SE¼NE¼, NE¼NW¼;			
	sec. 34,	N½, NE¼SW¼, N½SE¼, SE¼SE¼.	Pacific NW and Pacific SW Intertie	4,302.57	Public Land Laws 1872 Mining Law

United States Forest Service Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 18 S., R. 55 E.				
PLO-1355 (Nev-016774)	sec. 13,	S½SE¼;			
	sec. 24,	N½NE¼.			
	T. 19 S., R. 57 E.				
	sec. 29,	S½N½SE¼, S½SE¼, SE¼NE¼SW¼, E½SE¼SW¼;			
	sec. 32,	Lots 1,2,3,4; (N½)			
	sec. 7,	Lots 8 (S½), 9 and 10 (SE¼), 11 (N½);			
	sec. 8,	Lots 5 (SW¼), 12 (NW¼), 9 (W½), 10,15;	Recreation Areas &		Public Land Laws
	sec. 31,	Lots 7 (W½), 8,9,11,12.	Administrative Sites	776.08	1872 Mining Law
	T. 18 S., R. 56 E.				
PLO-1377	sec. 27,	SW¼NE¼NW¼, S½NW¼NW¼,			

(Nev-028474)		W½SE¼NW¼, SW¼NW¼, NW¼NE¼SW¼, N½NW¼SW¼, SW¼NW¼SW¼;			
	sec. 28,	SE¼NE¼NE¼, NE¼SE¼NE¼, NE¼NE¼SE¼, S½NE¼SE¼;			
	sec. 33,	NW¼NE¼, N½SE¼NE¼, E½NE¼NW¼, NE¼SE¼NW¼.	Recreation Areas	270	Public Land Laws 1872 Mining Law
	T. 19 S., R. 57 E.				
PLO-2785 (Nev-058297)	sec. 7,	Lots ll (S½), 12;			
	sec. 8,	Lots 5 (N½,SE¼), 6 (S½), 11, 12 (NE¼,S½), 13,14.	Geological Area	243	1872 Mining Law
	T. 18 S., R. 55 E.				
PLO 1487 (Nev-054565)	sec. 10,	E½;			
	sec. 11-14,	All;			
	sec. 15,	E½;			
	sec. 23-25,	All;			
	sec. 36,	All.			
	T. 19 S., R. 55 E.				
	sec. 1,	Lots 1,2,3,4, S½NE¼, S½NW¼, SW¼, NE¼SE¼;			
	sec. 2,	Lots 1,2,3,4, S½N½, S½;			
	sec. 12,	S½NE¼, W½, SE¼;			
	sec. 13-15,	All;			
	T. 18 S., R. 56 E.				
	sec. 18-22,	All;			
	sec. 25,	N½, SW¼;			
	sec. 26-34,	All;			
	sec. 35,	E½NE¼, W½NW¼;			
	sec. 36 NW¼, SE¼.	NE¼NE¼, S½SE¼SE¼NW¼NE¼,			
	T. 19 S., R.56 E.				
	sec. 1,	Lots 5,6,7,8,9,10,11, 12,13, SE¼NW¼, E½SW¼;			
	sec. 2,	Tract 40 (within), Lots 5,6,7;			
	sec. 3,	Tract 43 (within), Lots 5,6,7,8,9, S½N½, SW¼, N½SE¼, SW¼SE¼;			
	sec. 4,	Lots 5,6,7,8, S½N½, S½;			
	sec. 5,	Lots 5,6,7,8,9,10,13, 14,15,16, S½N½, E½SE¼;			
	sec. 6,	Lots 8,9,10,11,12,13, 14,15,16,17,19,20,21, 22, S½NE¼, SE¼NW¼, NE¼SW¼, N½SE¼;			
	sec. 7,	Lots 6,7,8,9,10,11,12, 13, S½NE¼, SE¼NW¼, E½SW¼, SE¼;			
	sec. 8,	Lots 1,2,3,4, NE¼NE¼, S½NE¼, S½NW¼, S¼;			
	sec. 9,	Tract 43 (within), Lots 1,2,3,4, W½E½, W½;			
	sec. 10,	Tract 43 (within), Tract 57 (all in sec.), Lots 1,2,3,4;			
	sec. 11,	Tract 43 (all in sec.), Tract 44;			
	sec. 12,	Tract 48 (all in sec.),			

	Tract 58;
sec. 13,	Tract 37 (within),
	Tract 48 (all in sec.),
	Tract 58 (all in sec.),
	Lots 1,2,3,4,5,6,7,
	SW¼, SW¼SE¼;
sec. 14,	Tract 51 (all in sec.),
	Lots 1,2,3,4,5,6,7,8,
	SW¼SW¼;
sec. 15,	Tract 43 (all in sec.),
	Tract 51 (all in sec.),
	Tracts 52,53,54,
	Tract 57 (all in sec.),
	Lots 1,2,3,4,5,6;
sec. 16,	Tract 43 (all in sec.),
	Lots 1,2,3,4,5,6,7,
	NW¼NE¼, N½NW¼, SW¼NW¼,
	W½SW¼, SE¼SW¼;
sec. 17,	All;
sec. 18,	Lots 5,6,7,8, E½, E½W½;
sec. 19,	Lots 5,6,7,8, E½, E½W½;
sec. 20,	All;
sec. 21,	All;
sec. 22,	N½N½, SW¼NW¼, SW¼;
sec. 23,	Lots 1,2,3, SE¼NE¼,
	W½NW¼, SE¼NW¼, N½SW¼,
	SE¼SW¼, SE¼;
sec. 24,	Lots 1,2,3,4, W½E½, W½;
sec. 25,	Lots 1,2,3,4, W½E½, NW¼,
	N½SW¼, SE¼SW¼;
sec. 26,	N½, SW¼, NW¼SE¼;
sec. 27-29,	All;
sec. 30,	Lots 5,6,7,8, E½, E½W½;
sec. 31,	Lots 5,6,7,8,9,10,11,
	NE¼, E½NW¼, NE¼SW¼,
	N½SE¼;
sec. 32,	Lots 1,2,3,4, N½, N½S½;
sec. 33,	Lots 1,2,3,4, N½, N½S½;
sec. 34,	Lots 1,2,3,4, N½, N½S½;
sec. 35,	Lots 1,2,3,4, W½NE¼,
	SE¼NE¼, NW¼, N½SW¼,
	N½SE¼;
sec. 36,	Lots 1,2,3,4,5,
	E½NE¼ (within), SW¼NE¼,
	S½NW¼, N½SW¼, NW¼SE¼.
<u>T. 20 S., R. 56 E.</u>	
sec. 1-5,	All;
sec. 11-13,	All;
<u>T. 18 S., R. 57 E.</u>	
sec. 30,	Lots 1,2,3,4, E½W½, E½;
sec. 31,	Lots 1,2,3,4, E½W½, E½.
<u>T. 19 S., R. 57 E.</u>	
sec. 5-6,	All;
sec. 7,	E½;
sec. 8,	All;
sec. 17,	All;
sec. 18,	Lots 2,3,5,6,7,8,9,10,
	11,12,13,14,15, E½NW¼;
sec. 19-20,	All;
sec. 29-30,	All;
sec. 31,	Lots 5,6,7,8,9,10,11,
	12,13;

	sec. 32-33,	All;			
	T. 20 S., R. 57 E.				
	sec. 4-8,	All;			
	sec. 9,	All;	Toiyabe National		
	sec. 18,	All.	Forest	38,436.85	None
	T. 18 S., R. 56 E.				
PLO-4708			Toiyabe National		
(Nev-054565)	sec. 26,	SE¼.	Forest	160	None
	T. 19 S., R. 57 E.				
PLO-3253	sec. 17,	E½SW¼NW¼ (within),			
(Nev-060240)		SE¼NW¼ (within).	Historic Site	38	1872 Mining Law

Federal Aviation Administration Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 13 S., R. 47 E.				
BLM Order	sec. 17,	S½NE¼SW¼, SE¼NW¼SW¼,			
09-18-1957		SE¼SW¼, E½SW¼SW¼,			
(Nev-045108)		SW¼NW¼SE¼, W½SW¼SE¼;			
	sec. 20,	NW¼NW¼NE¼, N½NE¼NW¼,	Beatty		Public Land Laws
		NE¼NW¼NW¼.	VOR Facility	160	1872 Mining Law
	T. 13 S., R. 47 E.				
PLO-6687	sec. 17,	W½SE¼NW¼SE¼,			
(N-42735)		W½E½SW¼SE¼;			
	sec. 20,	W½NE¼NW¼NE¼,			
		SW¼NW¼NE¼,			
		S½NE¼NW¼,			Public Land Laws
		SE¼NW¼NW¼.	Beatty ANS	60	1872 Mining Law
	Clark County -				
	T. 19 S., R. 57 E.,				
PLO-5305					Public Land Laws
(N-5999)	sec. 10,	SE¼SE¼NE¼NW¼(within).	Angel Peak ANS	.304	1872 Mining Law
	T. 26 S., R. 63 E.				
PLO-3447	sec. 12,	SW¼NW¼NE¼NE¼, W½SW¼NE¼NE¼,			
PLO-3485		S½N½NW¼NE¼, S½NW¼NE¼, SW¼NE¼,			
PLO-3931		W½W½SE¼NE¼, S½NE¼NE¼NW¼,			Public Land Laws
(Nev-059256)		SE¼NE¼NW¼, E½SE¼NW¼.	Searchlight RCAG	122.5	1872 Mining Law
	T. 13 S., R. 69 E.				
PLO-6687	sec. 27,	NW¼SW¼;			Public Land Laws
(N-42415)	sec. 28,	NE¼SE¼.	Mormon Mesa ANS	80	1872 Mining Law
	T. 13 S., R. 69 E.				
BLM Order 01-18-1952					Public Land Laws
(Nev-051785)	sec. 28,	SE¼SE¼.	ANS Nev. #1	40	1872 Mining Law

Bureau of Reclamation Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 21 S., R. 62 E.				
PLO-3512	sec. 23,	NE¼NE¼, E½SE¼;			
(Nev-059798)	sec. 24,	All;			
	sec. 25,	E½NE¼, NE¼NW¼.			
	T. 21 S., R. 63 E.				
	sec. 19,	Lots 3,4, E½SW¼;			
	sec. 25,	All;			
	sec. 26,	Lots 1,2,3,4, N½, N½S½,			
	sec. 27,	SE¼;			
	sec. 28,	SE¼NE¼, N½NW¼, W½SW¼, SE¼SW¼, SE¼;			
	sec. 29,	N½NE¼, NW¼, S½S½;			
	sec. 30,	Lots 1,2,4, NE¼, E½NW¼, SE¼SW¼, S½SE¼;			
	sec. 34,	Lots 1,2,3,4,5,6, W½NE¼, W½;			
	sec. 35,	Lots 1,2,3,6,7, SE¼SE¼;			
	sec. 36,	S½.			
	T. 22 S., R. 63 E.				
	sec. 1-3,	All;			
	sec. 10,	All;			
	sec. 14-15,	All;			
	sec. 22,	All;			
	sec. 23,	W½;			
	sec. 26,	W½;			
	sec. 35,	All.			
	T. 22 S., R. 63½ E.				
	sec. 1,	Lots 1,2,3,4,5,6, S½NE¼, SE¼.	Southern Nevada Water Supply Project	9,777.64	Public Land Laws 1872 Mining Law
	T. 20 S., R. 63 E.				
Various SO's (Nev-051745)					
SO 03-03-1933	sec. 35,	All;			
SO 12-11-1941	sec. 36,	All;			
	T. 21 S., R. 63 E.				
S0 12-11-1941	sec. 1-2,	All;			
	sec. 11-13,	All;			
	sec. 14,	N½NE¼, NE¼NE¼SW¼NE¼, E½SE¼NE¼, N½NW¼SE¼NE¼, SE¼NW¼SE¼NE¼, E½SW¼SE¼NE¼, E½NE¼SE¼, SE¼SE¼;			
	sec. 23,	E½E½;			
	sec. 24,	All.			
	T. 23 S., R. 63 E.				
SO 01-03-1929	sec. 2,	Lots 12,20;			
	sec. 11,	Lots 1,4,5,8; (within)			
	sec. 14,	Lots 1,4,5,8. (within)			
	T. 30 S., R. 63 E.				
SO 06-04-1930	sec. 17-20,	All;			
	T. 31 S., R. 63 E.				
SO 06-04-1930	sec. 1,	Lots 1,2, S½NE¼, SE¼;			
	sec. 3,	Lot 4, SW¼NW¼;			
	sec. 4,	Lots 1,2,3, S½NE¼,			

		SE¼NW¼, S½;
	sec. 9,	Lots 1,2,3,4,5,6,7, 8,9, S½NE¼, SE¼NW¼, N½SE¼, SE¼SE¼;
	sec. 12,	NE¼, E½SE¼;
	sec. 13,	E½E½;
	sec. 16,	Lot 4.
	T. 21 S., R. 63½ E.	
SO 12-11-1941	All Township Included.	
	T. 20 S., R. 64 E.	
SO 03-03-1933	sec. 31-33,	All;
SO 01-31-1903	Affects All Lands Lying Within 4 Miles of the Colorado River.	
	T. 21 S., R. 64 E.	
SO 01-31-1903	sec. 11-12,	Within;
	sec. 13,	All;
	sec. 14-15,	Within;
	sec. 22,	Within;
	sec. 23-26,	All;
	sec. 27-28,	Within;
	sec. 33,	Within;
	sec. 34-36,	All;
SO 08-07-1920	All Township Included.	
	T. 22 S., R. 64 E.	
SO 08-07-1920	sec. 1-2,	All;
	sec. 3,	Lots 5,6,7,11,12, S½N½, S½;
	sec. 4,	Lots 6,7,8,10,11, 12,14,15,16, S½N½, S½;
	sec. 5-23,	All;
	sec. 24,	Lots 1,2,3,4,5,6, W½NE¼, NW¼, N½SW¼, SW¼SW¼, NW¼SE¼;
	sec. 25,	Lots 1,2,3,4,5,6, 7,8,9,10,11,12, SW¼NE¼, NW¼NW¼, W½SE¼;
	sec. 26-27,	All;
	sec. 36,	Lots 1,2,3,4,5,6, W½E½, S½NW¼, SW¼.
	T. 23 S., R. 64 E.	
SO 08-07-1920	sec. 1,	All;
	sec. 12-13,	All;
SO 01-31-1903	sec. 6,	Lots 12,13,16.
SO 01-03-1929		
	T. 29 S., R. 64 E.	
SO 06-04-1930	sec. 31,	Lots 1,2,3,4.
	T. 14 S., R. 65 E.	
SO 06-11-1943	sec. 25,	NW¼NW¼;
	sec. 27,	E½E½;
	sec. 34,	E½E½.
	sec. 35,	Lots, 3,4, SW¼, W½SE¼, SE¼SE¼.
	T. 20 S., R. 65 E.	
SO 04-19-1920	sec. 19,	All;
SO 03-13-1933	sec. 20-36,	All;
O 01-31-1903	Affects All Lands Lying Within 4 Miles of the Colorado River.	
	T. 21 S., R. 65 E.	
SO 04-19-1920	All Township Included.	
SO 01-31-1903	Affects All Lands Lying Within 4 Miles of the Colorado River.	
	T. 22 S., R. 65 E.	
SO 08-07-1920	All Township Included.	

	T. 23 S., R. 65 E.	
SO 01-31-1903	sec. 5,	Within;
SO 08-07-1920	sec. 6-7,	All;
	sec. 8-9,	Within;
	sec. 16,	Within;
	sec. 17-20,	All;
	sec. 21,	Within;
	sec. 27-28,	Within;
	sec. 29,	All;
	sec. 34,	Within.
	T. 23½ S., R. 65 E.	
SO 01-31-1903	sec. 35,	Within.
SO 08-07-1920		
	T. 24 S., R. 65 E.	
SO 01-31-1903	sec. 1,	Within;
SO 05-08-1919	sec. 2,	Within;
	sec. 10,	Within;
	sec. 12-15,	Within;
	sec. 22-23,	Within;
	sec. 26-27,	Within;
	sec. 34-35,	Within;
	T. 25 S., R. 65 E.	
SO 01-31-1903	sec. 2,	Within;
SO 08-07-1920	sec. 11,	Within;
	sec. 14,	Within;
	sec. 23,	Within;
	sec. 26,	Within;
	sec. 35,	Within.
	T. 26 S., R. 65 E.	
SO 10-16-1931	sec. 2-3,	Within;
	sec. 11-14,	Within;
	sec. 23-26,	Within;
	sec. 35-36,	Within;
	T. 27 S., R. 65 E.	
SO 10-16-1931	sec. 1,	Within;
	sec. 13,	Within;
	sec. 23-26,	Within;
	sec. 36,	Within.
	T. 28 S., R. 65 E.	
SO-10-16-1931	sec. 1,	Within;
	sec. 12-13,	Within;
	sec. 23-25,	Within;
	sec. 36,	Within.
	T. 29 S., R. 65 E.	
SO 10-16-1931	sec. 1,	E½; (within)
	sec. 12,	E½; (within)
	sec. 13,	E½. (within)
	T. 33 S., R. 65 E.	
SO 10-16-1931	sec. 14,	Lot 1, N½, N½SW¼, SE¼SW¼, SE¼;
	sec. 23,	Lots 2,3,4, N½NE¼, SE¼NE¼.
	T. 20 S., R. 66 E.	
SO 04-19-1920	sec. 26-35,	All;
	T. 27 S., R. 66 E.	
SO 10-16-1931	sec. 6-7,	Within;
	sec. 18-19,	Within;
	sec. 31,	Within.
	T. 29 S., R. 66 E.	
SO 10-16-1931	sec. 8,	Within;
	sec. 17-21,	Within;
	sec. 28-30,	Within;

	sec. 32-34,	Within;
	T. 30 S., R. 66 E.	
SO 01-31-1903	sec. 3,	Within;
SO 09-08-1903	sec. 5,	Within;
SO 10-16-1931	sec. 8-10,	Within;
	sec. 15-18,	Within;
	sec. 20-22,	Within;
	sec. 27-28,	Within;
	sec. 34,	Within.
	T. 31 S., R. 66 E.	
SO 01-31-1903	sec. 2,	Within;
SO 09-08-1903	sec. 3,	Within;
SO 10-16-1931	sec. 10-11,	Within;
	sec. 14,	Within;
	sec. 23,	Within;
	sec. 26,	Within;
	sec. 35-36,	Within;
	T. 32 S., R. 66 E.	
SO 01-31-1903	sec. 1,	Lots 1,4;
SO 10-16-1931	sec. 2,	S½NE¼, S½, Lots 1,2;
	sec. 10,	NE¼, S½NW¼, S½;
	sec. 11,	All;
	sec. 12,	Lots 6,7,9,12,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33;
SO 01-31-1903	sec. 29,	S½NE¼SE¼NE¼, SE¼NW¼SE¼NE¼,
SO 10-16-1931		E½SW¼SE¼NE¼, SE¼SE¼NE¼,
SO 10-28-1953		E½E½E½SE¼, NE¼NW¼NE¼SE¼,
		W½;
	sec. 30,	All;
	sec. 31,	NE¼, E½W½, Lots 1,2,
		3,4;
	sec. 32,	Lot 19. (W½)
	T. 34 S., R. 66 E.	
SO 01-31-1903	sec. 5,	Within.
SO 10-16-1931		
	T. 20 S., R. 66½ E.	
SO 01-31-1903	sec. 18,	Within;
	sec. 19,	All;
	sec. 30-31,	All;
	T. 16 S., R. 67 E.	
SO 05-08-1919	sec. 1,	Lot 1;
SO 04-21-1923	sec. 11,	SW¼NW¼, SW¼, SW¼SE¼;
	sec. 13,	SW¼SW¼;
	sec. 14,	W½NE¼, SE¼NE¼, W½,
		SE¼;
	sec. 24,	SW¼NE¼, W½, W½SE¼,
		SE¼SE¼.
SO 12-06-1937	sec. 36,	SE¼NE¼, E½SE¼.
	T. 17 S., R. 67 E.	
SO 12-06-1937	sec. 1,	Lots 5,6,9,10,11,
		SW¼NE¼, SW¼, E½SE¼;
	sec. 12,	Lots 1,2,3, W½NE¼,
		N½NW¼.
	T. 18 S., R. 67 E.	
SO 03-03-1933	sec. 36,	Lots 1,2,3,4,5,6,7,
		E½NE¼, NW¼, N½SW¼,
		NW¼SE¼.
	T. 19 S., R. 67 E.	
SO 05-08-1919	sec. 1,	E½. (within)
	T. 20 S., R. 67 E.	
SO 01-31-1903	sec. 12-13,	All;
SO 03-30-1921	sec. 24-30,	All;
SO 05-19-1921	sec. 31,	All.

SO 03-03-1933	sec. 36,	All.
	T. 15 S., R. 68 E.	
SO 04-21-1923	sec. 1,	Lots 1,2; S½NE¼, S½;
	sec. 12,	N½, SW¼, W½SE¼;
	sec. 13,	W½NE¼, NW¼.
SO 03-03-1933	sec. 23,	SW¼;
	sec. 26,	W½;
	sec. 35,	W½;
SO 05-08-1919	sec. 36,	SE¼SE¼. (within)
	T. 17 S., R. 68 E.	
SO 05-08-1919	sec. 1-4,	Within;
	sec. 5-9,	All;
	sec. 10-11,	Within;
	sec. 12,	All;
	sec. 13,	E, N½S½NW¼NW¼;
	sec. 14,	Within;
	sec. 15-26,	All;
	sec. 27,	Within;
	sec. 28,	All;
	sec. 29,	Within;
	sec. 30-33,	All;
	sec. 34,	Within;
	sec. 35,	All;
	sec. 36,	E½, N½NW¼, SE¼NW¼, SW¼.
	T. 18 S., R. 68 E.	
SO 05-08-1919	sec. 1,	All;
SO 03-03-1933	sec. 2,	Lots 1,2,3,4, S½N½, SE¼SW¼, SE¼;
	sec. 3,	Lots 2,3,4, SW¼NE¼, S½NW¼, SW¼, W½SE¼;
	sec. 4-5,	All;
	sec. 9	Within;
	sec. 10,	N½, N½SW¼, SE¼;
	sec. 11,	All;
	sec. 12-14,	Within;
	sec. 15,	E½NE¼, S½SW¼, SE¼;
	sec. 16,	All;
	sec. 17,	Within;
	sec. 19-20,	Within;
	sec. 21,	N½, SW¼, W½SE¼;
	sec. 22,	N½N½, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
	sec. 23,	Within;
	sec. 26,	Within;
	sec. 27,	E½, E½NW¼, SW¼NW¼, SW¼;
	sec. 28,	W½, SE¼;
	sec. 29,	All;
	sec. 30-32,	Within;
	sec. 33,	All;
	sec. 34-35,	Within;
	T. 19 S., R. 68 E.	
SO 05-08-1919	sec. 2,	Within;
SO 04-21-1923	sec. 3,	Within;
SO 03-31-1933	sec. 4,	All;
	sec. 5-11,	Within;
	sec. 14-17,	Within;
	sec. 20-22,	Within;
	sec. 27,	Within;
	sec. 28,	All;
	sec. 29,	Within;
	sec. 31-32,	Within;

	sec. 33,	All;
	sec. 34,	Within.
	T. 20 S., R. 68 E.	
SO 01-31-1903	sec. 3,	Within;
SO 04-21-1923	sec. 4,	Within;
	sec. 5,	All;
	sec. 6-7,	Within;
	sec. 8,	All;
	sec. 9-10,	Within;
	sec. 15-16,	Within;
	sec. 17,	All;
	sec. 18,	Within;
	sec. 19,	All;
	sec. 20,	N½, SW¼, N½SE¼, SW¼SE¼;
	sec. 21,	All;
	sec. 22,	Within;
	sec. 26-27,	Within;
	sec. 28,	All;
	sec. 29	E½NE¼, SW¼NE¼, W½, SE¼;
	sec. 30,	Within;
	sec. 31-34,	All;
	sec. 35-36,	Within;
	T. 21 S., R. 68 E.	
SO 05-08-1919	All Township Included Except:	
	sec. 1,	NE¼NE¼.
SO 01-31-1903	Affects All Lands Lying Within 4 Miles of the Colorado River Except:	
	sec. 1,	NE¼NE¼.
	T. 15 S., R. 69 E.	
SO 04-21-1923	sec. 6,	Lots 3,4,5, SE¼NW¼.
	sec. 8,	E½, SW¼;
SO 03-21-1933	sec. 29,	All;
SO 05-08-1919	sec. 31,	Within;
SO 03-21-1933	sec. 32,	All.
	T. 16 S., R. 69 E.	
SO 04-21-1923	sec. 5,	All;
SO 05-08-1919	sec. 7,	Within;
SO 04-21-1923	sec. 8,	All;
SO 05-08-1919	sec. 18,	SE¼SE¼;
	sec. 19,	E½;
	sec. 30,	E½;
	sec. 31,	Within.
	T. 17 S., R. 69 E.	
SO 05-08-1919	sec. 6-7,	Within;
	sec. 18-19,	Within;
	sec. 29-30,	Within;
	sec. 31,	All;
	sec. 32,	Within.
	T. 18 S., R. 69 E.	
SO 05-08-1919	sec. 5-7,	Within;
	T. 20 S., R. 69 E.	
SO 01-31-1903	sec. 18-20,	Within;
	sec. 28-29,	Within;
	sec. 33-34,	Within;
SO 03-22-1933	sec. 34-36,	All;
	T. 21 S., R. 69 E.	
SO 01-31-1903	sec. 6,	Within;
SO 05-08-1919	sec. 7,	Within;
SO 05-19-1921	sec. 8,	Within;
	sec. 16-17,	Within;
	sec. 20-21,	Within;

	sec. 27-29,	Within;			
	sec. 33-35,	Within;			
	T. 14 S., R. 70 E.				
SO 01-31-1903	sec. 31,	All;			
SO 05-08-1919	sec. 32-34,	All;			
	T. 21 S., R. 70 E.				
SO 01-31-1903	sec. 12,	Within;			
SO 05-08-1919	sec. 13,	Within;			
	sec. 14,	Within;			
	sec. 23,	Within;			
	sec. 26,	Within;			
	sec. 35,	Within.			
	T. 22 S., R. 70 E.				
SO 01-03-1903	sec. 2,	Within;			
SO 05-08-1919	sec. 9-11	Within;			
	sec. 14-18,	Within;			
	T. 19 S., R. 71 E.				
SO 01-31-1903	sec. 27-28,	Within;			
	sec. 31-32,	Within;			
	sec. 32,	Within;			
	sec. 33-34,	All;			
	T. 20 S., R. 71 E.				
SO 01-31-1903	sec. 10,	Within;			
SO 05-08-1919	sec. 15-16,	Within;			
	sec. 21,	Within;			
	sec. 28-32,	Within;			
	T. 21 S., R. 71 E.				
SO 01-31-1903					
SO 05-08-1919	sec. 6,	Within.	Colorado River		Public Land Laws
SO 03-03-1933	sec. 7,	Within.	Project	254,058	1872 Mining Law

NOTE: Secretarial Orders dated 01-31-1903 and 09-08-1903 do not segregate against the Homestead Act of May 20, 1862)

National Park Service Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 20 S., R. 63 E.				
Act of Congress Oct. 08, 1964					
(Nev-065135)	sec. 35-36,	All;			
	T. 21 S., R. 63 E.				
	sec. 1-2,	All;			
	sec. 11-13,	All;			
	sec. 14,	N½NE¼, NE¼NE¼SW¼NE¼, E½SE¼NE¼, N½NW¼SE¼NE¼, SE¼NW¼SE¼NE¼, E½SW¼SE¼NE¼, E½NE¼SE¼, SE¼SE¼;			
	sec. 23,	E½E½;			
	sec. 24,	All.			
	T. 21 S., R. 63½ E.				
	sec. 1,	Within;			
	sec. 12-13,	Within;			
	sec. 24-25,	Within;			
	sec. 36,	Within.			
	T. 20 S., R. 64 E.				
	sec. 25,	SE¼;			
	sec. 31-33,	All;			
	sec. 36,	All.			

T. 21 S., R. 64 E.
All Township Included.
T. 22 S., R. 64 E.

sec. 1-2,	All;
sec. 3,	Lots 5,6,7,11,12, S½N½, S½;
sec. 4,	Lots 6,7,8,10,11, 14,15,16, S½N½, S½;
sec. 5,	All;
sec. 6,	Lots 8,9,10,11,14, 15,18, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 7,	Lots 5,8,9,12, E½, E½W½;
sec. 8-17,	All;
sec. 18,	Lots 5,8,9,12, E½, E½W½;
sec. 19,	Lots 5,8,9,12, E½, E½W½;
sec. 20-23,	All:
sec. 24,	Lots 1,2,3,4,5,6, W½NE¼, NW¼, N½SW¼, SW¼SW¼, NW¼SE¼;
sec. 25,	Lots 1,2,3,4,5,6, 7,8,9,10,11,12, SW¼NE¼, NW¼NW¼, W½SE¼;
sec. 26-27,	All;
sec. 28,	N½, N½S½;
sec. 29,	N½, N½S½;
sec. 30,	Lots 5,6,7,8,9,10, NE¼, E½NW¼, NE¼SW¼, N½SE¼;
sec. 34,	N½;
sec. 35,	N½;
sec. 36,	Lots 1,2,3,4,5,6, W½E½, S½NW¼, SW¼.

T. 23 S., R. 64 E.

sec. 1,	All;
sec. 12-13,	All;
sec. 35-36,	All;

T. 23½ S., R. 64 E.

sec. 36,	Lots 1,2,3,4, N½.

T. 24 S., R. 64 E.

sec. 1,	All;
sec. 12-13,	All;
sec. 24-25,	All;
sec. 36,	All.

T. 20 S., R. 65 E.

sec. 1,	S½;
sec. 12-13,	All;
sec. 19-36,	All;

T. 21 S., R. 65 E.
All Township Included.
T. 22 S., R. 65 E.
All Township Included.
T. 23 S., R. 65 E.
All Township Included.
T. 23½ S., R. 65 E.
All Township Included.
T. 24 S., R. 65 E.
All Township Included.
T. 25 S., R. 65 E.
All Township Included.

T. 26 S., R. 65 E.
All Township Included
T. 27 S., R. 65 E.
All Township Included Except Mineral Patent #338123.
T. 28 S., R. 65 E.
All Township Included Except Mineral Patents in Sec. 24.
T. 29 S., R. 65 E.
All Township Included.
T. 30 S., R. 65 E.

sec. 1-3,	All;
sec. 10-15,	All;
sec. 22-27,	All;
sec. 34-36,	All;

T. 31 S., R. 65 E.

sec. 1-3,	All;
sec. 10-15,	All;
sec. 22-27,	All;
sec. 34-36,	All;

T. 32 S., R. 65 E.

sec. 1,	All.

T. 20 S., R. 66 E.
All Township Included.
T. 21 S., R. 66 E.
All Township Included.
T. 27 S., R. 66 E.
All Township Included.
T. 29 S., R. 66 E.

sec. 8,	Lot 1;
sec. 17,	Lots 1,2,3,4, SW¼SW¼;
sec. 18,	Lot 4;
sec. 19,	Lots 1,2,3,4, S½NE¼, E½W½, SE¼;
sec. 20,	Lots 1,2,3, W½, NW¼SE¼, S½SE¼;
sec. 21,	Lots 1,2;
sec. 28,	Lots 1,2,3,4,5, NW¼NW¼, S½NW¼, SW¼, NW¼SE¼;
sec. 29-32,	All;
sec. 33,	Lots 1,2,3, W½, NW¼SE¼, S½SE¼;
sec. 34,	Lots 1,2.

T. 30 S., R. 66 E.
All Township Included.
T. 32 S., R. 66 E.

sec. 1,	Lots 1,4;
sec. 2,	Lots 1,2,3,4, S½N½, S½;
sec. 3,	S½;
sec. 4,	Lots 1,2,3,4, S½N½, S½;
sec. 5,	Lots 1,2,3,4, S½N½, S½;
sec. 6,	Lots 1,2,3,4,5,6,7, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 10,	N½N½;
sec. 11,	N½N½;
sec. 12,	Lots 6,7,9,12,17,18, 19,20,21,22,23,24,25, 26,27,28,29,30,31,32, 33.

T. 33 S., R. 66 E.
All Township Included.
T. 20 S., R. 66½ E.

sec. 6-7,	All;
sec. 18-19,	All;

sec. 30-31	All;
T. 18 S., R. 67 E.	
sec. 12-15,	All;
sec. 22-27,	All;
sec. 34-36,	All;
T. 19 S., R. 67 E.	
sec. 1-3,	All;
sec. 10-15,	All;
sec. 22-29,	All;
sec. 30,	Lots 3,4, E½SW¼, SE¼;
sec. 31-36,	All;
T. 20 S., R. 67 E.	
All Township Included.	
T. 15 S., R. 68 E.	
sec. 36,	NE¼NE¼SE¼, S½NE¼SE¼, SE¼NW¼SE¼, E½SW¼SE¼, SE¼SE¼.
T. 17 S. R. 68 E.	
sec. 1,	All;
sec. 2,	Within;
sec. 3,	S½N½; (within)
sec. 4,	Within;
sec. 5,	All;
sec. 8-9,	All;
sec. 10-11,	Within;
sec. 12,	All;
sec. 13,	E½, N½S½NW¼NW¼;
sec. 14,	Within;
sec. 15-26,	All;
sec. 27,	Within;
sec. 28,	All;
sec. 29,	Within;
sec. 30,	All;
sec. 32-33,	All;
sec. 34,	Within;
sec. 35,	All;
sec. 36,	E½, N½NW¼, SE¼NW¼, SW¼.
T. 18 S., R. 68 E.	
All Township Included.	
T. 19 S., R. 68 E.	
All Township Included.	
T. 20 S., R. 68 E.	
All Township Included.	
T. 21 S., R. 68 E.	
All Township Included.	
T. 15 S., R. 69 E.	
sec. 31,	Lots 3,4, E½SW¼.
T. 16 S., R. 69 E.	
sec. 7,	Lots 1,2,3,4, E½W½;
sec. 19,	Lots 1,2,3,4, E½W½;
sec. 30,	Lots 1,2,3,4, E½W½;
sec. 31,	Lots 1,2,4, E½W½, E½;
sec. 32,	All.
T. 17 S., R. 69 E.	
sec. 4-10	All;
sec. 15-18	All;
sec. 19,	Lots 1,4, E½, E½W½;
sec. 20-21	All;
sec. 28-33	All;
T. 18 S., R. 69 E.	
sec. 4-8	All;

	sec. 18-19	All;			
	sec. 30-31	All;			
	T. 20 S., R. 69 E.				
	sec. 30-32	All;			
	T. 21 S., R. 69 E.				
	All Township Included.				
	T. 14 S., R. 70 E.				
	sec. 12-13	All;			
	sec. 23-26	All;			
	sec. 35-36	All;			
	T. 21 S., R. 70 E.				
	All Township Included.				
	T. 22 S., R. 70 E.				
	All Township Included.				
	T 20 S., R. 71 E.				
	All Township Included.				
	T. 21 S., R. 71 E.		Lake Mead National		Public Land Laws
	All Township Included.		Recreation Area	586,076	1872 Mining Law
	T. 17 S., R. 50 E.				
Proclamation 2961			Death Valley		Public Land Laws
	sec. 36,	SW¼SE¼.	National Monument	40	1872 Mining Law

Bureau of Indian Affairs Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 18 S., R. 59 E.				
PL 98-203	sec. 25,	All;			
(N-39027)	sec. 27,	All;			
	sec. 34-36,	All;			
	T. 20 S., R. 61 E.				
	sec. 27,	SE¼NW¼NE¼.	Las Vegas Paiute Tribe	3,901.79	All
	T. 14 S., R. 66 E.				Public Land Laws
SO 03-17-1916					1872 Mining Law
(Nev-054556)			Moapa Indian Tribe		1920 Mineral Leasing Act
	sec. 31,	Lots 20,23,25½.26.35.36.	Administration Site	13.12	1947 Materials Act
	T. 16 S., R. 64 E.				
PL 96-491	sec. 1-17,	All;			
(Nev-35395)	sec. 18,	Lots 1,2,3,4, N½NE¼, NW¼SW¼NE¼, NE¼SE¼NE¼, E½NW¼, E½SW¼, SW¼NW¼SE¼, SW¼SE¼;			
	sec. 19-36,	All;			
	T. 17 S., R. 64 E.				
	sec. 7,	Lots 5,6, S½NE¼.			
	T. 15 S., R. 65 E.				
	sec. 1,	Lots 1,6, S½NW¼, SW¼, W½SE¼, SE¼SE¼;			
	sec. 2-36,	All;			
	T. 16 S., R. 65 E.				
	sec. 1-30,	All;			
	sec. 31,	Lots 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26, 27, NE¼, E½NW¼NE¼, SW¼NW¼NE¼, S½NE¼, SE¼SW¼, NE¼SE¼;			
	sec. 32-36,	All;			

	T. 14 S., R. 66 E.				
	sec. 29,	Lots 1,2,3,4,5,6,7, NW¼, NE¼SW¼;			
	sec. 30,	Lots 1,2,3,4,5,6,7,8,9, 10,11,12,13,14,15, NE¼NE¼; SE¼NW¼, E½SW¼, W½SE¼, SE¼SE¼;			
	sec. 31,	Lots 2,4,5, NE¼, E½NW¼, NE¼SW¼, SE¼;	Moapa Indian		Public Land Laws 1872 Mining Law
	sec. 32,	Lots 1,2,3,4,5,6, SW¼.	Reservation	70,355.99	1947 Materials Act
	T. 14 S., R. 65 E.				
SO 07-03-1875	sec. 25,	Lots 2,3,4,5,6,;			
(Nev-054557)	sec. 26,	Lots 4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38;			
	sec. 35,	Lots 8,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,25,26,27, 28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46, 47,48,49,50,51,52,56,57,58,59,60,61,62,63,64,65,66,67,68, 69,70,71,72,73,7475,76,77,78; Lots 79,86,87; (within) Lots 88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104; Lots 105,106,108,109; (within) Lots 110,111,112,113,114,115,116,117,118,119, 120,121,122,123,124,125,126,127,128,129,130; Lot 131; (within) Lot 132,133,134,135,136,137,138,139,140,141,142, 143,144,145,146,147,148,149,150,151,152,153,154, 155,156,157,158,159,160,161,162,163,164,165,166, 167,168,169,170,172,173,174,175,176,177,178.			
EO 07-31-1903	sec. 36,	Lots 53,54,55; Lot 79; (within) Lots 80,81,82,83,84,85; Lots 86,87,105,106; (within) Lot 107; Lots 108,109,131; (within) Lot 178.			
SO 07-31-1875	sec. 1,	Lots 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26; Lot 27; (within) Lots 29,30,31,32,33,34,35,38,39;			
EO 1649	sec. 1,	Lot 27; (within) Lots 28,36,37,40,41.			
	T. 14 S., R. 66 E.				
EO 07-31-1903	sec. 31,	Lots 55,6,7,8,9,10,11,12,13,			
EO 07-31-1875		Lot 14; (within) Lots 15,16,17,18,19; Lots 20,21; (within) Lot 22; Lots 23,24,27; (within) Lots 28,29,30,31,32; 33; (within) Lots 41,42; Lot 43; (within) Lot 44.			
EO 1649	sec. 31,	Lots 34,35,36,37,38,39,40.			
	T. 15 S., R. 66 E.				
SO 07-03-1875	sec. 6,	Lots 8,9,10,11,12,13,14, 15,16,17,18,19,20,21,22, 23,24,25,26.	Moapa Indian Reservation	1,112.12	Public Land Laws 1872 Mining Law 1947 Materials Act
	T. 33 S., R. 66 E.				
EO 09-19-1880	sec. 19,	Within;			
(Nev-054553)	sec. 20,	Within;			

	sec. 21,	Within;			Public Land Laws
	sec. 22,	Within;			1872 Mining Law
	sec. 30,	Within;	Ft. Mohave Indian		1920 Mineral Leasing Act
	sec. 31,	Within.	Reservation		1947 Materials Act

Military Withdrawals

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 21 S., R. 61 E.				Public Land Laws
PLO 1485			LV Army Reserve		1872 Mining Law
(Nev-045218)	sec. 1,	E½SE¼SE¼SW¼.	Training Center	5	1920 Mineral Leasing Act
	T. 18 S., R. 62 E.				
EO 8954	sec. 32,	All;			
(Nev-054510	sec. 33-36,	All;			
	T. 19 S., R. 62 E.				
	sec. 1-5,	All;			
	sec. 8,	All;			
	sec. 9-11,	All;			
	sec. 12,	W½;			
	sec. 16-17,	All;			
	T. 18 S., R. 63 E.				
					Public Land Laws
	sec 31,	Lots 1,2,3,4,	Nellis Air		1872 Mining Law
		E½NW¼, NE¼SW¼.	Force Base	10,759.54	1920 Mineral Leasing Act
	T. 19 S., R. 61 E.				
PLO 1175					Public Land Laws
(Nev-051793)			Nellis Air		1872 Mining Law
	sec. 35,	SE¼SW¼.	Force Base	40	1920 Mineral Leasing Act
	T. 19 S., R. 62 E.				
PLO 1638	sec. 25,	S½;			
(Nev-013137)	sec. 36,	W½.			
	T. 20 S., R. 62 E.				
	sec. 1,	Lots 3,4.			
	T. 19 S., R. 63 E.				
(Nev-014602)					Public Land Laws
	sec. 27,	SW¼;	Lake Mead		1872 Mining Law
	sec. 30,	Lots 3,4, E½SW¼.	Base	997.85	1920 Mineral Leasing Act
	T. 19 S., R. 62 E.				
PLO 841	sec. 36,	E½.			
(Nev-051790)	T. 20 S., R. 62 E.				
	sec. 1,	Lots 1,2, S½NE¼.			
	T. 19 S., R. 63 E.				
	sec. 28,	S½;			
	sec. 29,	S½;			
	sec. 30,	SE¼;			
	sec. 31-33,	All:			
	sec. 34,	NW¼, S½.			
	T. 20 S., R. 63 E.				
	sec. 3,	N½, SW¼;			
	sec. 4-5,	All;			
	sec. 6,	Within;			Public Land Laws
	sec. 8,	NE¼;	Lake Mead		1872 Mining Law
	sec. 9,	N½.	Base	6,192.94	1920 Mineral Leasing Act

	T. 20 S., R. 63 E.				
PLO 877					Public Land Laws
(Nev-051795)	sec. 8,	SE¼;	Lake Mead		1872 Mining Law
	sec. 9,	S½.	Base	480	1920 Mineral Leasing Act

Withdrawal Applications Pending Within The Stateline Resource Area

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 17 S., R. 50 E.				
N-27612	sec. 26,	S½;			
(12-10-1979)	sec. 34,	NE¼;			
	sec. 35,	W½W½, NE¼NW¼, N½NE¼;			
		SE¼NE¼, N½NE¼SE¼, NW¼SE¼;			
	sec. 36,	W½.			
	T. 18 S., R. 50 E.				
	sec. 1,	Lots 3,4;	Warm Springs		
	sec. 2,	Lots 1,2, S½NE¼.	Pupfish Area	1,419.04	None
	T. 18 S., R. 50 E.				
N-29915	sec. 13,	E½SW¼SE¼, E½W½SW¼SE¼;			
(05-15-1980)	sec. 24,	NE¼NE¼;			
	T. 18 S., R. 51 E.				
	sec. 19,	SW¼NE¼, SE¼NW¼.	As Meadows Fish and Plants	150	None
	T. 19 S., R. 56 E.				
Nev-054565	sec. 27,	SW¼SW¼;			
(08-01-1903)	sec. 28,	W½SW¼, SE¼SW¼, S½SE¼;			
	sec. 29,	SE¼SW¼, SE¼;			
	sec. 32,	Lots 1,2,3,4, NE¼;			
		E½NW¼, N½S½;			
	sec. 33,	All;			
	sec. 34,	Lot 1, W½NW¼, NW¼SW¼.			
	T. 20 S., R. 56 E.				
	sec. 4,	N½, SW¼, NW¼SE¼;	Application to segregate		
	sec. 5,	All.	from mining location	1,623.6	1872 Mining Law

PUBLIC LAND SEGREGATIONS

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Nye County -				
	T. 21 S., R. 53 E.,				
N-40976	sec. 3,	Lots 2,3,4, SW¼NE¼,			
(02-09-1970)		S¼NW¼, SW¼, NW¼SE¼;			
	sec. 4,	All;	Pahrump Valley		
	sec. 9,	All;	Regional Airport		
	sec. 10,	W½E½, W½.	Application	2,168.07	All
	Clark County -				
	T. 19 S., R. 60 E.				
N-44642	sec. 16,	W½;			
	sec. 20,	E½NE¼NE¼;	Public Airport		
	sec. 21,	SW¼NW¼.	Lease Application	380	All

	T. 18 S., R. 60 E.				
N-38196	sec. 30,	Lots 3,4, SE¼SW¼;			
(01-07-1984)	sec. 31,	Lots 1,2,3,4, SW¼NW¼NE¼, SW¼NE¼, E½W½, SE¼;			
	sec. 32,	SW¼SW¼;			
	T. 19 S., R. 60 E.				
	sec, 5,	Lots 3,4, S½NW¼;			
	sec. 6,	Lots 1,2,3,4,5,9, S½NE¼, SE¼NW¼, NE¼SW¼, W½NE¼NW¼SW¼, NE¼NW¼SE¼NW¼SW¼, E½SE¼SW¼, SE¼;			
	sec. 7,	N½NE¼, NE¼SW¼NE¼, SE¼NE¼.	Public Airport Lease Application	1,514.65	All
	T. 19 S., R. 61 E.				
N-53110	sec. 13,	N½, NE¼SW¼, SE¼;			
(07-09-1990)	sec. 14,	N½;			
	sec. 15,	All;			
	sec. 16-18,	All;			
	sec. 19,	Lots 5,6,7,8,9,10, 11,12,13,14,15,16, 17,18;			
	sec. 20,	All;			
	sec. 21,	N½;			
	sec. 23,	N½NE¼, SW¼NE¼, E½NW¼;			
	sec. 24,	N½, NE¼SW¼, N½SE¼, SW¼SE¼.			
	T. 19 S., R. 62 E.				
	sec. 18,	All;			
	sec. 19,	All;	City of NLV Direct Sale Application	7,534.27	Public Land Laws 1872 Mining Law
	sec. 20,	All.			
	T. 22 S., R. 61 E.				
N-48869	sec. 8,	Lot 39;			
(06-04-1990 NTE 06-04-1992)	sec. 17,	NW¼NE¼, S½NE¼NE¼SW¼NE¼, W½NE¼SW¼NE¼, SE¼NE¼SW¼NE¼, W½SW¼NE¼, SE¼SW¼NE¼, W½E½NE¼NW¼SE¼, E½W½NE¼NW¼SE¼, E½NE¼NW¼NW¼SE¼, E½NE¼SW¼NW¼SE¼, N½SE¼NW¼SE¼.	Private Exchange Application	96.25	Public Land Laws 1872 Mining Law
	T. 13 S., R. 63 E.				
N-36878	sec. 25,	N½; (south of Hwy)			
(08-13-1982)	sec. 36,	All.			
	T. 13½ S., R. 63 E.				
	sec. 36,	N½.			
	T. 13 S., R. 64 E.				
	sec. 30,	SW¼; (south of Hwy 168)			
	sec. 31,	All;			
	sec. 32,	S½;			
	sec. 33,	S½;			
	sec. 34,	N½ (within), S½. (south of Hwy 168)			
	T. 13½ S., R. 64 E.				
	sec. 31-33,	All;			

	sec. 35,	SW¼.			
	T. 14 S., R. 64 E.				
	sec. 1,	SW¼;			
	sec. 2,	W½, SE¼;			
	sec. 3,	All;			
	sec. 4,	N½, SW¼;			
	sec. 5,	N½;			
	sec. 10,	N½, SW¼;			
	sec. 11,	All;			
	sec. 12,	All;			
	sec. 13,	N½;			
	sec. 14,	N½.			
	T. 14 S., R. 65 E.				
	sec. 7,	All;	Arrow Canyon		
	sec. 8,	N½NW¼, W½SW¼, SE¼SW¼;	State Park		Public Land Laws
	sec. 18,	N½.	R&PP Application	11,180	1872 Mining Law
	T. 15 S., R. 66 E.				
N-36868	sec. 13,	All;			
(Application)	sec. 14,	All;			
	sec. 15,	E½;			
	sec. 22-24,	All;			
	sec. 25,	W½NE¼, W½;			
	sec. 26,	All;			
	sec. 27,	N½, W½NW¼NE¼SW¼, N½NW¼SW¼, SW¼NW¼SW¼, W½SE¼NW¼SW¼, W½W½SW¼SW¼, E½SE¼SE¼SW¼, E½SE¼, SE¼NW¼SE¼, E½SW¼NW¼SE¼, NE¼SW¼SE¼, E½NW¼SW¼SE¼, S½SW¼SE¼;			
	sec. 28,	All;			
	sec. 33,	W½E½E½E½, W½E½E½,W½E½, W½;			
	sec. 34,	E½, E½E½NW¼, E½NW¼NE¼NW¼, SW¼NE¼NW¼, E½SE¼NW¼NW¼, E½E½SW¼NW¼, SE¼NW¼, E½E½W½SW¼;			
	sec. 35,	All;			
	sec. 36,	NW¼.			
	T. 16 S., R. 66 E.				
	sec. 2,	Lots 2,3,4, SW¼NE¼, S½NW¼, SW¼, NW¼SE¼;			
	sec. 3,	Lots 1,2,3,4(within), S½N½, S½;			
	sec. 4,	Lot 1(within),2,3,4, S½N½,S½;			
	sec. 9,	All;			
	sec. 10,	All;			
	sec. 11,	W½W½;			
	sec. 14,	W½W½;			
	sec. 15-17,	All;			
	sec. 20-22,	All;			
	sec. 23,	W½NW¼;			
	sec. 27,	All;			
	sec. 28,	N½, E½SE¼;			
	sec. 29,	W½E½, W½;			
	sec. 30,	All;			
	sec. 31,	All;			
	sec. 32,	NW¼, S½SE¼;			
	sec. 33,	E½NE¼, E½W½NE¼, S½SW¼, NE¼SE¼, E½SE¼SE¼;			
	sec. 34,	W½W½.			

	T. 15 S., R. 67 E.				
	sec. 7,	SW¼SE¼;			
	sec. 17,	W½W½(within), SE¼SW¼;			
	sec. 18-20,	All;			
	sec. 21,	W½, SW¼NE¼, W½SE¼.			
	T. 17 S., R. 67 E.				
	sec. 2,	All;			
	sec. 3,	Lots 5,6, S½NE¼, S½;			
	sec. 4,	SE¼, E½E½SW¼;			
	sec. 9,	NE¼, E½E½NW¼, E½SE¼, E½W½SE¼;			
	sec. 10,	All;			
	sec. 11,	N½, SW¼, N½SE¼.			
	T. 18 S., R. 67 E.				
	sec. 5,	SW¼;			
	sec. 9,	N½;	Valley of Fire State Park R&PP Application	24,864.25	None
	sec. 10,	All;			
	sec. 11,	N½.			

Other Land Law Determinations Affecting Public Lands

Serial No.	Location		Purpose	Acres	Segregates from Appropriation under the following laws
	Clark County -				
	T. 33 S., R. 66 E.				
PL 31 (05-22-1953)	sec. 4,	within;			
	sec. 5,	within;			
	sec. 9-10,	within;			
	sec. 15,	within;			
	sec. 22,	within.			
	T. 34 S., R. 66 E.				
	sec. 5,	within.	Established rights vested in States for submerged lands	Not available	None
	T. 18 S., R. 55 E.				
PL 167 (Nev-050646)	sec. 10,	E½;			
	sec. 11-14,	All;			
	sec. 15,	E½;			
	sec. 23-25,	All;			
	sec. 36,	All.			
	T. 19 S., R. 55 E.				
	sec. 1,	Lots 1,2,3,4, S½NE¼, S½NW¼, SW¼, NE¼SE¼;			
	sec. 2,	Lots 1,2,3,4, S½N½, S½;			
	sec. 12,	S½NE¼, W½, SE¼;			
	sec. 13-14,	All;			
	sec. 24,	All.			
	T. 18 S., R. 56 E.				
	sec. 18-22,	All;			
	sec. 25,	N½, SW¼;			
	sec. 26-34,	All;			
	sec. 35,	E½NE¼, W½NW¼;			
	sec. 36	NE¼NE¼, S½SE¼SE¼NW¼NE¼, NW¼, SE¼.			
	T. 19 S., R.56 E.				
	sec. 1,	Lots 5,6,7,8,9,10,11, 12,13, SE¼NW¼, E½SW¼;			

sec. 2,	Tract 40 (within),
	Lots 5,6,7;
sec. 3,	Tract 43 (within),
	Lots 5,6,7,8,9, S½N½,
	SW¼, N½SE¼, SW¼SE¼;
sec. 4,	Lots 5,6,7,8, S½N½, S½;
sec. 5,	Lots 5,6,7,8,9,10,13,
	14,15,16, S½N½, E½SE¼;
sec. 6,	Lots 8,9,10,11,12,13,
	14,15,16,17,19,20,21,
	22, S½NE¼, SE¼NW¼,
	NE¼SW¼, N½SE¼;
sec. 7,	Lots 6,7,8,9,10,11,12,
	13, S½NE¼, SE¼NW¼,
	E½SW¼, SE¼;
sec. 8,	Lots 1,2,3,4, NE¼NE¼,
	S½NE¼, S½NW¼, S¼;
sec. 9,	Tract 43 (within),
	Lots 1,2,3,4, W½E½, W½;
sec. 10,	Tract 43 (within),
	Tract 57 (all in sec.),
	Lots 1,2,3,4;
sec. 11,	Tract 43 (all in sec.),
	Tract 44;
sec. 12,	Tract 48 (all in sec.),
	Tract 58;
sec. 13,	Tract 37 (within),
	Tract 48 (all in sec.),
	Tract 58 (all in sec.),
	Lots 1,2,3,4,5,6,7,
	SW¼, SW¼SE¼;
sec. 14,	Tract 51 (all in sec.),
	Lots 1,2,3,4,5,6,7,8,
	SW¼SW¼;
sec. 15,	Tract 43 (all in sec.),
	Tract 51 (all in sec.),
	Tracts 52,53,54,
	Tract 57 (all in sec.),
	Lots 1,2,3,4,5,6;
sec. 16,	Tract 43 (all in sec.),
	Lots 1,2,3,4,5,6,7,
	NW¼NE¼, N½NW¼, SW¼NW¼,
	W½SW¼, SE¼SW¼;
sec. 17,	All;
sec. 18,	Lots 5,6,7,8, E½, E½W½;
sec. 19,	Lots 5,6,7,8, E½, E½W½;
sec. 20-21,	All;
sec. 22,	N½N½, SW¼NW¼, SW¼;
sec. 23,	Lots 1,2,3, SE¼NE¼,
	WNW, SENW, NSW, SESW,
	SE;
sec. 24,	Lots 1,2,3,4, W½E½, W½;
sec. 25,	Lots 1,2,3,4, W½E½, NW¼,
	N½SW¼, SE¼SW¼;
sec. 26,	N½, SW¼, NW¼SE¼;
sec. 27-29,	All;
sec. 30,	Lots 5,6,7,8, E½, E½W½;
sec. 31,	Lots 5,6,7,8,9,10,11,
	NE¼, E½NW¼, NE¼SW¼,
	N½SE¼;
sec. 32,	Lots 1,2,3,4, N½, N½S½;
sec. 33,	Lots 1,2,3,4, N½, N½S½;

sec. 34,	Lots 1,2,3,4, N½, N½S½;			
sec. 35,	Lots 1,2,3,4, W½NE¼, SE¼NE¼, NW¼, N½SW¼, N½SE¼;			
sec. 36,	Lots 1,2,3,4,5, E½NE¼ (within), SW¼NE¼, S½NW¼, N½SW¼, NW¼SE¼.			
T. 20 S., R. 56 E.				
sec. 1-5,	All;			
sec. 11-13,	All;			
T. 18 S., R. 57 E.				
sec. 30,	Lots 1,2,3,4, E½W½, E½;			
sec. 31,	Lots 1,2,3,4, E½W½, E½.			
T. 19 S., R. 57 E.				
sec. 5-6,	All;			
sec. 7,	E½;			
sec. 8,	All;			
sec. 17,	All;			
sec. 18,	Lots 2,3,5,6,7,8,9,10, 11,12,13,14,15, E½NW¼;			
sec. 19-20,	All;			
sec. 29-30,	All;			
sec. 31,	Lots 5,6,7,8,9,10,11, 12,13;			
sec. 32-33,	All;			
T. 20 S., R. 57 E.				
sec. 4-6,	All;			
sec. 7,	All;	Determined surface		
sec. 8,	All;	management responsi-		
sec. 9,	All;	bility on unpatented		
sec. 18,	All.	mining claims	38,436.85	None

Areas of Critical Environmental Concern

ACEC Name	LOCATION		Acres
	Legal descriptions reflect Bureau of Reclamation land within ACECs. If any of the BOR land is relinquished it will become part of the applicable ACEC. Acreage totals represent only the land managed by the Bureau of Land Management.		
	Nye County -		
Amargosa Mesquite	T. 16 S., R. 51 E.		
	sec. 35,	All;	
	sec. 36,	SW¼.	
	T. 17 S., R. 51 E.		
	sec. 1,	Lots 3 - 4, S½NW¼, S½;	
	sec. 2,	All;	
	sec. 11,	E½;	
	sec. 12,	All;	
	sec. 13,	All;	
	sec. 14,	E½;	
	sec. 23,	E½;	
	sec. 24,	All;	
	sec. 25,	All;	
	sec. 26,	E½;	
	sec. 35,	All;	
	sec. 36,	All.	6,890.97

	Clark County -		
Arden Historic Sites	T. 22S., R. 60 E.		
	sec. 32,	W½NE¼NE¼NE¼, W½NE¼NE¼, SE¼NE¼NE¼, W½NE¼, W½NE¼SE¼NE¼, W½SE¼NE¼, W½NE¼NE¼NW¼, S½NE¼NW¼, E½NE¼NW¼NW¼, E½SW¼NW¼NW¼, W½SE¼NW¼NW¼, E½NE¼SW¼NW¼, W½SW¼NW¼, SE¼SW¼NW¼, W½NE¼SE¼NW¼, W½SE¼NW¼, SE¼SE¼NW¼, S½;	
	sec. 33,	NE¼NE¼SW¼, W½NW¼NE¼SW¼, S½NE¼SW¼, NW¼S¼W, W½NE¼SW¼SW¼, W½SW¼SW¼, SE¼SW¼SW¼, E½NE¼SE¼SW¼, W½SE¼SW¼.	
	T. 23 S., R 60 E.		
	sec 4,	Lots 1 - 4, S½N½;	
	sec. 5,	Lots 1 - 4, S½N½.	1,480.10
Arrow Canyon	T. 14 S., R. 64 E.		
	sec. 10,	NW¼, SE¼, E½SW¼;	
	sec. 11,	SW¼;	
	sec. 13,	All;	
	sec. 14,	N½, SE¼;	
	sec. 15,	NE¼, E½NW¼.	
	T. 14 S., R. 65 E.		
	sec. 7,	Lots 3 - 4, SE¼, E½SW¼.	2,083.68
	Nye County -		
Ash Meadows	T. 17 S., R. 50 E.		
	sec. 7,	All;	
	sec. 8,	All;	
	sec. 9,	Lots 1 - 12;	
	sec. 10,	Lots 1 - 8, 12;	
	sec. 11,	Lots 1 - 16;	
	sec. 12,	Lots 1 - 15;	
	sec. 13,	Lots 1 - 16;	
	sec. 14,	Lots 1 - 16;	
	sec. 15,	Lots 1 - 4;	
	sec. 17,	N½, SW¼, W½SE¼;	
	sec. 18,	All;	
	sec. 19,	All;	
	sec. 20,	NW¼, N½SW¼;	
	sec. 21,	Lots 5 - 6, E½SE¼;	
	sec. 22,	Lots 1 - 5, W½SE¼, S½N½SE¼SE¼, S½SE¼SE¼;	
	sec. 23,	Lots 1 - 6, N½SE¼, E½SW¼SE¼, SE¼SE¼;	
	sec. 24,	All;	
	sec. 25,	All;	
	sec. 26,	NE¼NE¼, E½NW¼NE¼, S½NE¼, SW¼NW¼, S½SE¼NW¼;	
	sec. 27,	All;	
	sec. 28,	E½NE¼;	
	sec. 29,	NE¼NW¼;	

sec. 30,	Lots 3 - 10,
	E½SW¼, W¼SE¼;
sec. 31,	All;
sec. 32,	NE¼NE¼, S½NE¼,
	W½W½, N½SE¼;
sec. 34,	NE¼;
sec. 35,	N½NE¼, SE¼NE¼,
	NE¼NW¼, W½W½,
	N½NE¼SE¼, NW¼SE¼;
sec. 36,	NE¼, W½, N½SE¼, SE¼SE¼.
T. 18 S., R. 50 E.	
sec. 1,	Lots 1 - 4;
sec. 2,	Lots 1 - 2,
	S½NE¼, SE¼;
sec. 3,	SW¼SW¼;
sec. 5,	All;
sec. 6,	Lots 1 - 2,
	Lots 8 - 12,
	S½NE¼, SE¼NW¼,
	E½SW¼, E½W½SE¼;
sec. 7,	Lots 4 - 10,
	S½NE¼, E½NW¼,
	NE¼SW¼, N½SE¼;
sec. 8,	All;
sec. 9,	W½NW¼, SW¼;
sec. 10,	E½;
sec. 11,	N½NW¼, W½SW¼;
sec. 12,	W½NE¼, NW¼;
sec. 13,	SW¼NE¼, SE¼SW¼, NW¼SE¼,
	E½SW¼SE¼, E½W½SW¼SE¼;
sec. 14,	NE¼, NW¼SE¼, SE¼SE¼;
sec. 15,	E½, E½SW¼;
sec. 16,	Lot 2,
	W½E½, NW¼,
	E½SW¼, NW¼SW¼;
sec. 17 - 23,	All;
sec. 24,	N½N½, SE¼NE¼,
	W½SW¼;
sec. 25,	S½NE¼, W½NW¼,
	SE¼NW¼, S½;
sec. 26 - 29,	All;
sec. 33 - 36,	All.
T. 17 S., R. 51 E.	
sec. 7,	All;
sec. 8,	W½;
sec. 17,	S½NE¼NE¼, W½NE¼,
	SE¼NE¼, W½, SE¼;
sec. 18 - 20,	All;
sec. 29 - 30,	All;
sec. 31,	Lots 1 - 4,
	NE¼NE¼, W½E½, E½W½;
sec. 32,	Lots 1 - 4,
	NE¼, NW¼.
T. 18 S., R. 51 E.	
sec. 5,	Lot 1;
sec. 6,	Lots 2 - 6,
	SW¼NE¼, SE¼NW¼,
	NE¼SW¼, SE½;
sec. 7,	NE¼, E½NW¼;
sec. 8,	NW¼;
sec. 17,	E½E½;
sec. 18,	Lots 2 - 4,

		SW¼NE¼, SE¼NE¼,	
		E½SW¼;	
	sec. 19,	Lots 1 - 2,	
		E½, E½NW¼, E½SW¼;	
	sec. 20,	All;	
	sec. 29,	All;	
	sec. 30,	Lots 2 - 4,	
		E½NE¼, N½NE¼NW¼NE¼,	
		S½NE¼NW¼NE¼ except for the land patented under Mining Claim Occupancy Act Patent No. 27-70-0091	
		N½SE¼NW¼NE¼ except for the land patented under Mining Claim Occupancy Act Patent No. 27-70-0091	
		S½SE¼NW¼NE¼, W½NW¼NE¼,	
		SW¼NE¼, E½NW¼,	
		E½SW¼, SE¼;	
	sec. 31,	Lots 1 - 4,	
		E½, E½W½;	
	sec. 32,	All.	37,151.52
Big Dune	T. 15 S., R. 48 E.		
	sec. 8,	S½;	
	sec. 9,	S½;	
	sec. 16,	All;	
	sec. 17,	All.	1,920
	Clark County -		
Bird Spring	T. 24 S., R. 59 E.		
	sec. 4,	lots 1 - 2,	
		S½NE¼.	160.77
Coyote Springs Valley	T. 13 S., R. 63 E.		
	sec. 5,	All except the land east of U. S. 95 centerline;	
		Nevada Highway 168 centerline;	
	sec. 21,	S½ except the land north of NV Hwy 168 centerline;	
	sec. 22,	S½ except the land north of NV Hwy 168 centerline;	
	sec. 23,	S½ except the land north of NV Hwy 168 centerline;	
	sec. 26,	All except the land north of NV Hwy 168 centerline;	
	sec. 27 - 35,	All.	
	T. 13½ S., R. 63 E.		
	sec. 31 - 35,	All.	
	T. 14 S., R. 63.		
	sec. 2 - 11,	All;	
	sec. 14 - 23,	All;	
	sec. 26 - 35,	All.	
	T. 15 S., R. 63 E.		
	sec. 2 - 11,	All;	
	sec. 14 - 22,	All;	
	sec. 27 - 34,	All.	
	T. 16 S., R. 63 E.		
	sec. 3 - 10,	All;	
	sec. 15 - 22,	All;	
	sec. 28 -33,	All;	
	T. 17 S., R. 63 E.		
	sec. 7 - 9,	All;	
	sec. 16 - 21,	All;	
	sec. 28 - 31,	All;	
	sec. 32,	All except the land east of powerline R/W N-53399 centerline.	
	T. 18 S., R. 63 E.		
	sec. 5,	W½ except the land east of powerline R/W N-53399 centerline;	
	sec. 6 - 7,	All;	
	sec. 8,	W½ except the land east of powerline R/W N-53399 centerline;	
	sec. 17,	W½W½ except the land east of powerline R/W N-53399 centerline;	

	sec. 18,	All except the land east of powerline R/W N-53399 centerline;	
	sec. 19,	All except the land east of powerline R/W N-53399 centerline;	
	sec. 29,	W½W½ except the land east of powerline R/W N-53399 centerline;	
	sec. 30,	All except the land east of powerline R/W N-53399 centerline;	
	sec. 31,	E½ except the land east of powerline R/W N-53399 centerline, SE¼SW¼ except the land east of powerline R/W N-53399 centerline.	
	T. 19 S., R. 63 E.		
	sec. 6,	Lots 3 - 4 except the land east of powerline R/W N-53399 centerline.	
			75,500
Crescent Townsite	T. 28 S., R.61 E.		
	sec. 29,	SW¼, W½SE¼ except the land patented under MS 2571 and 2572;	
	sec. 30,	E½SW¼ except the land patented under MS 2571 and 3246;	
	sec. 32,	E½NW¼, W½NE¼.	
			437
Desert Tortoise Center	T. 23 S. R. 59 E.		
	sec. 12,	E½;	
	sec. 13,	All;	
	sec. 24,	All.	
	T. 23 S., R. 60 E.		
	sec. 2 - 4,	All;	
	sec. 5,	Lots 1 - 2, S½NE¼, S½;	
	sec. 6,	SE¼;	
	sec. 7 - 11,	All;	
	sec. 15,	N½;	
	sec. 16 - 21,	All.	11,000.30
	(total acreage excludes 474.97 acre overlap w/Arden ACEC)		
Devil's Throat	T. 17 S., R. 70 E.		
	sec. 26,	All.	640.00
Gold Butte	T. 14 S., R. 69 E.		
	sec. 24 - 26,	All;	
	sec. 34 - 36,	All.	
	T. 15 S., R. 69 E.		
	sec. 1 - 3,	All;	
	sec. 9 - 10,	All;	
	sec. 11,	N½, N½S½, SW¼SW¼, SE¼SE¼;	
	sec. 12 - 13,	All;	
	sec. 14,	NE¼NE¼, NW¼NW¼, S½N½, S½;	
	sec. 15 - 16,	All;	
	sec. 21 - 28,	All;	
	sec. 33 - 36,	All.	
	T. 16 S., R. 69 E.		
	sec. 1 - 5,	All;	
	sec. 8,	All;	
	sec. 9 - 28,	All;	
	sec. 33 - 36,	All.	
	T. 17 S., R. 69 E.		
	sec. 1 - 3,	All;	
	sec. 11 - 14,	All;	
	sec. 22 - 23,	All;	
	sec. 24,	All;	
	sec. 25,	All except that portion patented under MS 4709;	
	sec. 26,	All except that portion patented under MS 4709;	
	sec. 27,	All;	
	sec. 34,	All;	

sec. 35,	All except that portion patented under MS 4709.
sec. 36,	All except that portion patented under MS 4709 & 4710.
T. 18 S., R. 69 E.	
sec. 1,	All except that portion patented under MS 4710;
sec. 2,	All except that portion patented under MS 4709;
sec. 3,	All;
sec. 9 - 10,	All;
sec. 11 - 12,	All except that portion patented under MS 4710;
sec. 13,	All;
sec. 14,	All except that portion patented under MS 4710;
sec. 15 - 17,	All;
sec. 20 - 29,	All;
sec. 32 - 36,	All.
T. 19 S., R. 69 E.	
sec. 1 - 2,	All except that portion patented under MS 4707;
sec. 3 - 10,	All;
sec. 11,	All except that portion patented under MS 4707;
sec. 12 - 36,	All.
T. 20 S. R. 69 E.	
sec. 1 - 29,	All;
sec. 33 - 36,	All.
T. 14 S., R. 70 E.	
sec. 1,	All;
sec. 10 - 36,	All.
T. 15 S., R. 70 E.	
sec. 1,	All;
sec. 2 - 14,	All;
sec. 15 - 20,	All;
sec. 21 - 22,	All except that portion patented under MS 1988;
sec. 23 - 36,	All.
T. 16 S., R. 70 E.	
sec. 1 - 22,	All;
sec. 23,	N½, SW¼.
sec. 24 - 36,	All.
T. 17 S., R. 70 E.	
sec. 1 - 6,	All;
sec. 7,	N½,SW¼;
sec. 8,	N½,SE¼;
sec. 17,	NE¼, S½;
sec. 18,	NW¼, S½;
sec. 19 - 25,	All;
sec. 27 - 36,	All.
T. 18 S., R. 70 E.	
sec. 1 - 6,	All;
sec. 7 - 9,	All;
sec. 10 - 15,	All;
sec. 16 - 21,	All;
sec. 22 - 27,	All;
sec. 28 - 33,	All.
sec. 34 - 36,	All.
T. 19 S., R. 70 E.	
sec. 1 - 16,	All;
sec. 18 - 36,	All.
T. 20 S., R. 70 E.	
sec. 1 - 11,	All;
sec. 14 - 22,	All;
sec. 27 - 34,	All.
T. 13 S., R. 71 E.	
sec. 32,	All;
sec. 33,	All except the land east of range improvement (fence) 0101.
T. 14 S., R. 71 E.	
sec. 4,	All except the land east of range improvement (fence) 0101;

	sec. 5 - 8,	All;	
	sec. 9,	All except the land east of range improvement (fence) 0101;	
	sec. 10,	W½W½ except the land east of range improvement (fence) 0101;	
	sec. 15,	W½ except the land east of range improvement (fence) 0101;	
	sec. 16 - 20,	All;	
	sec. 21,	All except the land east of range improvement (fence) 0101;	
	sec. 22,	W½W½ except the land south of range improvement (fence) 0101;	
	sec. 28,	All except the land east of range improvement (fence) 0101;	
	sec. 29 - 31,	All.	
	T. 15 S., R. 71 E.		
	sec. 3 - 10,	All;	
	sec. 15 - 22,	All;	
	sec. 27 - 34,	All;	
	T. 16 S., R. 71 E.		
	sec. 3 - 10,	All;	
	sec. 15 - 21,	All;	
	sec. 22,	Lots 1, 2, W½NW¼, NW¼SW¼;	
	sec. 27,	Lots 2-4, SW¼NW¼, W½SW¼;	
	sec. 28 - 34,	All.	
	T. 17 S., R. 71 E.		
	sec. 3 - 10,	All;	
	sec. 15 -22,	All;	
	sec. 27 - 34,	All.	
	T. 18 S., R. 71 E.		
	sec. 3 - 10,	All;	
	sec. 15 - 22,	All;	
	sec. 27 - 34,	All.	
	T. 19 S., R. 71 E.		
	sec. 3 - 8,	All;	
	sec. 9 - 10,	All;	
	sec. 17 - 20,	All;	
	sec. 15 - 16,	All;	
	sec. 21 - 22,	All;	
	sec. 27 - 28,	All;	
	sec. 29 - 32,	All;	
	sec. 33 - 34,	All.	342,837.38
Gold Butte Townsite	T. 19 S., R. 70 E.		
	sec. 17,	S½NW¼, N½SW¼.	160
Hidden Valley	T. 18 S., R. 65 E.		
	sec. 26,	W½;	
	sec. 27,	E½;	
	sec. 34,	All;	
	sec. 35,	All.	
	T. 19 S., R. 65 E.		
	sec. 2,	W½;	
	sec. 3,	All;	
	sec. 10,	N½;	
	sec. 11,	NW¼.	3,360
Keyhole Canyon	T. 26 S., R. 63 E.		
	sec. 3,	Lots 6 - 8, SW¼NE¼, S½NW¼.	360.53
Mormon Mesa	T. 13 S., R. 63 E.		
	sec. 25,	All except the land north of NV Hwy 168 centerline;	
	sec. 36,	All.	
	T. 13½ S., R. 63 E.		
	sec. 36,	All.	

T. 14 S., R. 63 E.	
sec. 1,	All.
T. 13 S., R. 64 E.	
sec. 1 - 5,	All;
sec. 6,	E½;
sec. 7,	NE¼, E½SE¼;
sec. 8 - 17,	All;
sec. 20 - 29,	All;
sec. 30,	All except the land north of NV Hwy 168 centerline;
sec. 31 - 36,	All.
T. 13½ S., R. 64 E.	
sec. 31 - 35,	All;
sec. 36,	All except the land south of NV Hwy 168 centerline.
T. 14 S., R. 64 E.	
sec. 2 - 6,	All;
sec. 8 - 11,	All;
sec. 15-16,	All.
T 13 S., R. 65 E.	
sec. 1,	Lots 2 - 4, SW¼NE¼, S½NW¼, SW¼, W½SE¼;
sec. 2 - 24,	All;
sec. 26 - 27,	N½;
sec. 28,	N½, SW¼;
sec. 29 - 30,	All;
sec. 31,	All except the land south of NV Hwy 168 centerline;
sec. 32,	All;
sec. 33,	W½.
T. 13 S., R. 66 E.	
sec. 1 - 5,	All;
sec. 6,	Lots 1 - 4, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 7 - 18,	All;
sec. 19,	Lots 1 - 4, SE¼NW¼, E½SW¼, SW¼SE¼;
sec. 20 - 24,	All.
T. 13 S., R. 67 E.	
sec. 1 - 36,	All.
T. 14 S., R. 67 E.	
sec. 1 - 5,	All;
sec. 6,	E½;
sec. 7,	NE¼;
sec. 8 - 11,	All;
sec. 12,	All except the land south of I-15 centerline;
sec. 13,	NW¼ except the land south of I-15 centerline;
sec. 14,	All except the land south of I-15 centerline;
sec. 15,	All except the land south of I-15 centerline;
sec. 16,	All;
sec. 17,	N½, SE¼;
sec. 20,	E½;
sec. 21 - 22,	All except the land south of I-15 centerline;
sec. 23,	NW¼NW¼ except the land south of I-15 centerline.
T. 13 S., R. 68 E.	
sec. 1 - 32,	All;
sec. 33 - 35,	All except the land south of I-15 centerline;
sec. 36,	N½ except the land south of I-15 centerline.
T. 14 S., R. 68 E.	
sec. 4,	N½ except the land south of I-15 centerline;
sec. 5 - 6,	All except the land south of I-15 centerline;
sec. 7,	Lots 1 & 2 except the land south of I-15 centerline.

	T. 13 S., R. 69 E.		
	sec. 1 - 24,	All;	
	sec. 25 - 26,	All except the land south of I-15 centerline;	
	sec. 27,	N½ except the land south of I-15 centerline;	
	sec. 28 - 30,	All except the land south of I-15 centerline;	
	sec. 31,	N½NW¼ except the land south of I-15 centerline.	
	T. 13 S., R. 70 E.		
	sec. 4,	Lots 8 - 9, SW¼NW¼, W½SW¼;	
	sec. 5 - 8,	All;	
	sec. 9,	W½W½;	
	sec. 16,	W½W½;	
	sec. 17 - 20,	All;	
	sec. 21,	W½W½;	
	sec. 28,	W½W½;	
	sec. 29,	All;	
	sec. 30,	All except the land south of I-15 centerline;	
	sec. 31,	N½N½ except the land south of I-15 centerline;	
	sec. 32,	N½ except the land south of I-15 centerline;	
	sec. 33,	NW¼ except the land south of I-15 centerline.	151,360
Piute-Eldorado Valley	T. 28 S., R. 60 E.		
	sec. 2 - 3,	All;	
	sec. 10 - 11,	All;	
	sec. 13,	W½;	
	sec. 14 - 17,	All;	
	sec. 21 - 23,	All;	
	sec. 24,	All except the land within patented Mineral Entries;	
	sec. 25 - 26,	All except the land south of NV Hwy 164 centerline.	
	T. 26 S., R. 61 E.		
	sec. 1 - 2,	All;	
	sec. 11 - 14,	All;	
	sec. 24 - 25,	All;	
	sec. 36,	All.	
	T. 27 S., R. 61 E.		
	sec. 1,	All;	
	sec. 12 - 13,	All;	
	sec. 23 - 26,	All;	
	sec. 35 - 36,	All.	
	T. 28 S., R. 61 E.		
	sec. 1 - 2,	All;	
	sec. 10 - 12,	All;	
	sec. 13 - 14,	N½ except the land south of NV Hwy 164 centerline;	
	sec. 15,	All except the land south of NV Hwy 164 centerline;	
	sec. 16,	All;	
	sec. 19,	All except the land within patented Mineral Entries;	
	sec. 20,	All except the land south of NV Hwy 164 centerline or within patented Mineral Survey 4916-A;	
	sec. 21,	All except the land south of NV Hwy 164 centerline;	
	sec. 22,	N½ except the land south of NV Hwy 164 centerline;	
	sec. 29 - 30,	All except the land south of NV Hwy 164 centerline.	
	T. 29 S., R. 61 E.		
	sec. 36,	All.	
	T. 26 S., R. 62 E.		
	sec. 3 - 10,	All;	
	sec. 15 - 20,	All;	
	sec. 22,	E½, N½NW¼;	
	sec. 23 - 26,	All;	
	sec. 27,	NE¼;	
	sec. 29 - 32,	All;	
	sec. 35 - 36,	All.	

T. 27 S., R. 62 E.	
sec. 1,	All;
sec. 5 - 8,	All;
sec. 12,	All;
sec. 17 - 20,	All;
sec. 29 - 36,	All.
T. 28 S., R. 62 E.	
sec. 1 - 17,	All;
sec. 20 - 21,	All;
sec. 22,	N½, N½SW¼, SE¼;
sec. 23 - 26,	All;
sec. 27,	NE¼, S½NW¼, S½;
sec. 28 - 29,	All;
sec. 31,	SE¼ except the land patented under MS 2518;
sec. 32 - 36,	All.
T. 29 S., R. 62 E.	
sec. 1 - 5,	All;
sec. 6,	E½;
sec. 7 - 32,	All;
sec. 33,	NE½NE¼, NW¼NW¼;
sec. 34 - 36,	All.
T. 27 S., R. 62½ E.	
sec. 1,	All;
sec. 12 - 13,	All;
sec. 24 - 25,	All;
sec. 36,	All.
T. 26 S., R. 63 E.	
sec. 19,	All;
sec. 20,	All except the land east of U. S. 95 centerline and north of powerline right-of-way N-869 centerline;
sec. 21 - 24,	S½ except the land north of powerline right-of-way N-869 centerline;
sec. 25,	All except the land north of powerline right-of-way N-869 centerline;
sec. 26 - 36,	All.
T. 27 S., R. 63 E.	
sec. 1 - 36,	All.
T. 28 S., R. 63 E.	
sec. 1 - 8,	All;
sec. 9,	All except the E½SW¼SW¼SE¼;
sec. 10 - 11,	All;
sec. 12,	All except the land patented under MS 3964;
sec. 13,	All except the land patented under MS 3964 or other patented Mineral Entries;
sec. 14 - 15,	All except the land within patented Mineral Entries;
sec. 16 - 20,	All;
sec. 29,	All except the land south of NV Hwy 164 centerline;
sec. 30,	W½, W½E½, E½E½ except the land south of NV Hwy 164 centerline;
sec. 31,	All;
sec. 32,	W½SW¼, SE¼SW¼.
T. 29 S., R. 63 E.	
sec. 5 - 10,	All;
sec. 15 - 22,	All;
sec. 23,	All except the land east of U. S. 95 centerline;
sec. 24,	W½W½ except the land east of U. S. 95 centerline;
sec. 25,	W½ except the land east of U. S. 95 centerline;
sec. 26 - 35,	All;
sec. 36,	All except the land east of U. S. 95 centerline.
T. 30 S., R. 63 E.	
sec. 1,	All except the land east of U. S. 95 centerline;
sec. 2 - 11,	All;
sec. 12 - 13,	All except the land east of U. S. 95 centerline;

sec. 14 - 24,	All;
sec. 25,	All except the E½SE¼SE¼;
sec. 26 - 29,	All;
sec. 32 - 35,	All;
sec. 36,	All except the N½N½NE¼NE¼NE¼.
T. 31 S., R. 63 E.	
sec. 1 - 5,	All;
sec. 8 - 16,	All;
sec. 22 - 26,	All;
sec. 36,	All.
T. 26 S., R. 64 E.	
sec. 19,	S½SW¼ except the land north of powerline R/W N-869 centerline;
sec. 29 - 30,	All except the land north of powerline R/W N-869 centerline;
sec. 31 - 33,	All.
T. 27 S., R. 64 E.	
sec. 4 - 9,	All;
sec. 16 - 23,	All;
sec. 25,	All except the land patented under MS 4071;
sec. 26 - 27,	All;
sec. 28 - 29,	All except the land patented under MS 3541;
sec. 30 - 31,	All;
sec. 32 - 33,	All except the land patented under MS 3541;
sec. 34 - 36,	All.
T. 28 S., R. 64 E.	
sec. 1 - 6,	All;
sec. 7,	All except the land patented under MS 3788 or other patented Mineral Entries;
sec. 8,	All except the land patented under MS 3788;
sec. 9 - 16,	All;
sec. 17,	All except the land patented under MS 3755 & 3788;
sec. 18,	All except the land patented under MS 3755 or other patented Mineral Entries;
sec. 21 - 26,	All;
sec. 35 - 36,	All.
T. 29 S., R. 64 E.	
sec. 1 - 3,	All;
sec. 9 - 16,	All;
sec. 21 - 28,	All;
sec. 31 - 36,	All.
T. 30 S., R. 64 E.	
sec. 1 - 29,	All;
sec. 31,	Lots 13 - 68, E½NE¼, S½;
sec. 32 - 36,	All.
T. 31 S., R. 64 E.	
sec. 1 - 31,	All;
sec. 32,	N½, SW¼;
sec. 33 - 36,	All.
T. 32 S., R. 64 E.	
sec. 1 - 3,	All;
sec. 4,	Lots 1 - 2, 5 - 24, 34 - 47, 59 - 82, 84 - 128, S½SE¼NW¼, SW¼, S½NE¼SE¼, SE¼NW¼SE¼, E½SW¼SE¼, SE¼SE¼;
sec. 5,	Lots 6 - 9, 12 - 13, 15 - 22, 25 - 29, 32 - 37, 40 - 45, 47 - 75, SW¼NE¼, SE¼NW¼, NW¼SE¼;
sec. 6,	All;
sec. 8,	All;
sec. 9,	Lots 1 - 2, 7 - 8, 10 - 21, 27 - 30, 38 - 41, 48 - 49, 56, 63, 75 - 77, 79 - 84, SW¼NE¼, NW¼SE¼.

	T. 30 S., R. 65 E.		
	sec. 4 - 6,	All;	
	sec. 7,	All except the land patented under MS 3942;	
	sec. 8,	All except the land patented under MS 3936 & 3942;	
	sec. 9,	All except the land patented under MS 3936;	
	sec. 16,	All;	
	sec. 17 - 18,	All except the land patented under MS 3942;	
	sec. 19 - 21,	All;	
	sec. 30 - 31,	All.	
	T. 31 S., R. 65 E.		
	sec. 6,	All;	
	sec. 28 - 33,	All.	
	T. 32 S., R. 65 E.		
	sec. 2 - 8,	All;	
	sec. 9 - 11,	All except the land south of NV Hwy 163 centerline;	
	sec. 12,	All except the land south or east of NV Hwy 163 centerline;	
	sec. 17 - 20,	All;	
	sec. 29 - 32,	All.	
	T. 33 S., R. 65 E.		
	sec. 5,	All.	329,440
Rainbow Gardens	T. 20 S., R. 62 E.		
	sec. 12,	All;	
	Sec. 13,	All;	
	sec. 24,	All;	
	sec. 25,	All;	
	sec. 35,	Lots 1 - 4;	
	sec. 36,	All.	
	T. 21 S., R. 62 E.		
	sec. 1,	Lots 5 - 20;	
	sec. 2,	Lots 5 - 6, Lots 9 - 12, Lots 17 - 18.	
	sec. 11,	Lots 1 - 12;	
	sec. 12,	All;	
	sec. 13,	All;	
	sec. 14,	N½, N½SW¼, SE¼;	
	sec. 23,	NE¼NE¼, E½SE¼;	
	sec. 24,	All;	
	sec. 25,	E½NE¼, NW¼NE¼, NE¼NW¼.	
	T. 20 S., R. 63 E.		
	sec. 1,	N½, NW¼NE¼SW¼; N½NW¼SW¼, SW¼NW¼SW¼, SW¼SW¼, W½SE¼SW¼;	
	sec. 2,	All;	
	sec. 3,	SE¼;	
	sec. 7,	All;	
	sec. 8,	W½;	
	sec. 11,	All except the land patented under ME patent No. 1125850;	
	sec. 12,	W½SW¼, NW¼NW¼;	
	sec. 13,	W½E½NW¼, W½NW¼, SW¼, S½NE¼SE¼, W½NW¼SE¼, S½SE¼;	
	sec. 14 - 34,	All.	
	T. 21 S., R. 63 E.		
	sec. 3,	All;	
	sec. 4,	All except the land patented under ME Nev-062235;	
	sec. 5,	All;	
	sec. 6,	All;	
	sec. 7,	All;	
	sec. 8,	All except the land patented under MS 4807;	
	sec. 9,	All except the land patented under MS 4807;	
	sec. 10,	All;	

	sec. 16,	All except the land patented under MS 4807;	
	sec. 17,	All except the land patented under MS 4807;	
	sec. 18,	All;	
	sec. 19,	All;	
	sec. 20,	All except the land patented under MS 4807 and 4808;	
	sec. 21,	N½,SW¼,N½SE¼,SW¼SE¼;	
	sec. 30,	Lots 1 - 2, NE¼, E½NW¼.	
	T. 20 S., R. 64 E.		
	sec. 4,	All;	
	sec. 5,	All;	
	sec. 8,	N½, SE½;	
	sec. 9,	All;	
	sec. 16,	All;	
	sec. 19,	Lots 7 - 8, SE¼SW¼;	
	sec. 20,	S½NE¼, NE¼SW¼, S½SW¼, SE¼;	
	sec. 21	All;	
	sec. 28 - 30,	All.	37,620.15
Red Rock Spring	T. 17 S., R. 70 E.		
	sec. 7,	SE¼;	
	sec. 8,	SW¼;	
	sec. 17,	NW¼;	
	sec. 18,	NE¼;	640
River Mountains	T. 21 S., R. 63 E.		
	sec. 25,	All except the land west of NV Hwy 147 centerline;	
	sec. 26,	All except the land west of NV Hwy 147 centerline or within Mineral Entries;	
	sec. 35,	Lots 1, 4 - 10, S½SW¼, SW¼SE¼;	
	sec. 36,	All.	
	T. 22 S., R. 63 E.		
	sec. 1,	All;	
	sec. 2,	All;	
	sec. 3,	S½;	
	sec. 10,	NE¼, E½SE¼, NE¼NW¼;	
	sec. 11 - 13,	All;	
	sec. 14,	N½, SE¼;	
	sec. 23,	E½;	
	sec. 25,	All;	
	sec. 26,	E½;	
	sec. 36,	All.	
	T. 22 S., R. 63½ E.		
	sec. 1,	All;	
	sec. 12 - 13,	All;	
	sec. 24 - 25,	All;	
	sec. 36,	All;	
	T. 23S., R. 63½ E.		
	sec. 1,	Lots 1 - 7, S½NE¼.	5,616.78
Sloan Rock Art	T. 23 S., R. 61 E.		
	sec. 35,	S½S½.	
	T. 24 S., R. 61 E.		
	sec. 2,	Lots 1 - 4,	319.88
Stump Spring	T. 22 S., R. 55 E.		
	sec. 32,	S½;	
	T. 23 S., R. 55 E.		

	sec. 5,	Lots 1 - 4, S½N½.	641.32
Virgin River	T. 14 S., R. 69 E.		
	sec. 11,	SE¼;	
	sec. 12 - 13,	All federal land north of Gold Butte Back Country Byway Rd;	
	sec. 14,	N½NE¼, NW¼, N½SW½, SE¼SW¼;	
	sec. 15,	SE¼;	
	sec. 22,	NE¼, S½;	
	sec. 23,	All federal land north of Gold Butte Back Country Byway Rd;	
	sec. 26 - 28,	All land north of Gold Butte Back Country Byway Rd;	
	sec. 29,	S½;	
	sec. 32,	N½, SW¼, SE¼SE¼;	
	sec. 33,	All land west of the Gold Butte Back Country Byway Rd.	
	T. 13 S., R. 70 E.		
	sec. 27,	All federal land south of the southernmost lane of I-15;	
	sec. 33,	All land south of the southernmost lane of I-15;	
	sec. 34,	All federal land south of the southernmost lane of I-15 and north of NV Hwy 170;	
	T. 14 S., R. 70 E.		
	sec. 3,	All land north of NV Hwy 170;	
	sec. 4,	All land north of NV Hwy 170;	
	sec. 5,	All land north of NV Hwy 170;	
	sec. 6,	NE¼, S½;	
	sec. 7,	All federal land north of NV Hwy 170 or Gold Butte Back County Byway Rd;	
	sec. 8,	All land north of NV Hwy 170.	6,410.52
Whitney Pocket	T. 16 S., R. 70 E.		
	sec. 23,	SE¼.	160

APPENDIX E

LIVESTOCK GRAZING, EPHEMERAL RANGE
ARIZONA, CALIFORNIA AND NEVADA

In accordance with 43 CFR 4114.2-4 regarding special rules for grazing districts and pursuant to the receipt of recommendations of the State Directors for Arizona, California and Nevada, and a factual showing of its necessity, a special rule for range designated as ephemeral is hereby approved.

Ephemeral (annual) ranges lie within the general southwest desert region extending primarily into southern Arizona, southern California and Southern Nevada, and which include portions of the Mojave, Sonoran and Chihuahuan deserts. The region is characterized by desert type vegetation some of which may be classed as ephemeral only. Ephemeral range does not consistently produce forage, but periodically provides annual vegetation suitable for livestock grazing. In years of abundant moisture and other favorable climatic conditions, a large amount of forage may be produced. Favorable years are unpredictable and the season is usually short-lived. ephemeral areas fall generally below the 3200 foot contour and below the 8-inch precipitation isoline. A minor percentage of the total plant composition is made up of desirable perennial forage plants, and potential to improve range condition and produce a dependable supply of forage by applying intensive management practices is lacking. Because of the unique characteristics of ephemeral range the following special rule shall apply as follows:

Applicable allotments or use areas shall be formally designated by the District Manager as ephemeral range.

An annual application by qualified licensees or permittees is not required unless grazing use is desired. On a year to year basis whenever forage exists or climatic conditions indicate the probability of an ephemeral forage crop, livestock grazing may be authorized upon application, pursuant to any management requirements for the allotment.

Use of base property (water base) during nonforage years is not feasible or economical, and no use of base property is required except during those periods when ephemeral forage is available and livestock grazing occurs.

Therefore:

> An annual application, per 43 CFR 4114.2-1(e)(9), is not required unless grazing use is desired.
>
> Grazing capacity, per 43 CFR 4225.2-1(e)(3), may be based on a reasonable potential for forage.
>
> Substantial use of grazing privileges, per 43 CFR 4115.2-1(e)(7) is not required.

A year-round operation, per 43 CFR 4115.2-1(e)(1) is not required.

Substantial use of base property, per 43 CFR 4115.2-1(e)(7), is not required.

This special rule shall immediately apply to the Phoenix, Safford and St. George Districts in Arizona, the Bakersfield District in California and the Las Vegas District in Nevada, upon recommendation for adoption in that District by the respective District Advisory Board and concurrence by the State Director.

APPENDIX F

The Biological Opinion will be sent under a seperate letter upon completion and approval by the U.S. Fish and Wildlife Service.

APPENDIX G

PRIMARY STANDARDS

EPA has established primary standards (or "maximum contaminant level", in technical language) for ten chemicals, six pesticides, bacteria, radioactivity, and turbidity (cloudiness).

Most of these substances occur naturally in our environment and in the food we eat. The national drinking water standards set by EPA and adopted by the State of Nevada reflect the levels we can safely consume in our water, taking into account the amounts we are exposed to from these other sources.

Only two substances for which standards have been set pose an immediate threat to health whenever they are exceeded:

BACTERIA - Coliform bacteria is a common bacteria found in the soil and in human and animal wastes. It may also be found in drinking water if the water is not properly protected or treated. These bacteria may cause disease themselves or indicate that other harmful organisms may be present in the water. Waterborne diseases such as typhoid, cholera, infectious hepatitis, and dysentery have been traced to improperly protected or improperly disinfected drinking water.

NITRATE - Nitrate in drinking water above the national standard poses an immediate threat to children under three months of age. In some infants, excessive levels of nitrate have been known to react with the hemoglobin in the blood to produce an anemic condition commonly known as "blue baby". Drinking water that contains an excessive amount of nitrate must not be given to infants under three months of age or used to prepare formula. The maximum amount of nitrate allowed in drinking water is 10 milligrams nitrate as N per liter of water or 45 milligrams of nitrate as NO_3 per milliliter of water.

Following is a brief outline of the other substances covered by the national drinking water standards. Water exceeding the maximum contaminant levels for these elements, for short periods of time, will pose no immediate threat to health, however, these substances must be controlled as drinking water that exceeds these standards over long periods of time may prove harmful:

ARSENIC - This element occurs naturally in the environment, especially in the western United States, and it is also used in insecticides. It is found in foods, tobacco, shellfish, drinking water, and in the air in some locations.

The maximum amount of arsenic allowed in drinking water is 0.05 milligrams per liter of water.

Water that continuously exceeds the standard by a substantial amount may cause fatigue and loss of energy if consumed over a lifetime. Extremely high levels can cause poisoning.

BARIUM - Although not as widespread as arsenic, this element also occurs naturally in the environment in some areas. It can also enter water supplies through industrial waste discharges.

Small doses of barium are not harmful. However, it is quite dangerous when consumed in large quantities and will bring on increased blood pressure, nerve damage, and even death.

The maximum amount of barium allowed in drinking water is 1 milligram per liter of water.

CADMIUM - Only minute amounts of this element are found in natural waters in the United States. Waste discharges from the electroplating, photography, insecticide, metallurgy industries can increase cadmium levels, however. The most common source of cadmium in our drinking water is from galvanized pipes and fixtures. But the main source of cadmium exposure are the foods we eat and cigarette smoking.

As far as is known, cadmium is biologically a nonessential, non-beneficial element of high toxic potential. Evidence for the serious toxic potential of cadmium is provided by:

(a) poisoning from cadmium contaminated food and beverages
(b) epidemiologic evidence that cadmium may be associated with renal arterial hypertension under certain conditions and
(c) long term oral toxicity studies in animals.

The maximum amount of cadmium allowed in drinking water is 0.010 milligrams per liter of water.

CHROMIUM - This metal is found in cigarettes, some of our foods, in the air, and in some water supplies. Some studies suggest that in minute amounts, chromium may be essential to human beings, but this has not been proven. At present, the levels of chromium that can be tolerated by man for a lifetime without adverse effects on health are still undetermined. From toxicity studies that have been done, it would appear that a concentration of 0.05 milligrams of chromium per liter of water incorporates a reasonable factor of safety to avoid any hazard to human health.

The maximum amount of chromium allowed in drinking water is 0.05 milligrams per liter of water.

FLUORIDE - This is a natural mineral and all drinking water contains some. High levels of fluoride in drinking water can cause brown spots on the teeth, or mottling, in children up to 12 years of age. Adults can tolerate ten time more than children. In the proper amounts, however, fluoride in drinking water prevents cavities during formative years. this is why many communities add fluoride in controlled amounts to their water supply.

The maximum amount of fluoride allowed in drinking water ranges from 1.4 milligrams per liter of water to 2.4 milligrams per liter of water depending on the average daily air temperature. (The hotter the climate, the lower the amount allowed, for people tend to drink more water in hot climates.)

The maximum level of fluoride allowed in drinking water in this area is 1.6 milligrams per liter of water.

LEAD - This metal is found in the air and in our food. It comes from lead and galvanized pipes, auto exhausts, and other sources.

The maximum amount of lead permitted in drinking water is 0.05 milligrams per liter of water. Excessive amounts well above this standard may result in nervous system disorders or brain and kidney damage.

MERCURY - Mercury is found naturally throughout the environment. Large increases in mercury levels in water can be caused by industrial and agricultural use. The health risk from mercury is greater from mercury in fish than simply from waterborne mercury.

Mercury poisoning may be acute, in large doses, or chronic, from lower doses taken over an extended period of time.

The maximum amount of mercury allowed in drinking water is 0.002 milligrams per liter of water. That level is 13 percent of the total allowable daily intake of mercury.

SELENIUM - This mineral occurs naturally in soil and plants, especially in western States. It is found in meat and other foods. Although it is believed to be essential in the diet, there are indications that excessive amounts of selenium may be toxic. Studies are underway to determine the amount required for good nutrition and the amount that may be harmful.

The maximum amount of selenium allowed in drinking water is 0.01 milligrams per liter of water. If selenium came only from drinking water, it would take an amount many times greater than the standard to produce any ill effects.

SILVER - Silver is sometimes used in disinfecting water. The chief effect of silver in the body is cosmetic. It consists of a permanent blue-grey discoloration of the skin, eye, and mucous membranes which is unsightly and disturbing to the observer as well as the victim.

The maximum amount of silver allowed in drinking water is 0.05 milligrams per liter of water.

Maximum Contaminant Levels

PRIMARY STANDARDS

Maximum contaminated levels for inorganic chemicals.

(a) The maximum contaminant level for nitrate is applicable to both community water systems and non-community water systems. The levels for the other inorganic chemicals apply only to community water systems. Compliance with maximum contaminant levels for inorganic chemicals is calculated pursuant to § 141.23.

(b) The following are the maximum contaminant levels for inorganic chemicals other than fluoride:

Contaminant	*Level, milligrams per liter*
Arsenic	0.05
Barium	1.
Cadmium	0.010
Chromium	0.05
Lead	0.05
Mercury	0.002
Nitrate (as N)	10.
Selenium	0.01
Silver	0.05

(c) When the annual average of the maximum daily air temperatures for the location in which the community water system is situated is the following, the maximum contaminant levels for fluoride are:

Temperature Degree Fahrenheit	Degrees Celsius	Level, milligrams per liter
53.7 and below	12.0 and below	2.4
53.8 to 58.3	12.1 to 14.6	2.2
58.4 to 63.8	14.7 to 17.6	2.0
63.9 to 70.6	17.7 to 21.4	1.8
(70.7 to 79.2	21.5 to 26.2	1.6)
79.3 to 90.5	26.3 to 32.5	1.4

Maximum contaminant levels for organic chemicals.

The following are the maximum contaminant levels for organic chemicals. They apply only to community water systems. Compliance with maximum contaminant levels for organic chemicals is calculated pursuant to § 141.24.

		Level, milligrams per liter
(a)	Chlorinated hydrocarbons:	
	Endrin (1,2,3,4,10, 10-hexachloro-6,7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo, endo-5, 8 - dimethano naphthalene).	0.0002
	Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer).	0.004
	Methoxychlor (1,1,1-Trichloroethane).2,2-bis [p-methoxypheny].	0.1
	Toxaphene ($C_{10}H_{10}Cl_8$-Technical chlorinated camphene, 67-69 percent chlorine).	0.005
(b)	Chlorophenoxys:	
	2,4 - D, (2, 4-Dichlorophenoxyacetic acid).	0.1
	2,4,5-TP Silvex (2,4,5-Trichlorophen-oxypropionic acid).	0.01

Maximum contaminant levels for turbidity.

The maximum contaminant levels for turbidity are applicable to both community water systems and non-community water systems using surface water sources in whole or in part. The maximum contaminant levels for turbidity in drinking water, measured at a representative entry point(s) to the distribution system, are:

(a) One turbidity unit (TU), as determined by a monthly average pursuant to § 141.22, except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the State that the higher turbidity does not do any of the following:

(1) Interfere with disinfection;

(2) Prevent maintenance of an effective disinfectant agent throughout the distribution system; or

(3) Interfere with microbiological determinations.

(b) Five turbidity units based on an average for two consecutive days pursuant to § 141.22.

Maximum microbiological contaminant levels.

The maximum contaminant levels for coliform bacteria, applicable to community water systems and non-community water systems, are as follows:

(a) When the membrane filter technique pursuant to § 141.21(a) is used, the number of coliform bacteria shall not exceed any of the following:

(1) One per 100 milliliters as the arithmetic mean of all samples examined per month pursuant to § 141.21 (b) or (c);

(2) Four per 100 milliliters in more than one sample when less than 20 are examined per month; or

(3) Four per 100 milliliters in more than five percent of the samples when 20 or more are examined per month.

(b) (I) When the fermentation tube method and 10 milliliter standard portions pursuant to § 141.21(a) are used, coliform bacteria shall not be present in any of the following:

(i) more than 10 percent of the portions in any month pursuant to § 141.21 (b) or (c);

(ii) three or more portions in more than one sample when less than 20 samples are examined per month; or

(iii) three or more portions in more than five percent of the samples when 20 or more samples are examined per month.

(2) When the fermentation tube method and 100 milliliter standard portions pursuant to § 141.21(a) are used, coliform bacteria shall not be present in any of the following:

(i) more than 60 percent of the portions in any month pursuant to § 141.21 (b) or (c);

(ii) five portions in more than one sample when less than five samples are examined per month; or

(iii) five portions in more than 20 percent of the samples when five or more samples are examined per month.

(c) For community or non-community systems that are required to sample at a rate of less than 4 per month, compliance with paragraphs (a), (b) (1), or (b) (2) of this section shall be based upon sampling during a 3 month period, except that, at the discretion of the State, compliance may be based upon sampling during a one-month period.

Maximum contaminant levels for radium-226, radium-228, and grow alpha particle radioactivity in community water systems. The following are the maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity:

(a) Combined radium-226 and radium-228--5 pCi/1.

(b) Gross alpha particle activity (including radium-226 but excluding radon and uranium) -- 15 pCi/1.

Maximum contaminant levels for beta particle and photon radioactivity from man-made radionuclides in community water systems.

(a) The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year.

(b) Except for the radionuclides listed in Table A, the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents shall be calculated on the basis of a 2 liter per day drinking water intake using the 168 hour data listed in "*Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure,*" NBS Handbook 69 as amended August 1963, U.S. Department of Commerce. If two or more radinuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 millirem/year.

SECONDARY STANDARDS

Secondary Standards are those which deal with the esthetic quality of drinking water. The contaminants for which secondary maximum contaminant levels are set may not have a significant direct impact on the health of consumers, but their presence in excessive quantities may discourage the utilization of a drinking water supply by the public.

Secondary Standards adopted by the State of Nevada contain maximum contaminant levels for chloride, color, copper, foaming agents, iron, magnesium, manganese, odor, pH, sulfate, TDS, zinc. Brief statements on the effects of these on water are listed below:

CHLORIDE in reasonable concentrations is not harmful to humans, but in concentration above 250 milligrams per liter, chloride causes a salty taste in water which is objectionable to many people. Chloride should not exceed 250 milligrams per liter of water unless no other suitable source of water is or can be made available, in which case the maximum chloride level allowed is 400 milligrams per liter of water.

COLOR may be indicative of dissolved organic material, or by inorganic material such as manganese and iron. Color becomes objectionable and unesthetic to most people over 15 color units. Color should not exceed 15 color units.

COPPER is an essential and beneficial element in human metabolism, but copper imparts a considerable taste to drinking water. Small amounts of copper are generally regarded as non-toxic. Copper should not exceed 1 milligram per liter of water.

FOAMING is a characteristic of water caused principally by the presence of detergents and similar substances. Water which foams is definitely unesthetic and considered unfit for consumption. Foaming agents should not exceed 0.5 milligrams per liter of water.

IRON is a highly objectionable constituent of water supplies for either domestic or industrial use. Iron may impart brownish discolorations to laundered goods. The taste that it imparts to water may be described as bitter or astringent, and iron may adversely affect the taste of other beverages that are made from water. The amount of iron causing objectionable taste or laundry staining constitutes only a small fraction of the amount normally consumed in the daily diet and this does not have toxicologic significance. Iron should not exceed 0.3 milligrams per liter of water unless no other suitable source of water is or can be made available, in which case the maximum iron level allowed is 0.6 milligrams per liter of water.

MAGNESIUM is an essential element in human, animal and plant nutrition. An excess of magnesium in the diet is seldom harmful as it is promptly excreted. High concentrations of magnesium sulfate in drinking water have a laxative effect on users, but a tolerance is soon acquired. Magnesium should not exceed 125 milligrams per liter of water unless no other suitable source of water is or can be made available, in which case the maximum magnesium level allowed is 150 milligrams per liter of water.

MANGANESE, like iron, produces discoloration in laundered goods and imparts the taste of drinking water and beverages, including tea and coffee. At concentrations in excess of 0.05 milligrams per liter of water, manganese can occasionally cause a buildup of coatings in distribution piping which slough off and cause brown spots on laundered items and unesthetic precipitates. Manganese should not exceed 0.05 milligrams per liter of water unless no other suitable source of water is or can be made available, in which case the maximum manganese level allowed is 0.1 milligrams per liter of water.

ODOR is an important esthetic quality of water for domestic consumers and process industries such as food, beverages and pharmaceutical manufacturers which require water essentially free of taste and odor. The threshold odor number should not exceed 3.

pH - the range of pH in public water systems may have a variety of esthetic and health effects. Corrosion effects are commonly associated with pH levels below 6.5. As pH levels are increased above 8.5, mineral incrustations and bitter taste can occur. However, the impact of pH in any one water system will vary depending on the overall chemistry and composition of the water so that a more or less restrictive range may be appropriate under specific circumstances. The range of pH should be 6.5 - 8.5.

SULFATE may cause detectable tastes at concentrations of 300-400 milligrams per liter of water; at concentrations of 600 milligrams per liter it may have a laxative effect. High concentrations of sulfate also contribute to the formation of scale in boilers and heat exchangers. The laxative effect noted above seldom effects regular users of the water but transients are particularly susceptible. Sulfate should not exceed 250 milligrams per liter of water unless no other suitable source of water is or can be made available, in which case the maximum sulfate level allowed is 500 milligrams per liter of water.

TOTAL DISSOLVED SOLIDS (TDS), or the total amount of solids dissolved in the water, may have an influence on the acceptability of water in general, and in addition a high TDS may be an indication of the presence of an excessive concentration of some specific substance that would be esthetically objectionable to the consumer. Excessive hardness, taste, mineral deposition

or corrosion are common properties of highly mineralized water.

TDS should not exceed 500 milligrams per liter of water unless no other suitable source of water is or can be made available, in which case the maximum TDS level allowed is 1000 milligrams per liter of water.

ZINC, like copper, is an essential and beneficial element in human metabolism. Zinc can also impart an undesirable taste to water at high concentrations. Zinc salts impart a milky appearance to water. Zinc should not exceed 5.0 milligrams per liter of water.

Reference: "Environmental Protection Agency National Secondary Drinking Water Regulations. Proposed Regulations". Federal Register, Vol. 42, No. 62, March 31, 1977, pp. 17143 - 17145.

State of Nevada Water Supply Regulations, Part I. Adopted by the State Board of Health October 19, 1977.

SECONDARY STANDARDS

The following chemical substances should not be present in a public water supply in excess of the listed levels where, in the judgment of the health authority, other more suitable supplies are or can be made available. Such alternate supplies must be economically feasible, available under law in sufficient quantities and of a significant higher quality.

Substance	Level, Milligrams Per Liter
Chloride	250
Color	15 Color Units
Copper	1
Foaming Agents	0.5
Iron	0.3
Magnesium	125
Manganese	0.05
Odor	3 Threshold Odor Number
pH	6.5 - 8.5
Sulfate	250
TDS (Total Residue dried at 103 - 105OC)	500
Zinc	5

Whenever a standard established by Article 4.1 is exceeded, the supplier of water should give notice to the public. Such notice should insure that the public using the system is adequately informed.

The following chemical substances shall not be present in a public water supply in excess of the listed levels:

Substance	Level, Milligrams Per Liter
Chloride	400
Iron	0.6
Magnesium	150
Manganese	0.1
Sulfate	500
TDS (Total Residue dried at 103 - 105OC)	1000

APPENDIX H

445A.121 Standards applicable to all waters. The following standards are applicable to all waters of the state:

1. Waters must be free from substances attributable to domestic or industrial waste or other controllable sources that will settle to form sludge or bottom deposits in amounts sufficient to be unsightly, putrescent or odorous or in amounts sufficient to interfere with any beneficial use of the water.

2. Waters must be free from floating debris, oil, grease, scum and other floating materials attributable to domestic or industrial waste or other controllable sources in amounts sufficient to be unsightly or in amounts sufficient to interfere with any beneficial use of the water.

3. Waters must be free from materials attributable to domestic or industrial waste or other controllable sources in amounts sufficient to produce taste or odor in the water or detectable off-flavor in the flesh of fish or in amounts sufficient to change the existing color, turbidity or other conditions in the receiving stream to such a degree as to create a public nuisance or in amounts sufficient to interfere with any beneficial use of the water.

4. Waters must be free from high temperature, biocides, organisms pathogenic to human beings, toxic, corrosive or other deleterious substances attributable to domestic or industrial waste or other controllable sources at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water. Compliance with the provisions of this subsection may be determined in accordance with methods of testing prescribed by the department. If used as an indicator, survival of test organisms must not be significantly less in test water than in control water.

5. If toxic materials are known or suspected by the department to be present in a water, testing for toxicity may be required to determine compliance with the provisions of this section and effluent limitations. The department may specify the method of testing to be used. The failure to determine the presence of toxic materials by testing does not preclude a determination by the department, on the basis of other criteria or methods, that excessive levels of toxic materials are present.

6. Radioactive materials attributable to municipal, industrial or other controllable sources must be the minimum concentrations which are physically and economically feasible to achieve. In no case must materials exceed the limits established in the 1962 Public Health Service Drinking Water Standards (or later amendments) or 1/30th of the MPC values given for continuous occupational exposure in the "National Bureau of Standards Handbook No. 69." The concentrations in water must not result in accumulation of radioactivity in plants or animals that result in a hazard to humans or harm to aquatic life.

7. Wastes from municipal, industrial or other controllable sources containing arsenic, barium, boron, cadmium, chromium, cyanide, fluoride, lead, selenium, silver, copper and zinc that are reasonably amenable to treatment or control must not be

discharged untreated or uncontrolled into the waters of Nevada. In addition, the limits for concentrations of the chemical constituents must provide water quality consistent with the mandatory requirements of the 1962 Public Health Service Drinking Water Standards.

8. The specified standards are not considered violated when the natural conditions of the receiving water are outside the established limits, including periods of extreme high or low flow. Where effluents are discharged to such waters, the discharges are not considered a contributor to substandard conditions provided maximum treatment in compliance with permit requirements is maintained.

[Environmental Comm'n, Water Pollution Control Reg. § 4.1.2 subsecs. a-g, eff. 5-2-78]--(NAC A 9-26-90)--(Substituted in revision for NAC 445.119)

445A.122 Standards applicable to beneficial uses.

1. The following standards are intended to protect both existing and designated beneficial uses and must not be used to prohibit the use of the water as authorized under Title 48 of NRS:

(a) Watering of livestock. The water must be suitable for the watering of livestock without treatment.

(b) Irrigation. The water must be suitable for irrigation without treatment.

(c) Aquatic life. The water must be suitable as a habitat for fish and other aquatic life existing in a body of water.

This does not preclude the reestablishment of other fish or aquatic life.

(d) Recreation involving contact with the water. There must be no evidence of manmade pollution, floating debris, sludge accumulation or similar pollutants.

(e) Recreation not involving contact with the water. The water must be free from:

(1) Visible floating, suspended or settled solids arising from man's activities;

(2) Sludge banks;

(3) Slime infestation;

(4) Heavy growth of attached plants, blooms or high concentrations of plankton, discoloration or excessive acidity or alkalinity that leads to corrosion of boats and docks:

(5) Surfactants that foam when the water is agitated or aerated; and

(6) Excessive water temperatures.

(f) Municipal or domestic supply. The water must be capable of being treated by conventional methods of water treatment in order to comply with Nevada's drinking water standards.

(g) Industrial supply. The water must be treatable to provide a quality of water which is suitable for the intended use.

(h) Propagation of wildlife. The water must be suitable for the propagation of wildlife and water fowl without treatment.

2. This section does not entitle an appropriator to require that the source meet his particular requirements for water quality.

[Environmental Comm'n, Water Pollution Control Reg. § 4.1.1, eff. 5-2-78]--(NAC A 11-22-82; 12-3-84)--(Substituted in revision for NAC 445.120)

445A.170 Beneficial uses for part of Colorado River, Beaver Dam Wash and certain creeks.

1. The standards of water quality for:

(a) The Colorado River below Davis Dam are prescribed in NAC 445A.192;

(b) Chiatovich Creek in Esmeralda County are prescribed in NAC 445A.171;

(c) Indian Creek are prescribed in NAC 445A.172;

(d) Leidy Creek are prescribed in NAC 445A.173;

(e) Beaver Dam Wash are prescribed in NAC 445A.178;

(f) Snake Creek are prescribed in NAC 445A.179; and

(g) The Colorado River below Hoover Dam are prescribed in NAC 445A.193.

2. The beneficial uses for these areas are:

(a) Irrigation;

(b) Watering of livestock;

(c) Recreation involving contact with the water;

(d) Recreation not involving contact with the water;

(e) Industrial supply;

(f) Municipal or domestic supply, or both;

(g) Propagation of wildlife; and

(h) Propagation of aquatic life.

(Added to NAC by Environmental Comm'n, 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.134355)

445A.174 Beneficial uses for Virgin River, Meadow Valley Wash and part of Muddy River. The standards of water quality for the Virgin River, Muddy River below Glendale and Meadow Valley Wash are prescribed in NAC 445A.175, 445A.176, 445A.177, 445A.211 and 445A.212. The beneficial uses for these areas are:

1. Watering;
2. Watering of livestock;
3. Recreation not involving contact with the water;
4. Industrial Supply;
5. Propagation of wildlife; and
6. Propagation of aquatic life.

(Added to NAC by Environmental Comm'n, 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.13439)

445A.175 Virgin River at Mesquite.

STANDARDS OF WATER QUALITY
Virgin River

Control Point at Mesquite. The limits of this table apply from Mesquite to the Arizona state line (near Littlefield,Arizona).

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum		Nov.-Jun.: ≤21°C Jul.-Oct: ≤32°C	Aquatic life[b].
ΔT[a]	ΔT = 0°C	ΔT ≤2°C	
pH Units	--	S.V.: 7.0 - 9.0 ΔpH: ±0.5 Max.	Wildlife propagation[b], aquatic life[b], non-contact recreation, irrigation, stock watering and industrial supply.
Total Phosphates (as P) - mg/l		Avg.: ≤0.1	Aquatic life[b], and noncontact recreation.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤0.9 S.V.: ≤1.6	Nitrate S.V.:≤90 Nitrite S.V.:≤5.0 Ammonia S.V.:≤.06 (un-ionized)	Aquatic life[b], stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	--	S.V.: ≥5.0	Aquatic life[b], noncontact recreation, wild-life propagation, and stock watering.
Turbidity - NTU	--	e	Aquatic life[b].
Color - PCU --	d	Aquatic life[b].	
Total Dissolved Solids - mg/l	--	c	Irrigation and stock watering.
Alkalinity (as $CaCo_3$) -mg/l	--	less than 25% change from nat-ural conditions	Aquatic Life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	A.G.M.:≤300 S.V.: ≤550	A.G.M.:≤1000 S.V.: ≤2000	Noncontact recreation[b], irrigation, wildlife, propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Increase in color must not be more than 10 PCU above natural conditions.
e. Increase in turbidity must not be more than 10 NTU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 22, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85, eff.8-1-85)--(Substituted in revision for NAC 445.1344)

445A.176 Virgin River at state line near Littlefield.

STANDARDS OF WATER QUALITY
Virgin River

Control Point at state line (near Littlefield, Arizona). The limits of this table apply at the Arizona-Nevada state line (near Littlefield, Arizona).

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum ΔT^a	ΔT = 0°C	Nov.-Jun.: ≤21°C Jul.-Oct: ≤32°C ΔT ≤2°C	Aquatic life[b].
pH Units	--	S.V.: 7.0 - 9.0 ΔpH: ±0.5 Max.	Wildlife propagation[b], aquatic life[b], non-contact recreation, irrigation, stock watering and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg.: ≤0.6 S.V.: ≤.0.1	Avg.: ≤0.1	Aquatic life[b], and noncontact recreation.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤2.4 S.V.: ≤.3.2	Nitrate S.V.:≤90 Nitrite S.V.:≤5.0 Ammonia S.V.:≤.06 (un-ionized)	Aquatic life[b], stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	--	S.V.: ≥5.0	Aquatic life[b], noncontact recreation, wild-life propagation, and stock watering.
Turbidity - NTU	--	e	Aquatic life[b].
Color - PCU	--	d	Aquatic life[b].
Total Dissolved Solids - mg/l	--	c	Irrigation and stock watering.
Alkalinity (as $CaCo_3$) -mg/l	--	less than 25% change from nat-ural conditions	Aquatic Life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	A.G.M.:≤450 S.V.: ≤1800	A.G.M.:≤1000 S.V.: ≤2000	Noncontact recreation[b], irrigation, wildlife, propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Increase in color must not be more than 10 PCU above natural conditions.
e. Increase in turbidity must not be more than 10 NTU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 22.1, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]-- (NAC A 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.13441)

445A.177 Virgin River at Riverside.

STANDARDS OF WATER QUALITY
Virgin River

Control Point at Riverside. The limits of this table apply from the river mouth at Lake Mead to Mesquite.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum ΔT^a	ΔT = 0°C	Nov.-Jun.: ≤21°C Jul.-Oct: ≤32°C ΔT ≤2°C	Aquatic life[b].
pH Units	--	S.V.: 7.0 - 9.0 ΔpH: ±0.5 Max.	Wildlife propagation[b], aquatic life[b], non-contact recreation, irrigation, stock watering and industrial supply.
Total Phosphates (as P) - mg/l		Avg.: ≤0.1	Aquatic life[b], and noncontact recreation.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤2.9 S.V.: ≤.6.1	Nitrate S.V.:≤90 Nitrite S.V.:≤5.0 Ammonia S.V.:≤.06 (un-ionized)	Aquatic life[b], stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	--	S.V.: ≥5.0	Aquatic life[b], noncontact recreation, wild-life propagation, and stock watering.
Turbidity - NTU	--	e	Aquatic life[b].
Color - PCU	--	d	Aquatic life[b].
Total Dissolved Solids - mg/l	--	c	Irrigation[b] and stock watering.
Alkalinity (as $CaCo_3$) -mg/l	--	less than 25% change from nat-ural conditions	Aquatic Life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	A.G.M.:≤625 S.V.: ≤1250	A.G.M.:≤1000 S.V.: ≤2000	Noncontact recreation[b], irrigation, wildlife, propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Increase in color must not be more than 10 PCU above natural conditions.
e. Increase in turbidity must not be more than 10 NTU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 22.2, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.13442)

445A.178 Beaver Dam Wash.

STANDARDS OF WATER QUALITY
Beaver Dam Wash

Control Point above Schroeder Reservoir. The limits of this table apply above Schroeder Reservoir.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum ΔT[a]	 ΔT = 0°C	Nov.-Apr.: ≤13°C May-Jun.: ≤17°C Jul.-Oct.: ≤23°C ΔT ≤2°C	Aquatic life[b] and water contact recreation.
pH Units	--	S.V.: 7.0 - 8.3 ΔpH: ±0.5 Max.	Water contact recreation[b], wildlife propagation[b], aquatic life, irrigation, stock watering, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg.: ≤.01 S.V.: ≤.013	Avg.: ≤0.05 --	Aquatic life[b], water contact recreation[b], municipal or domestic supply and noncontact recreation.
Nitrogen Species (N) - mg/l	Nitrate S.V.: ≤.0.22	Nitrate S.V.:≤10 Nitrite S.V.:≤.06 Ammonia S.V.:≤.02 (un-ionized)	Municipal or domestic supply[b], aquatic life[b], water contact recreation, stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	-- --	S.V.: Nov.-May.: ≥6.0 Jun-Oct.: ≥5.0	Aquatic life[b], water contact recreation, wildlife propagation, stock watering, municipal or domestic supply and noncontact recreation.
Suspended Solids - mg/l	--	S.V.: ≤25	Aquatic life[b].
Turbidity - NTU	--	S.V.: ≤10	Aquatic Life[b] and municipal or domestic supply.
Color - PCU	--	e	Aquatic life[b] and municipal or domestic supply.
Total Dissolved Solids - mg/l	--	c	Municipal or domestic supply[b], irrigation and stock watering.
Alkalinity (as $CaCO_3$) - mg/l	--	less than 25% change from natural conditions	Aquatic life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	--	≤200/400[d]	Water contract recreation[b], noncontact recreation, municipal or domestic supply, irrigation, wildlife propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100 ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.
e. Increase in color must not be more than 10 PCU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 23, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.13443)

445A.192 Colorado River below Davis Dam.

STANDARDS OF WATER QUALITY
Colorado River

Control Point below Davis Dam. The limits of this table apply from the state line below Davis Dam to Lake Mohave Inlet.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum ΔTa	 ΔT = 0°C	Nov.-Apr.: ≤13°C May-Jun.: ≤17°C Jul.-Oct.: ≤23°C ΔT ≤2°C	Aquatic life[b] and water contact recreation.
pH Units	-- --	S.V.: 7.0 - 8.3 ΔpH: ≤0.5 Max.	Water contact recreation[b], wildlife propagationb, aquatic life, irrigation, stock watering, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg.: ≤.02 S.V.: ≤.03	A-Avg.: ≤0.05 --	Aquatic life[b], water contact recreation[b], municipal or domestic supply and noncontact recreation.
Nitrogen Species (N) - mg/l	Nitrate A-Avg.: ≤1.1 S.V.: ≤1.6	Nitrate S.V.:≤10 Nitrite S.V.:≤.06 Ammonia S.V.:≤.02 (un-ionized)	Municipal or domestic supply[b], aquatic life[b], water contact recreation, stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	-- --	S.V.: Nov.-May: ≥6.0 Jun.-Oct.:≥5.0	Aquatic life[b], water contact recreation, wildlife propagation, stock watering, municipal or domestic supply and noncontact recreation.
Suspended Solids - mg/l	-- --	S.V.: ≤25	Aquatic life[b].
Turbidity - NTU	-- --	S.V.: ≤10	Aquatic life[b] and municipal or domestic supply.
Color - PCU	--	e	Aquatic life[b] and municipal or domestic supply[b].
Total Dissolved Solids - mg/l	--	c	Municipal or domestic supply[b], irrigation and stock watering.
Alkalinity (as CaCO3) - mg/l	-- --	less than 25% change from natural conditions	Aquatic life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	A.G.M.: ≤50 S.V.: ≤100	≤200/400d	Water contact recreation[b], noncontact recreation, municipal or domestic supply, irrigation, wildlife propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100 ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.
e. Increase in color must not be more than 10 PCU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 46, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.13495)

445A.193 Colorado River below Hoover Dam.

STANDARDS OF WATER QUALITY
Colorado River

Control Point below Hoover Dam. The limits of this table apply from Lake Mohave Inlet to Hoover Dam.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum ΔTa	 ΔT = 0°C	Nov.-Apr.: ≤13°C May-Jun.: ≤17°C Jul.-Oct.: ≤23°C ΔT ≤2°C	Aquatic life[b] and water contact recreation.
pH Units	-- --	S.V.: 7.0 - 8.3 ΔpH: ≤0.5 Max.	Water contact recreation[b], wildlife propagation[b], aquatic life, irrigation, stock watering, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg.: ≤.02 S.V.: ≤.033	A-Avg.: ≤0.05 --	Aquatic life[b], water contact recreation[b], municipal or domestic supply and noncontact recreation.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤1.0 S.V.: ≤1.5	Nitrate S.V.:≤10 Nitrite S.V.:≤.06 Ammonia S.V.:≤.02 (un-ionized)	Municipal or domestic supply[b], aquatic life[b], water contact recreation, stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	-- --	S.V.: Nov.-May: ≥6.0 Jun.-Oct.:≥5.0	Aquatic life[b], water contact recreation, wildlife propagation, stock watering, municipal or domestic supply and noncontact recreation.
Suspended Solids - mg/l	-- --	S.V.: ≤25	Aquatic life[b].
Turbidity - NTU	-- --		Aquatic life[b] and municipal or domestic supply. S.V.: ≤10
Color - PCU	--	e	Aquatic life[b] and municipal or domestic supply.
Total Dissolved Solids - mg/l	--	c	Municipal or domestic supply[b], irrigation and stock watering.
Alkalinity (as $CaCO_3$a) - mg/l	-- --	less than 25% change from natural conditions	Aquatic life[b] and wildlife propagation.
Fecal Coliform- No./100 ml	A.G.M.: ≤50 S.V.: ≤100	≤200/400[d]	Water contact recreation[b], noncontact recreation, municipal or domestic supply, irrigation, wildlife propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445A.143.
d. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100 ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.
e. Increase in color must not be more than 10 PCU above natural conditions.

(Added to NAC by Environment Comm'n, 7-31-85; eff. 8-1-85)--(Substituted in revision for NAC 445.13496)

445A.194 Beneficial uses for area of Lake Mead not covered by NAC 445A.196. The water quality standards for the area of Lake Mead which is not covered by NAC 445A.197 are prescribed in NAC 445A.195. The beneficial uses for this area are:

1. Irrigation;
2. Watering of livestock;
3. Recreation involving contact with the water;
4. Recreation not involving contact with the water;
5. Industrial supply;
6. Municipal or domestic supply, or both;
7. Propagation of wildlife; and
8. Propagation of aquatic life, including a warmwater fishery.

(Added to NAC by Environmental Comm'n, eff. 11-22-82; A 12-17-87)--(Substituted in revision for NAC 445.1350)

445A.195 Lake Mead excluding area covered by NAC 445A.197.

Lake Mead

	WATER QUALITY STANDARDS[j]		
PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARD FOR BENEFICIAL USES	BENEFICIAL USE
Temperature °C ΔT Single Value[a]	0	2	Warmwater fishery,[b]
pH - Standard Unit Single Value	95% of samples not to exceed 8.8	Within Range 7.0 - 9.0	Bathing and water contact sports.[b] wildlife propagation[b], warmwater fishery,aquatic life, drinking water supply, industrial supply, agricultural use.
Dissolved Oxygen-mg/l Single Value in 90% of Samples	--	≥5 mg/l in the epilimnion ≥5 mg/l average in water column during periods of nonstratification	Warmwater fishery,[b] aquatic life, stock watering, bathing & contact sports, noncontact sports & esthetics, drinking water supply, wildlife propagation.
Chlorophyll a - μg/l	c.k		Bathing and water contact sports,[b] warmwater fishery,[b] aquatic life,[b] noncontact sports & esthetics,[b] drinking water supply.[b]
Un-ionized Ammonia - mg/l	--	d	Warmwater fishery, [b] aquatic life.
Total Dissolved Solids - mg/l Flow Weighted Annual Average Single Value	≤723 measured below Hoover Dam[h] --	-- ≤1000	Drinking water supply,[b] agricultural use.

Chloride - mg/l Single Value	e	≤400[e]	Drinking water supply,[b] stock watering, wildlife propagation.
Sulfate - mg/l Single Value	e	≤500[e]	Drinking water supply.[b]
Suspended Solids - mg/l Single Value	--	≤25	Warmwater fishery,[b] aquatic life, esthetics.
Nitrogen Species as N - mg/l	Total Inorganic Nitrogen	Nitrate Nitrite	Drinking water supply,[b] stock watering, warmwater fishery, aquatic life, wildlife propagation. ion.
Single Value in 90% of Samples	≤4.5	≤10 ≤1	Wildlife propagation.
Turbidity - NTU Single Value	f	≤25	Warmwater fishery,[b] aquatic life, drinking water supply, esthetics, bathing & water contact sports.
Fecal Coliform MV/100 ml	--	≤200/400[g]	Bathing & water contact sports,[b] agricultural use, noncontact sports & esthetics, drinking water supply, wildlife propagation.
Color-Pt-Co Units Single Value	i		Esthetics,[b] drinking water supply.[b]

[a] Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone.

[b] The most significant beneficial uses.

[c] Not more than one monthly mean in a calendar year at Station 3 may exceed 45 μgl. The mean for chlorophyll a in summer (July-September) must not exceed 40 μg/l at Station 3, and the mean for 4 consecutive summer years must not exceed 30 μg/l. "Mean" indicates the average of not less than 2 samples per month. The samples must consist of the average of the data collected from not less than 3 sites within a cross section of Station 3 that are representative of the top 5 meters of the cross section. "Station 3" means the center of the channel at which depth is from 16 to 18 meters.

[d] See footnote c to NAC 445A.197.

[e] The combination of this constituent with other constituents comprising TDS must not result in the violation of the TDS standards for Lake Mead and the Colorado River.

[f] Turbidity must not exceed that characteristic of natural conditions by more than 10 Nephelometric Units.

[g] Based on a minimum of not less than five samples taken over a 30-day period, the fecal coliform bacterial level must not exceed a log mean of 200 per 100 ml. nor must more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.

[h] The details of this standard are specified in the "1981 Review - Water Quality Standards for Salinity, Colorado River System," approved by the state environmental commission on June 8, 1982.

[i] Color must not exceed that characteristic of natural conditions by more than 10 units Platinum-Cobalt Scale.

[j] The Commission recognizes that at entrances of tributaries to this reach, localized violations of standards may occur.

[k] The mean for chlorophyll a in the growing season (April-September) must not exceed 5 μgl in the open water of Boulder Basin, Virgin Basin, Gregg Basin and Pierce Basin. The single value must not exceed 10 μg/l for more than 10 percent of the samples. "Mean" indicates the average of not less than 2 samples per month.

The "Guidelines for Formulating Water Quality Standards for the Interstate Waters of the Colorado River System," adopted January 13, 1967, are incorporated as a supplement to the standards for this stream.

(Added to NAC by Environmental Comm'n, eff. 11-22-82; A 12-17-87)--(Substituted in revision for NAC 445.1351)

445A.196 Beneficial uses for Lake Mead from western boundary of Las Vegas Marina Campground to confluence of Las Vegas Wash. The water quality standards for Lake Mead from the western boundary of the Las Vegas Marina Campground to the confluence of the Las Vegas Wash are prescribed in NAC 445A.197. The beneficial uses for this area are:

1. Irrigation;
2. Watering of livestock;
3. Recreation not involving contact with water;
4. Industrial supply;
5. Propagation of wildlife; and
6. Propagation of aquatic life, including a warmwater fishery.

(Added to NAC by Environmental Comm'n, eff. 11-22-82; A 12-17-87)--(Substituted in revision for NAC 445.1352)

445A.197 Lake Mead from the western boundary of Las Vegas Marina Campground to the confluence of Las Vegas Wash. Control point at the Western Boundary of Las Vegas Marina Campground.

	WATER QUALITY STANDARDS[f]		
PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARD FOR BENEFICIAL USES	BENEFICIAL USE
Temperature °C ΔT Single Value[a]	0	2	Warmwater fishery,[b]
pH - Standard Unit Single Value	95% of samples not to exceed 8.9	Within Range 7.0 - 9.0	Wildlife propagation,[b] agricultural use, warmwater fishery,aquatic life, industrial supply.
Dissolved Oxygen-mg/l Single Value in 90% of Samples	--	≥5 mg/l	Warmwater fishery,[b] aquatic life, stock watering, noncontact sports, noncontact sports & esthetics, wildlife propagation.
Nitrogen Species as N-mg/l Single Value in 90% of samples	Total Inorganic Nitrogen ≤5.3	Nitrate ≤90	Warmwater fishery,[b] stock watering, wildlife propagation.
Single Value	--	Nitrite ≤10	Stock watering,[b] wildlife propagation.[b]
Un-ionized Ammonia as N -mg/l	--	c	Warmwater fishery,[b] aquatic life[b].
Total Dissolved Solids - mg/l			Stock watering,[b] irrigation.
Single Value	e	≤3000	
Suspended Solids - mg/l Single Value	--	≤25	Warmwater fishery,[b] aquatic life, esthetics.
Turbidity - NTU Single Value	d	≤25	Warmwater fishery,[b] aquatic life, esthetics.
Fecal Coliform MV/100 ml Single Value	--	g	Agricultural use,[b] wildlife propagation[b] noncontact sports & esthetics.

[a] Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone.

[b] The most significant beneficial uses.

[c] The 4-day average for the concentration of un-ionized ammonia must not exceed 0.05 mg/l more often than once every 3 years. The daily value for this average must consist of the average of the data collected from not less than 3 sites within a cross section of Station 2 that are representative of the top 2.5 meters of the cross section, and must account for diurnal fluctuation. This average is not applicable to the area between Station 2 and the confluence of the Las Vegas Wash. The single value must not exceed 0.45 mg/l more often than once every 3 years. When the temperature exceeds 20°C, these standards must be adjusted pursuant to methods accepted by the United States Environmental Protection Agency. "Station 2" means the center of the channel at which the depth is 10 meters.

[d] Turbidity must not exceed that characteristic of natural conditions by more than 10 Nephelometric Units.

[e] Any increase in Total Dissolved Solids must not result in a violation of the standards specified in "1981 Review--Water Quality Standards for Salinity, Colorado River System," approved by the state environmental commission on June 8, 1982.

[f] The Commission recognizes that because of discharges of tributaries that localized violations of standards may occur in this reach.

[g] Any discharge from a point source into Las Vegas Wash must not exceed a log mean of 200 per 100 ml. based on a minimum of not less than five samples taken over a 30-day period nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.

The "Guidelines for Formulating Water Quality Standards for the Interstate Waters of the Colorado River System," adopted January 13, 1967, are incorporated as a supplement to the standards for this stream. The guidelines may be obtained from the division of environmental protection at no cost.

(Added to NAC by Environmental Comm'n, eff. 11-22-82; A 12-17-87; 7-5-94)

445A.198 Beneficial uses for Las Vegas wash from Pabco Road to city and county sewage treatment plants. The water quality standards for the Las Vegas Wash from Pabco Road to the confluence of the discharges from the city and county sewage treatment plants are prescribed in NAC 445A.199. The beneficial uses are:

1. Irrigation;
2. Watering of livestock;
3. Recreation not involving contact with water;
4. Maintenance of a freshwater marsh;
5. Propagation of wildlife; and
6. Propagation of aquatic life, excluding fish. This does not preclude the establishment of a fishery.

(Added to NAC by Environmental Comm'n, eff. 11-22-82; A 12-17-87)--Substituted in revision for NAC 445.1354)

445A.199 Las Vegas Wash from Pabco Road to city and county sewage treatment plants. Control point at Pabco Road. The limits in this table apply from Pabco Road to the confluence of the discharges from the city and county sewage treatment plants.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARD FOR BENEFICIAL USES	BENEFICIAL USE
Temperature °C ΔT Single Value[a]	0	--	--
pH - Standard Unit Single Value of 90% of samples	Within Range 6.5 - 7.8	Within Range 6.5 - 9.0	Wildlife propagation,[d] agricultural uses.[d]

Dissolved Oxygen-mg/l	--	b	Stock watering[d], noncontact sports, & esthetics,[d] wildlife propagation.[d]
Nitrogen Species as N-mg/l Single Value in 90% of samples	Total Inorganic Nitrogen ≤20	Nitrate ≤100 Nitrite ≤10	Stock water,[d] wildlife propagation.[d]
Total Filterable Residue at 180°C-mg/l Single Value in 90% of samples	≤2300	≤3000	Stock water,[d] irrigation, freshwater marsh maintenance.
Fecal Coliform MV/100 ml	--	c	Noncontact sports,[d] esthetics,[d] wildlife propagation, agricultural use.

[a] Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone except during storm flow conditions.

[b] It is known that aerobic conditions are desirable for the beneficial uses of stock watering, noncontact sports and esthetics, and wildlife propagation. Existing conditions prevent the attainment of aerobic conditions as of September 9, 1982. Therefore aerobic conditions are established as a goal rather than a standard and is not intended to preclude development of a limited fishery in selected areas. Aerobic conditions is intended to mean the absence of objectionable odors that may be caused by wastewater discharges in excess of existing odors.

[c] Any discharge from a point source into Las Vegas Wash must not exceed a log mean of 200 per 100 ml. based on a minimum of not less than five samples taken over a 30-day period nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.

[d] The most significant beneficial uses.

(Added to NAC by Environmental Comm'n, eff. 11-22-82)--(Substituted in revision for NAC 445.1355)

445A.200 Beneficial uses for Las Vegas Wash from Pabco Road to Lake Mead. The water quality standards for the Las Vegas Wash from Pabco Road to the confluence of Las Vegas Wash with Lake Mead are prescribed in NAC 445A.201. The beneficial uses for this area are:

1. Irrigation;
2. Watering of livestock;
3. Recreation not involving contact with the water;
4. Maintenance of a freshwater marsh;
5. Propagation of wildlife; and
6. Propagation of aquatic life, excluding fish. This does not preclude the establishment of a fishery.

(Added to NAC by Environmental Comm'n, eff. 11-22-82; A 12-17-87)--(Substituted in revision for NAC 445.1356)

445A.201 Las Vegas Wash.

WATER QUALITY STANDARDS

Las Vegas Wash

The limits in this table apply from Pabco Road to the confluence of the Las Vegas Wash with Lake Mead.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARD FOR BENEFICIAL USES	BENEFICIAL USE
Temperature °C ΔT Single Value[a]	0	--	--
pH - Standard Unit Single Value of 90% of samples	Within Range 7.2 - 8.7	Within Range 7.0 - 9.0	Wildlife propagation,[d] agricultural uses.[d]
Dissolved Oxygen-mg/l		b	Stock watering[d], noncontact sports, & esthetics,[d] wildlife propagation.[d]
Nitrogen Species as N-mg/l Single Value in 90% of samples	Total Inorganic Nitrogen ≤17	Nitrate ≤100 Nitrite ≤10	Stock watering,[d] wildlife propagation.[d]
Total Filterable Residue at 180°C-mg/l Single Value in 90% of samples	≤2600	≤3000	Stock water,[d] irrigation, freshwater marsh maintenance.
Fecal Coliform MF/100 ml	--	c	Noncontact sports & esthetics,[d] wildlife propagation,[d] agricultural use.

[a] Maximum allowable increase in temperature above receiving water temperature at the boundary of an approved mixing zone.

[b] It is known that aerobic conditions are desirable for the beneficial uses of stock watering, noncontact sports and esthetics, and wildlife propagation. Existing conditions prevent the attainment of aerobic conditions at this time. Therefore September 9, 1982. Therefore aerobic conditions are established as a goal rather than a standard and is not intended to preclude development of a limited fishery in selected areas. Aerobic conditions is intended to mean the absence of objectionable odors that may be caused by wastewater discharges in excess of existing odors.

[c] Any discharge from a point source into Las Vegas Wash must not exceed a log mean of 200 per 100 ml. based on a minimum of not less than five samples taken over a 30-day period nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.

[d] The most significant beneficial uses.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 47, eff. 5-27-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 11-22-82)--(Substituted in revision for NAC 445.1367)

445A.209 Beneficial uses for Muddy River at Glendale Bridge. The standards for water quality for the Muddy River at Glendale Bridge are prescribed in NAC 445A.210. The beneficial uses for this area are:

1. Irrigation;
2. Watering of livestock;
3. Recreation not involving contact with the water;
4. Industrial supply;
5. Municipal or domestic supply, or both;
6. Propagation of wildlife; and
7. Propagation of aquatic life.

(Added to NAC by Environmental Comm'n, 7-31-85, eff. 8-1-85)--(Substituted in revision for NAC 445.1379)

445A.210 Muddy River at Glendale Bridge.

STANDARDS OF WATER QUALITY
Muddy River

Control Point at Glendale Bridge. The limits of this table apply from the Glendale Bridge upstream to the river source.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum		Nov.-Jun.: ≤21°C Jul.-Oct.: ≤32°C	Aquatic life[b].
ΔT[a]	ΔT = 0°C	ΔT ≤2°C	
pH Units		S.V.: 7.0 - 9.0 ΔpH: ±0.5 Max.	Wildlife propagation[b], aquatic life[b], non-contact recreation, irrigation, stock watering, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	--.	A-Avg.: ≤0.1	Aquatic life[b], noncontact recreation, and municipal or domestic supply.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤1.3 S.V.: ≤1.4	Nitrate S.V.:≤10 Nitrite S.V.:≤1.0 Ammonia S.V.:≤.06 (un-ionized)	Municipal or domestic supply[b], aquatic life, water contact recreation, stock watering, wild-life propagation and noncontact recreation.
Dissolved Oxygen - mg/l	--	S.V.: ≤5.0	Aquatic life[b], noncontact recreation, wild-life propagation, stock watering and municipal or domestic supply.
Turbidity - NTU	--	e	Aquatic life[b] and municipal or domestic supply.
Color - PCU	--	d	Aquatic life[b] and municipal or domestic supply.
Total Dissolved Solids - mg/l	--	c	Municipal or domestic supply[b], irrigation and stock watering.
Alkalinity (as $CaCO_3$) - mg/l	--	less than 25% change from nat-ural conditions	Aquatic life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	-- --	A.G.M.: ≤1000 S.V.: ≤2000	Noncontact recreation[b], municipal or domestic supply[b], irrigation, wildlife propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Increase in color must not be more than 10 PCU above natural conditions.
e. Increase in turbidity must not be more than 10 NTU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 54, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85; eff. 8-1-85)--(Substituted in revision for NAC 445.1381)

445A.211 Muddy River at Overton.

STANDARDS OF WATER QUALITY
Muddy River

Control Point at Overton. The limits of this table apply from the mouth of the river at Lake Mead to the Glendale Bridge.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum		Nov.-Jun.: ≤21°C Jul.-Oct.: ≤32°C	Aquatic life[b].
ΔT[a]	ΔT = 0°C[a]	ΔT ≤2°C	
pH Units	--	S.V.: 7.0 - 9.0 ΔpH: ±0.5 Max.	Wildlife propagation[b], aquatic life[b], non-contact recreation, irrigation, stock watering and industrial supply.
Total Phosphates (as P) - mg/l	--	A-Avg.: ≤0.3	Aquatic life[b] and noncontact recreation.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤1.3 S.V.: ≤1.8	Nitrate S.V.:≤90 Nitrite S.V.:≤5.0 Ammonia S.V.:≤.06 (un-ionized)	Aquatic life[b], stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	--	S.V.: ≥5.0	Aquatic life[b], noncontact recreation, wildlife propagation and stock watering.
Turbidity - NTU	--	e	Aquatic life[b].
Color - PCU	--	d	Aquatic life[b].
Total Dissolved Solids - mg/l	--	c	Irrigation[b] and stock watering.
Alkalinity (as $CaCO_3$) - mg/l	--	less than 25% change from natural conditions	Aquatic life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	A.G.M.: ≤500 S.V.: ≤1300	A.G.M.: ≤1000 S.V.: ≤2000	Noncontact recreation[b], irrigation, wildlife propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Increase in color must not be more than 10 PCU above natural conditions.
e. Increase in turbidity must not be more than 10 NTU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 55, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85; eff. 8-1-85)--(Substituted in revision for NAC 445.1382)

445A.212 Meadow Valley Wash.

STANDARDS OF WATER QUALITY
Meadow Valley Wash

Control Point at confluence with Muddy River. The limits of this table apply from the confluence of the Meadow Valley Wash with the Muddy River to the bridge above Rox.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - Maximum		Nov.-Jun.: ≤21°C Jul.-Oct.: ≤32°C	Aquatic life[b].
ΔT[a]	ΔT = 0°C	ΔT ≤2°C	
pH Units	--	S.V.: 7.0 - 9.0 ΔpH: ±0.5 Max.	Wildlife propagation[b], aquatic life[b], non-contact recreation, irrigation, stock watering and industrial supply.
Total Phosphates (as P) - mg/l	--	A-Avg.: ≤0.1	Aquatic life[b] and noncontact recreation.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg.: ≤2.0 S.V.: ≤3.3	Nitrate S.V.:≤90 Nitrite S.V.:≤5.0 Ammonia S.V.:≤.06 (un-ionized)	Aquatic life[b], stock watering, wildlife propagation and noncontact recreation.
Dissolved Oxygen - mg/l	--	S.V.: ≥5.0	Aquatic life[b], noncontact recreation, wild-life propagation, stock watering.
Turbidity - NTU	--	e	Aquatic life[b].
Color - PCU	--	d	Aquatic life[b].
Total Dissolved Solids - mg/l	--	c	Irrigation[b] and stock watering.
Alkalinity (as $CaCO_3$) - mg/l	--	less than 25% change from nat-ural conditions	Aquatic life[b] and wildlife propagation.
Fecal Coliform-No./100 ml	-- --	A.G.M.: ≤1000 S.V.: ≤2000	Noncontact recreation[b], irrigation, wildlife propagation and stock watering.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
b. The most restrictive beneficial use.
c. The salinity standard for the Colorado River System is specified in NAC 445.1337.
d. Increase in color must not be more than 10 PCU above natural conditions.
e. Increase in turbidity must not be more than 10 NTU above natural conditions.

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 56, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]--(NAC A 7-31-85; eff. 8-1-85)--(Substituted in revision for NAC 445.1385)

APPENDIX I

CUMULATIVE IMPACT ANALYSIS

INTRODUCTION

Cumulative impacts result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts could result from individually minor, but collectively significant actions, taking place over a period of time (Council on Environmental Quality, Regulations for Implementation of National Environmental Policy Act, 1508.7).

This section identifies past, present, and reasonably foreseeable future actions so that their contribution to cumulative impacts toward recovery of the desert tortoise can be considered. Past actions are those that have been completed to date, present actions may have been started in the past but are ongoing and not completed yet, and future actions are anticipated but have not yet begun.

This analysis of cumulative impacts considers the connected actions of BLM and other agency efforts to implement the goals and objectives of the **Desert Tortoise Recovery Plan** within the Northeastern Mojave Recovery Unit (see **Map 1**).

Certain land jurisdictions, or programs, consisting of the Washington County Habitat Conservation Plan, Pahranagat National Wildlife Refuge, Las Vegas Piute Reservation, Bureau of Reclamation, Spring Mountain National Recreation Area, Utah State Lands, Arizona State Lands, and California State Lands include insignificant amounts of the tortoise habitat within the Northeastern Mojave Recovery Unit and are inconsequential to the analysis or to the decision to be made, therefore, their contribution to cumulative impacts will not be considered further.

INCOMPLETE AND/OR UNAVAILABLE INFORMATION

Management of Desert Tortoise Habitat in the California Portion of the Northeastern Mojave Recovery Unit

The Mojave National Preserve, administered by the National Park Service in California and the Bureau of Land Management, California Desert District are currently undertaking a planning efforts which include a small portion of desert tortoise habitat within the Northeastern Mojave Recovery Unit. Since this planning is only beginning (public scoping meetings were held in April 1997), documentation on future management for this tortoise habitat within the Northeastern Mojave Recovery Unit in California is lacking. However, only a small portion of the Northeastern Mojave Recovery Unit is located in California and, because of their mandates, the National Park Service and the BLM would manage for ecosystem integrity. This specific information, therefore, is not essential to a reasoned choice among alternatives and the decision on how to implement the goals and objectives of the Recovery Plan within the Planning Area.

Tortoise Population Numbers and Trends

Precise numbers of tortoise are unknown to the BLM, Nevada Division of Wildlife and the Service, and population trend information is inconclusive. According to the Recovery Plan, "Our analysis indicates that areas receiving summer rains and are relatively free from human-induced mortality show no statistically significant population trend..." (USFWS, p. C8, 1994a) and "Because of the difficulty in obtaining accurate population size estimates on these cryptic, semi-fossorial, and sparse animals, most data collected over the last 15 years on the dynamics of desert tortoise populations are insufficient to determine whether a population is stationary, fluctuating stochastically, or undergoing a population trend" (USFWS, p. C8, 1994a).

Monitoring has, however, demonstrated concerns with population trends and recruitment of young into the

population in some areas. Some researchers warn that although populations in the Northeastern Mojave Recovery Unit do not appear to be undergoing major changes in numbers or density in most places, population levels are dangerously low (Brussard 1994, written communication). The lack of exact population numbers or trend information from all portions of the Northeastern Mojave Recovery Unit is not an impediment to implementation of the goals and objectives of the Recovery Plan. Since the desert tortoise has been listed as threatened by the USFWS, the mandate of the BLM is to help recover the species.

Effect of Livestock Grazing on Desert Tortoise

It is known that tortoise rely on new spring growth once they emerge from their burrows, and that livestock use decreases both the quantity and quality of this growth. According to the 1988 BLM Range wide Plan, livestock grazing is one of the detrimental impacts to tortoise in the Eastern Mojave. Since 1988, there have been studies showing the negative impacts of grazing on desert tortoise and its habitat.

According to the 1988 BLM Rangewide Plan, however, data gaps include the effects of grazing on tortoise populations and habitats. And, "At this time there are no data showing that continued livestock grazing is compatible with recovery of the desert tortoise, although it appears that cattle grazing under certain circumstances can be compatible with desert tortoise survival." (Tracy et. al. quoted in USFWS, p. 58, 1994a) It should be noted, however, that desert tortoise "survival" is not necessarily sufficient for "recovery" of a species. The Recovery Team who wrote the Recovery Plan for the Desert Tortoise determined that domestic livestock grazing is incompatible with desert tortoise recovery.

According to the federal register announcement designating critical habitat for the desert tortoise, "Although no definitive studies on the relation between livestock grazing and the welfare of desert tortoises have yet been completed there is significant amount of scientific literature on the adverse effects of livestock grazing on desert ecosystems, in terms of vegetation changes, soil compaction and erosion, and reduction of microorganisms in the soil." (USFWS, p. 5839, 1994c). "Experimental information to assess the effect of livestock grazing on tortoises is lacking, and researchers have not yet examined whether the forage that remains after grazing is sufficient to meet the nutritional needs of desert tortoise." (Oldemeyer, p. 95, 1994).. Several recent studies by the Smithsonian intuition have focused on the nutritional requirements of desert tortoise, the relationship of native herbaceous species to meeting these needs, and amounts and types of forages important to desert tortoise.

While there is some differences of opinion regarding impacts of livestock grazing on desert tortoise, conclusions drawn by professionals in the Service, BLM, University scientists, and the Recovery Team for desert tortoise indicate that livestock grazing can have a number of negative impacts on desert tortoise and their habitat as described in the Recovery Plan and in this plan. The preponderance of scientific evidence indicates that livestock grazing can have a number of different negative impacts to tortoise and its habitat. The Recovery Plan advised that livestock grazing should be prohibited in special management areas established for desert tortoise recovery.

It was necessary to use professional judgement to establish the impact-link between livestock and tortoise rather than a definitive study since, "Studies designed to detect this linkage (between grazing and species declines) are, interalia, logistically difficult, expensive, politically contentious, and statistically indefensible. On the other hand, there is strong circumstantial evidence that grazing is a major problem" (Carrier and Czech, p. 39, 1996).

ASSUMPTIONS FOR ANALYSIS

Certain assumptions are necessary for analysis. These assumptions help form the basis for the Reasonably Foreseeable Future Actions projections, and may also suggest areas for needed research.

Approximately 1.5 million acres of BLM Wilderness Study Areas are within the Northeastern Mojave Recovery Unit. The Desert National Wildlife Range also includes a proposed wilderness area. Management of these Wilderness Study Areas and future designated wilderness have implications for management of the desert

tortoise. It is assumed that these areas will remain in a wilderness study area status until after the ongoing BLM land use planning efforts within the Northeastern Mojave Recovery Unit are finalized. While Congress could eventually designate none, part or all of the areas as wilderness, it is assumed for analysis purposes that Congress will designate as wilderness those wilderness study areas recommended as suitable by the BLM.

For the BLM land use plans or amendments in progress within the Northeastern Mojave Recovery Unit (Las Vegas, Caliente, Tonopah, and Dixie) it is assumed that the ultimate decision will be the current agency preferred alternative or the agency proposed action.

Desert tortoise habitat includes all portions of the Northeastern Mojave Recovery Unit below 4,000 feet in elevation with suitable vegetation present.

It is assumed that the human population within the Northeastern Mojave Recovery Unit will continue to grow; at a rapid rate within the urban areas and at a slower rate in the rural areas.

It is assumed that recreational use of the desert environments will continue to grow as a direct result of the increase in human populations and the increase in sales and use of off-highway vehicles.

Based on projections in the Las Vegas District Resource Management Plan and considering the size and extent of the Northeastern Mojave Recovery Unit, it is assumed that about 170,000 acres of public lands within the Northeastern Mojave Recovery Unit will be transferred into private ownership during the life of the plan. Of the 170,000 acres it is assumed that 80% would be within tortoise habitat.

It is assumed that all 113,900 acres of private land authorized to be developed during the 30 year life of the Clark County Desert Conservation Plan will be developed.

AREA OF ANALYSIS

The area of analysis for cumulative impacts is the Northeastern Mojave Recovery Unit (see **Map 1**). This is the appropriate area of analysis since the Fish and Wildlife Service will evaluate tortoise population recovery on a Recovery Unit basis. "Recovery units are considered distinct population segments and may be individually delisted if they meet the recovery criteria." (USFWS, p. 43, 1994a) This area includes portions of four states (Utah, Arizona, Nevada and California), six BLM districts, the United States Fish and Wildlife Service (Desert National Wildlife Range), Department of Energy (Nevada Test Site), and Department of the Air Force (Weapons and Tactics Center Range Complex) and a variety of other land administrations. The Northeastern Mojave Recovery Unit was identified by the Recovery Team based on genetic, morphological, ecological and physiological similarities among the desert tortoise.

A total of 6.4 million acres has been designated by the Fish and Wildlife Service as critical habitat for the Mojave population of the desert tortoise. Of this, 1.2 million acres of the critical habitat is in Nevada. Approximately 1.5 million acres of this designated critical habitat occurs in the Northeastern Mojave Recovery Unit. Approximately 846,000 acres of the designated critical habitat in Nevada is within the Northeastern Mojave Recovery Unit. In Nevada, the majority (approximately 87%) of the total desert tortoise habitat is managed by the BLM.

The Northeastern Mojave Recovery Unit includes the Gold Butte-Pakoon, Mormon Mesa, Beaver Dam Slope, Coyote Spring, the eastern third of the Ivanpah and the northern third of the Piute-Eldorado Desert Wildlife Management Areas as proposed in the Recovery Plan (**see map 4**). While the Northeastern Mojave Recovery Unit is the area of analysis, tortoise habitat is assumed to only occur below 4,000 feet in elevation within the area, therefore, actions or projects above this elevation would not directly affect tortoise or its habitat but could result in indirect effects.

TIME FRAME FOR ANALYSIS

The time frame for impact analysis is 25 years, which represents one tortoise generation and is the minimum period of time the Recovery Plan determined is appropriate to use monitoring data to evaluate success of the recovery efforts, and consider delisting of the species. The time frame for cumulative impact analysis defines how far into the past and how far into the future additive impacts will be considered. The appropriate time frames for cumulative impact analysis varies by impact or resource consideration. For example, while the Northeastern Mojave Recovery Unit has been grazed by domestic livestock since the mid 1800s, the explosive human population growth in the Las Vegas Valley is a relatively recent development. It is recognized that the cumulative impact of recovery of the desert tortoise which could result from the combination of proposals in the Northeastern Mojave Recovery Unit, would likely extend beyond the life of the plan.

RELEVANT PAST, PRESENT AND REASONABLY FORESEEABLE FUTURE ACTIONS

Introduction

Past, present and reasonably foreseeable future actions which impact desert tortoise or their habitat must be identified so that their contribution to cumulative impacts in the Northeastern Mojave Recovery Unit can be considered. Certain actions have been administrative or planning in nature and did not, by themselves, directly impact desert tortoise, but they are identified since they did have indirect impacts by providing important management direction.

Quad-State County Government Coalition

Eight counties, (including Lincoln County) in four southwestern states, have founded the Quad-State County Government Coalition. "The coalition will seek to overturn the desert tortoise 'critical habitat' designation and to stop enforcement of the Tortoise Recovery Plan, efforts which the counties argue go too far and tie up too much otherwise useable land." (Las Vegas Review Journal, March 23, 1998).

Catron County Ruling on National Environmental Policy Act Compliance for Designation of Critical Habitat

The Catron County Tenth Circuit Court of Appeals ruling, issued February 2, 1996 (No. 94-2280) determined that the Fish and Wildlife Service is required to comply with the National Environmental Policy Act when designating critical habitat for threatened species. This was not done for designation of critical habitat for the desert tortoise. The parts of the Northeastern Mojave Recovery Unit which are in Utah and Arizona are within the jurisdiction of the Tenth Circuit Court. The other parts of the Northeastern Mojave Recovery Unit are within the jurisdiction of the Ninth Circuit Court of Appeals which ruled in Douglas County, Oregon vs. Babbit that the Fish and Wildlife Service did not have to comply with the National Environmental Policy Act when designating critical habitat.

U. S. Supreme Court Ruling on the Endangered Species Act

The U.S. Supreme Court ruled unanimously on March 18, 1997 that people whose economic interests are affected by actions taken to protect endangered species may sue under the Endangered Species Act to stop what they view as overregulation. Property owners affected by decisions made under the Act now can challenge in court under the Act whether those decisions were properly made and necessary to protect a species from extinction. People who suffer economic harm as a result of efforts to protect endangered species have standing to sue under the Act.

Protection Under State Laws

The desert tortoise has been classified in Nevada as protected since 1969 (NRS 501.110).

The Arizona Game and Fish Commission extended full protection from take to the desert tortoise effective January 1, 1988.

The California Fish and Game Commission listed the desert tortoise as a state threatened species on June 22, 1989.

In Utah the desert tortoise is considered a "prohibited reptile" and is protected from collection, importation, transportation, possession, sale, transfer or release.

BLM

In November of 1988 the BLM published their "Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan". This Plan which considered the tortoise habitat in Nevada, California, Utah and Arizona identified management actions and goals meant to prevent "listing" of the tortoise. This Rangewide Plan required that BLM categorize all tortoise habitat in regard to four pertinent criteria. The BLM has categorized tortoise habitat in Nevada into 341,400 acres of Category I, 643,600 acres of category II, and 1,704,800 acres of Category III. The BLM committed to maintaining viable populations in category I and II habitats and identified objectives and management actions to benefit tortoise and protect their habitat. This plan, however, "does not address site-specific, population-specific, or individual on-the-ground management actions." In spite of this BLM effort, the Mojave tortoise population was listed as threatened approximately one and one half years later.

The 20,800 acre Beaver Dam Slope Area of Critical Environmental Concern in Arizona was established by the BLM in 1992 to protect sensitive tortoise habitat.

BLM and the State Trust Administration in Utah have exchanged State lands that possess critical habitat for the desert tortoise with public lands that would enhance Utah's future urban development needs.

The Desert Tortoise Conservation Center in Las Vegas, Nevada was established pursuant to a $2.5 million research program under a Section 10(a)(1)(A) research permit as part of the Las Vegas Suit Settlement Agreement in March 1991. The Center is owned and operated by the BLM which also coordinates all research activities at the facility. Research is primarily focused on information which will help the long-term survival of the tortoise in the wild. Research completed at the Center between 1991 and 1993 included Desert Tortoise Physiology, Behavior, and Reproduction; Reproductive Biology; and Cause and Transmission of Upper Respiratory Tract Disease.

A wide variety of activities on public lands in Clark County and southern Nye County have undergone Section 7 consultation. Section 7 requires Federal agencies to: 1) Consult with the Service on discretionary actions that may affect listed species, and 2) assist in recovery of listed species. Federal agencies then review their activities and when consultation is necessary, prepare a biological assessment or evaluation which evaluates the affects of the agency -proposed action on the listed species and designated critical habitat. This is then submitted to the Service, which 1) determines whether the proposed action will jeopardize the listed species or adversely modify designated critical habitat, and 2) prepares and issues a biological opinion. These activities have resulted in take of tortoise and the loss of habitat. There have been few Section 7 consultations for desert tortoise in Nevada outside of the Las Vegas Field Office.

Due to the listing of the desert tortoise, BLM initiated Section 7 consultation on the Bureau's livestock grazing program in desert tortoise habitat. Full Force and Effect grazing decisions (69) were issued from January 1992 to March 1993 to implement the Biological Opinion pursuant to Section 7 of the Endangered Species Act.

Approximately 70 additional full force and effect decisions have been issued since the first set of 69. These decisions prohibited livestock grazing from March 1 to June 14 in all Category I and II and III Intensive desert tortoise habitat. In category III non-intensive desert tortoise habitat grazing is restricted by percent utilization and not by season of use.

The BLM manages over 3.5 million acres of the approximately 5 million acres of desert tortoise habitat in Nevada. The BLM, throughout the Northeastern Mojave Recovery Unit covering portions of four states, is amending their Land Use Plans to implement the goals and objectives of the Recovery Plan for the Desert Tortoise. In addition to this plan, there are four other BLM planning efforts which are in various stages of completion. The BLM is completing the Caliente Management Framework Plan amendment, the Tonopah Resource Management Plan, and the Dixie Resource Management Plan all of which propose Special Management Areas for tortoise and management actions to implement the goals and objectives of the Desert Tortoise Recovery Plan. The Arizona Strip Resource Management Plan amendment was completed in April 1998.

Ongoing BLM actions include monitoring livestock grazing, monitoring vegetation condition and trend, routine law enforcement patrols and full suppression of wildfires in tortoise habitat. The Las Vegas District of the BLM established a policy generally prohibiting speed off road vehicle events in proposed desert tortoise Areas of Critical Environmental Concern.

Caliente Management Framework Plan Amendment

The Ely Field Office of the BLM manages 754,600 acres of desert tortoise habitat. The proposed action in the Draft Caliente Management Framework Plan Amendment proposes the designation of 219,000 acres as Areas of Critical Environmental Concern for desert tortoise. These areas would encompass 86% of the designated critical habitat in Lincoln County.

Tonopah Resource Management Plan

The Nevada Tonopah Resource Area of the BLM manages 70,600 acres of tortoise habitat in the Northeastern Mojave Recovery Unit. They have completed a Resource Management Plan and Final Environmental Impact Statement which is currently under protest. In the plan it is proposed to maintain population numbers of desert tortoise, restrict grazing to be consistent with the Biological Opinion, and limit vehicle use to existing roads and trails within all 70,600 acres of tortoise habitat. Approximately 30,000 acres of known desert tortoise habitat is identified for disposal.

Dixie Resource Management Plan

The Dixie Draft Resource Management Plan was published in Draft in October 1995. The Beaver Dam Slope portion of the Dixie Resource Area contains a population of desert tortoise which are within the Northeastern Mojave Recovery Unit. Under the preferred alternative the BLM would acquire up to 16,000 acres, partially within the Northeastern Mojave Recovery Unit, of some of the highest quality desert tortoise habitat in Washington County, Utah. There could be up to 6,205 acres of additional surface disturbance in the Beaver Dam Slope area from powerline and pipeline construction from previously issued rights-of-way. There would be additional surface disturbance from mining on 800 acres within the 63,630 acres of high mineral potential areas in the Beaver Dam Slope outside of tortoise habitat. Also, 83,765 acres outside of the proposed corridors within the Northeastern Mojave Recovery Unit would be established as right-of-way avoidance and exclusion areas. Approximately 2,000 acres in the Beaver Dam Slope Area would be withdrawn from mineral entry. Spring grazing would be deferred on 61,150 acres of desert tortoise critical habitat. All desert tortoise habitat in the Beaver Dam Slope Area would be closed to off-highway vehicle use. No off-road vehicle use for fire suppression would be allowed in the Beaver Dam Slope. Options for predator control will be evaluated.

Arizona Strip Land Use Plan Amendment Resource Management Plan

The Arizona Strip contains 300,000 acres of tortoise habitat in the Northeastern Mojave Recovery Unit. Their Land Use Plan Amendment for the purposes of incorporating the goals and objectives of the Recovery Plan into their Resource Management Plan was signed in April 6, 1998. The Amendment designated two Areas of Critical Environmental Concern; Beaver Dam Slope of 48,200 acres and Virgin Slope of 40,300 acres. In addition, the Pakoon Desert Wildlife Management Area of 81,900 acres was designated. These areas will be managed for the recovery of the tortoise.

Las Vegas District Resource Management Plan

In May 1992 BLM issued the Draft Stateline Resource Management Plan for the management of 3.7 million acres in Clark and southern Nye counties. When completed, the Plan (now the Las Vegas Resource Management Plan) will replace both the Clark County Management Framework Plan and the Esmeralda-Southern Nye Resource Management Plan. The Draft Resource Management Plan alternatives all proposed to establish Areas of Critical Environmental Concern for management of desert tortoise with varying levels of protection by alternative. In part due to the management recommendations of the Desert Tortoise Recovery Plan, a supplement to the Stateline Resource Management Plan was released in May 1994. One purpose of the supplement was to ensure that there was an alternative which would incorporate the goals and objectives of the Desert Tortoise Recovery Plan.

Activity Plans

All desert tortoise habitat in Arizona is within the Arizona Strip BLM Pakoon Basin Habitat Management Plan, a cooperative Sikes Act document written by the BLM and the Arizona Game and Fish Department.

In June 1992, a Piute-Eldorado Habitat Management Plan (which included a portion of the Northeastern Mojave Recovery Unit) was prepared by the Las Vegas District BLM in cooperation with the National Park Service, Nature Conservancy and Nevada Division of Wildlife. It proposes management plans and policies for about 430,000 acres in the Eldorado, Cottonwood and Piute Valleys. It is not yet finalized and approved.

Management established in the Piute/Eldorado Tortoise Management Area under the Clark County Short-Term Habitat Conservation Plan will be carried forward into the Las Vegas Resource Management Plan as valid existing management. Grazing allotments currently under non-use status would be closed to grazing. Off highway vehicle designations would be set in the plan, replacing an interim closure which is currently in effect.

United States Fish and Wildlife Service

On August 20, 1980 the Service determined the Beaver Dam Slope population of the desert tortoise to be threatened and also designated 35 square miles of critical habitat.

In August of 1989 the Mojave population of desert tortoise north and west of the Colorado River was listed as endangered under emergency rule. Emergency listings are only effective for 180 days and the desert tortoise (Mojave population) was listed as threatened under the normal listing procedure in 1990.

In January 1993 environmental organizations sued the Service for not designating critical habitat pursuant to the 1990 Federal listing of the desert tortoise as a threatened species throughout its range in the Mojave Desert. As a result of this suit, the Service designated critical habitat for the listed populations of desert tortoise on February 8, 1994. Of the acreage designated, 846,000 acres of critical habitat were designated within the Northeastern Mojave Recovery Unit. Critical habitat was not designated within the Lake Mead National Recreation Area nor the Desert National Wildlife Range because land management practices already provided sufficient protection. The Service will revise critical habitat in the future as land management plans, recovery plans, or other

conservation strategies are developed and fully implemented reduce the need for the additional protection provided by critical habitat designation.

The Recovery Plan for the Desert Tortoise was completed in June 1994. The Plan provided direction to land management agencies on geographic areas to be protected for the tortoise and management prescriptions for these areas. The objective of the Recovery Plan is the recovery and delisting of the desert tortoise. The Service is working with the BLM and other land management agencies to implement the goals and objectives of the Recovery Plan for the Desert Tortoise. The Service has a contract with the Nature Conservancy to develop site-specific management plans for the proposed Desert Wildlife Management Areas in Nevada. Section 7 funding has been authorized for purchase of grazing allotments, a monitoring program and signs for tortoise management areas, removal of burros, a public education program, testing tortoise for exposure to upper respiratory tract disease prior to release, a study of barrier effectiveness, data development and habitat restoration.

Clark County Habitat Conservation Plans

In July 1991 the Short-Term Habitat Conservation Plan for the Desert Tortoise in Las Vegas Valley, Clark County, Nevada was approved. It allowed incidental take of 3,710 tortoise on 22,352 acres in the Las Vegas Valley for a period of three years. Prior to habitat disturbance, a survey and removal of desert tortoise was required. In July 1994, an amendment to the permit was issued that increased the acreage to 30,352 and extended the period by one year. On August 1, 1995 the Service issued Clark County a long-term 30-year Incidental Take Permit and approved the accompanying Desert Conservation Plan. The long-term permit extended coverage county-wide.

In 1991 a tortoise management area was established in Piute and Eldorado Valleys in southern Nevada. This tortoise management area was established through the implementation of the Clark County Short-Term Habitat Conservation Plan. In order to qualify as conserved habitat, certain land-use controls had to be implemented by the Land Management Agency. This included the removal of livestock from the area, restriction of vehicles to designated roads and trails, limitations on commercial and competitive off-highway vehicle events and additional law enforcement. Since approval of the plan in 1991, the BLM has implemented all of the required actions except for the mining claim validation. The BLM and National Park Service established an area including approximately 541,000 acres of conserved habitat. Of this about 139,500 acres is within the Northeastern Mojave Recovery Unit.

Under the County's Habitat Conservation Plan, the BLM agreed to manage public lands in which Clark County acquired the grazing privileges on a willing seller basis, as part of a "Tortoise Management Area" for the conservation of desert tortoises. From 1991 to 1994 Clark County, through an agreement with the Nature Conservancy, acquired three grazing allotments (Christmas Tree Pass, McCullough Mountain and Jean Lake) of which the first two listed became the foundation for the establishment of the Piute/Eldorado Tortoise Management Area. Ireteba Peaks and Crescent Peak Allotments were subsequently acquired. As a signatory to the Implementation Agreement for implementing the Habitat Conservation Plan, the BLM agreed to: 1) allow nonuse of the allotments for conservation reasons; 2) implement a road closure by designating certain roads and trails as open and closing others; 3) not approve competitive, commercial, or organized events within the Tortoise Management Area (except for parts of Eldorado Valley); 4) not allow additional landfills to be established within the Tortoise Management Area; 5) not take any action which would increase the recreational activities within the Tortoise Managment Area; and 6) otherwise manage the Tortoise Management Area on public lands for the conservation of desert tortoises. These conservation actions were to be incorporated into the Las Vegas Resource Management Plan once approved.

In 1995 Boulder City acquired 107,500 acres of Public Lands under the authority of the Eldorado Valley Transfer Act. In conjunction with this purchase Clark County acquired a conservation easement on approximately 85,000 acres of the purchased lands. The conservation easement requires that the covered lands be managed consistent with the Desert Tortoise Recovery Plan for the conservation of desert tortoises and other species as identified in

Clark County's Desert Conservation Plan. This conservation easement is contiguous to the proposed Piute/Eldorado Area of Critical Environmental Concern and tortoise habitat on Lake Mead National Recreation Area.

Three interim road closures were implemented between December 1992 and July 1994. The off highway vehicle designations were changed from "open" or "limited to existing roads and trails" to "limited to designated roads and trails". These management actions were implemented on approximately 401,000 acres of BLM lands. Of this approximately 73,500 acres is within the Northeastern Mojave Recovery Unit.

Under the Short-Term Habitat Conservation Plan, a trust fund of over $3,000,000 was established to assist ongoing management of conserved habitat. An additional $1,000,000 was added to the trust fund as mitigation for a one-year amendment and extension of the section (10)(a) permit.

In July 1995, the Short-Term Habitat Conservation Plan with a one year extension, expired. The subsequent plan, called the Clark County Desert Conservation Plan, was approved on July 11, 1995 and became effective on August 1, 1995. This plan provides funding for implementation of recovery actions, research and environmental education. The Section 10(a) permit associated with the Clark County Desert Conservation Plan provides for incidental take of desert tortoise on private land in Clark County for a 30 year period. The area covered by the Section 10 (a) permit includes all non-Federal lands in Clark County (412,000 acres) which consists of 170,000 acres of developed land and 242,000 acres of undeveloped land. Take of desert tortoise is authorized on up to 113,900 acres of non-federal lands. Disturbance is expected to occur mostly within the Las Vegas Valley.

The Desert Conservation Plan requires a $550 per acre development fee on disturbance of private property throughout Clark County. Fees collected are held in an endowment fund. Clark County administers and invests the endowment fund in accordance with the laws of the State of Nevada. The Desert Conservation Plan proposes to mitigate the impacts of incidental take of tortoises on nonfederal lands in Clark County through the expenditure of funds to assist in implementation of conservation activities, primarily within desert wildlife management areas or tortoise areas of critical environmental concern.. Between $1.35 and $1.65 million per year will be available for the first 10 years and a minimum of $1.35 million per year for the rest of the 30 year period will be allocated and spent for mitigation measures outlined in the Desert Conservation Plan. Specific conservation measures to be funded include: funding for law enforcement; designation, signing, and closure of roads; restoration or acquisition of habitat; construction and maintenance of tortoise barriers along roads; tortoise inventory; monitoring and multiple species inventory; and other protective measures within Clark County.

It is possible that some of the money could be spent outside of Clark County, and may be used to purchase grazing permits within tortoise habitat in Lincoln County. In the event that grazing permits are acquired, the BLM has agreed that Clark County need not maintain or remove any range improvements because the land would be retained as habitat.

There is a potential loss through development of 113,900 acres of privately owned land within desert tortoise habitat authorized under the permit to Clark County. This includes lands currently in federal ownership which are transferred to private ownership during the life to the permit. This permit includes incidental take of the desert tortoise over a 30 year period. The permit area includes all of the non-Federal lands within Clark County, approximately 325,000 acres. The Desert Conservation Plan would impact less than 4% of the more than 3.5 million acres of desert tortoise habitat in the county. Of that 113,900 acres, 80% is likely to support desert tortoise habitat. It is projected that during the life of the permit (1994-2023) $44,757,642 will be raised to be used for conservation of the desert tortoise (USFWS, 1995).

For a two year period after issuance of the July 1995 permit, payments from the principal of the Clark County Desert Conservation Plan endowment fund were committed to purchase (on a willing-seller/willing-buyer basis) grazing privileges and/or private inholding, provided the cost does not jeopardize the ability of the fund to provide sufficient money to fulfill the other minimization and mitigation requirements of the plan for the term of

the permit. In order to qualify, contracts or options to purchase grazing privileges and other real property must have been entered into within two years after the long-term permit is issued (July 1995) and the money must actually be expended within five years after the long-term permit is issued. Grazing privileges which have been canceled will not be purchased. However, in the event the decision canceling any grazing privilege is under review by the Interior Board of Land Appeals or any court, that grazing privilege shall still qualify for purchase.

Until the Las Vegas Resource Management Plan is approved the non-use provision of the Implementation Agreement for the Desert Conservation Plan is in effect. It reads, "Non-use status for conservation and protection purposes shall be approved and grazing shall not be permitted...until such time as a definitive study of livestock/tortoise interrelationships has been completed and has scientifically demonstrated that livestock grazing can be conducted on the acreage affected by the acquired grazing permits under conditions that will improve tortoise habitat and will not impair recovery of the species."

Some tortoises removed from lands to be developed in the Las Vegas Valley have been translocated to an area of public lands outside of the Las Vegas Valley. The translocation site is located west of I-15 and south of Highway 161. The purpose of the translocation is to 1) provide a means in which otherwise healthy desert tortoise may have a reasonable chance of long-term survival in the wild; 2) study various translocation techniques; 3) determine if large scale translocation can be successfully implemented where existing tortoise populations occur or once occurred; and 4) to reduce the number of tortoise held at the Desert Tortoise Conservation Center which is nearing capacity. The project is mostly funded with Habitat Conservation Plan and Section 7 funding.

Nye County Habitat Conservation Plan

A 30-year Permit issued by the Service to Nye County became effective on February 10, 1995. It allows for the incidental take of 20 desert tortoise during construction, operation and rehabilitation of the Pahrump Landfill, which will affect 80 acres of desert tortoise habitat. The Habitat Conservation Plan submitted with the permit application outlines measures to minimize and monitor the effects of the take. Over the term of the permit, Nye County shall transfer up to a total of $25,920 into a desert tortoise trust fund as mitigation for the alteration of these 80 acres. These funds will be used to purchase, install, and maintain cautionary tortoise road signs. Surplus funds will be used for public education on the Mojave Desert and its inhabitants, including the desert tortoise.

Desert Tortoise Management Oversight Group

A Management Oversight Group consisting of the BLM State Directors for Nevada, Utah, Arizona and California; the three Regional Directors of the U.S. Fish and Wildlife Service regions which cover desert tortoise habitat; the four state wildlife agency Directors; representatives from the National Park Service, and Military Departments provides direction for the coordinated management of desert tortoise habitat. In addition, the group, through their Technical Advisory Committee, prioritize research activities to benefit desert tortoise. The Management Oversight Group also proposes rangewide management policies.

Desert National Wildlife Range

The Desert National Wildlife Range was established in 1936 primarily for the preservation of the desert bighorn sheep. The Desert Range originally contained 2,250,000 acres. In 1966 it was reduced in size to it's current 1,588,000 acres which includes 150,000 acres of desert tortoise habitat. Public use of the Desert Range has historically been restricted through limitations on vehicle access. Tortoise habitat in the Desert Range is managed in accordance with the Recovery Plan for the desert tortoise. Critical habitat for the tortoise was not designated within the Desert Range because land management practices were determined to provide sufficient protection.

The Nellis Air Force Range utilizes approximately 836,000 acres of the Desert Range for air-to-air and air-to-ground testing and training. Historic desert tortoise habitat loss in this area can be attributed to military bombing and gunnery activities. While the number of tortoises that currently occupy these denuded sites is unknown, bombing continues to kill some tortoise and disturb remaining tortoise habitat within the 100,000 acre target impact area of the Desert Range which overlaps with the Nellis Air Force Range. There are 800,000 acres in use by the Air Force with a target impact area of 100,000 acres and with active bombing on 50,000 acres of low density tortoise habitat. A "jurisdictional" exchange has been proposed by the Service to relieve the Service and the Desert Range of incompatible uses as represented by the military use. This is currently under negotiation with the Military.

The Department of Defense

The Department of Defense manages approximately 275,000 acres of tortoise habitat on the combination of the Nellis Air Force Range, the Small Arms Range and the Nellis Air Force Base. The Nellis Air Force Range contains about 260,000 acres of mostly low density tortoise habitat. The 10,240 acres within the Small Arms Range is of low to moderate habitat value for tortoise. Sixty three percent of the historic ordnance impact areas (67,655 acres) are in desert tortoise habitat. Portions of 21 historic target impact zones (1,056 acres) are within desert tortoise habitat.

The habitat supports very low to moderate density tortoise populations. The Nellis Range is restricted to public access, protecting tortoises from collection or harassment by the public. These animals are also isolated from exposure to released pet tortoises which may be infected with Upper Respiratory Tract Disease. No off-road travel is allowed and there is no livestock grazing or mining. A few wild burros may use tortoise habitat, however, numbers are low. Air Force personnel and contractors using the range must complete a tortoise education program. Because of target closures, only 970 acres of disturbed desert tortoise habitat within the Nellis Air Force Range will continue to be degraded by weapons testing/training.

Nevada Test Site

Department of Energy manages approximately 285,440 acres of tortoise habitat which occurs on the southern third of the Nevada Test Site. Defense related, nuclear testing activities have disturbed an unknown acreage of desert tortoise habitat. Public access and use has always been severely restricted. Portions of the area have remained in primarily a natural condition with no other uses allowed. Department of Energy is currently preparing a Resource Management Plan which will lay out how natural resources are managed on the Test Site.

Tortoise densities on Nevada Test Site range from very low to low. Habitat is contiguous with tortoise habitat on public land to the south and the Nellis Air Force Range to the east. It is isolated from the proposed Coyote Springs Area of Critical Environmental Concern by the Nellis Air Force Range and is not identified as a potential desert wildlife management area in the Tortoise Recovery Plan. No critical habitat was designated on the Nevada Test Site.

The Draft Environmental Impact Statement for the Nevada Test Site and Offsite Locations in the State of Nevada was completed in January 1996. This document covers the entire Test Site and includes comprehensive considerations of the desert tortoise. On August 22, 1996 the Service issued a programmatic biological opinion (File No. 1-5-96-F-33) to the Department of Energy/Nevada Operations which covered implementation of proposed actions on the Nevada Test Site.

As of spring 1997 the Yucca Mountain Project began an Environmental Impact Statement with the BLM as a cooperating agency. The Environmental Impact Statement will include consideration of desert tortoise and will evaluate effects on natural resources.

Harrick Investments (formerly Aerojet)

On March 31, 1988, PL 100-275, the Nevada Land Exchange Authorization Act of 1988 was passed. This legislation authorized the transfer of approximately 29,000 acres of moderate to high density tortoise habitat on Public land in Clark and Lincoln counties to Aerojet Corporation. An additional 13,800 acres of tortoise habitat were leased to Aerojet for a term of 99 years. These transferred and leased lands create a doughnut hole within the proposed Coyote Springs Area of Critical Environmental Concern. Recent transfer of the leased lands to Harrick Investments lands was approved by the BLM on November 15, 1996.

Approximately 13,800 acres of tortoise habitat are leased to Harrick Investments under a 99 year lease (6,400 acres in Clark County and 7,370 acres in Lincoln County). Under the terms of the lease, these lands are withdrawn from mineral entry and livestock grazing. The area is closed to off highway vehicle use. While Harrick has the authority to construct various facilities on the leased land, they are required to minimize impacts to desert tortoise and to comply with federal, state and local laws and regulations. Minimization measures include fencing of construction sites and roads which traverse high density tortoise habitat, providing a tortoise education program for all workers and relocating tortoises from fenced areas to undisturbed areas. Development of the leased lands is also subject to Section 7 consultation.

Lake Mead National Recreation Area

The establishment of Lake Mead National Recreation Area on one hand protected tortoise habitat from development, but on the other hand focused intense recreational use on portions of tortoise habitat. The Recreation Area contains tortoise habitat around the edges of Lake Mead within the Northeastern Mojave Recovery Unit. The area is managed to maintain natural conditions while providing for visitor recreational use. The National Park Service emphasizes public education and preservation of the desert ecosystem. The National Park Service has completed a draft management plan for the desert tortoise to implement the goals and objectives of the Tortoise Recovery Plan.

Valley of Fire State Park

This State Park manages for natural conditions and visitor use within 36,000 acres of desert tortoise habitat and environmental education for the desert ecosystem, including the desert tortoise, is emphasized for the visitors.

Moapa Piute Indian Reservation

The Moapa Piute Reservation contains approximately 72,000 acres of tortoise habitat. Land use activities on the Reservation which affect desert tortoise are subject to Section 7 consultation through the Bureau of Indian Affairs.

Other Actions

Environmental Education

A Public Affairs Plan was developed by the Las Vegas District BLM in October of 1989 as a result of the BLM Rangewide Plan. This was used to guide public education efforts in regard to protection of the desert tortoise. Four "Fact Sheets" have been developed and are being distributed to the public. Clark County in cooperation with BLM, other governmental agencies and interest groups, has developed public education videos for desert tortoise environmental education. Clark County has also developed several desert tortoise environmental education "public service announcements" for radio and TV broadcast which have been aired in the Las Vegas area.

The BLM is currently working on establishing two kiosks in the Piute/Eldorado Tortoise Management Area. A school curriculum on desert etiquette has been developed by the Nevada Cooperative Extension Service under contract to Clark County. Environmental education to assist survival of the desert tortoise is done at the local schools and is also conducted at The Spring Mountain National Recreation Area, Desert Tortoise Conservation Center, Red Rock Canyon National Conservation Area, Lake Mead National Recreation Area, and Valley of Fire State Park.

Research

There is ongoing research to aid in the recovery of the desert tortoise. The Recovery Plan identified 10 research needs among the recovery tasks recommended for agency implementation. The research is being coordinated by the Management Oversight Group. Research continues to be conducted at the Desert Tortoise Conservation Center. The Smithsonian is currently conducting desert tortoise nutrition research at the Center with funds provided by the Desert Conservation Plan and Section 7 mitigation funds derived from community sand and gravel pits on public lands.

In the Desert Tortoise Translocation and Habitat Efficiency Study, desert tortoise are being released on land south of Las Vegas. The purpose of the project is to provide researchers and land managers with techniques for improving desert tortoise translocation efforts at other underpopulated sites, and learn more about the habitat requirements of desert tortoise.

Implementation of the results of the current research by Biological Resources Division of U.S. Geological Survey and the Smithsonian Institution will provide scientific data as guidance for more effective management of the desert tortoise. The ongoing research includes such topics as effects of livestock grazing on tortoise growth rates, effectiveness of fences and culverts in preventing tortoise highway mortality, and effectiveness of raven control in reducing juvenile tortoise predation. Monitoring will be done in accordance with the methods developed through the Management Oversight Group.

The College Of Natural Resources at Utah State University has received funding to study the Mojave Desert ecosystem which would include considerations of desert tortoise. The principals in this "Mojave Desert Ecosystem Initiative" are the Department of Defense, the BLM and Utah State University. This study would provide an ecological data base for future management decisions within the Mojave Desert.

Transportation Corridors

Highways, roads and railroads have been built throughout desert tortoise habitat to interconnect the population centers within the Northeastern Mojave Recovery Unit, with concentrations located around the major population centers. Nevada Department of Transportation manages approximately 1,000 miles of roadway through desert tortoise habitat in Clark, Lincoln, Nye, Esmeralda, and Mineral Counties. About 900 miles of this is within the Northeastern Mojave Recovery Unit. In addition there are many miles of County and BLM roads throughout tortoise habitat.

The Clark County Desert Conservation Plan specifies procedures for Nevada Department of Transportation to follow during normal and emergency maintenance activities and construction activities in order to protect tortoise. The area of Nevada Department of Transportation activity covered by this plan includes approximately 1,000 miles of roadway (affecting about 2,900 acres) through desert tortoise habitat in Nevada. Incidental take will be allowed in connection with the maintenance of roads, highways and material sites.

During 1997 highway barriers were installed along I-15 south of Jean, Nevada and along State Route 161 in conjunction with a tortoise relocation program. Tortoise proof barriers are also being installed along US Highway 95 in Piute Valley. These barriers will be monitored and evaluated for their effectiveness and longevity. Currently, Clark County's Implementation and Monitoring Committee is looking at which roads should have

priority for fencing over the next few years. Highway barriers and underpasses will continue to be constructed for the benefit of desert tortoise as monitoring demonstrates the effectiveness of the current barriers and openings. Clark County through Habitat Conservation Plan funding intends to spend at least $500,000 per year to construct tortoise proof barriers along highways and roads where tortoise mortalities are known or expected to occur due to traffic. Underpasses for tortoises would probably be installed during new road construction projects. Current culverts may be modified to provide better access for tortoises.

The Nevada Division of Transportation anticipates 26 road widening projects resulting in 494 acres of disturbance and the need for about three new materials sites per year for the next three to five years and one per year thereafter adjacent to existing roadways in Clark, Lincoln and Nye Counties. A maximum of about 2,400 acres of land may be developed as material sites over the thirty year term of the Service Section 10 (a) permit. While this permit includes the majority of desert tortoise habitat in Nevada, similar types of disturbances will occur in other portions of the Northeastern Mojave Recovery Unit in Utah, Arizona and California, but to a lesser degree.

As specified in the Clark County Desert Conservation Plan, Nevada Department of Transportation will relinquish and rehabilitate unused and unneeded material sites (about 160 acres) within the proposed Piute/Eldorado Area of Critical Environmental Concern. An estimated 120 acres of these would be within the Northeastern Mojave Recovery Unit.

Residents of Scenic, Arizona have approached Mojave County and the BLM in regard to a potential bridge over the Virgin River near Big Bend that would connect with Highway 91. This would alter travel patterns within that portion of the Northeastern Mojave Recovery Unit.

Collection as Pets

Desert tortoise have been taken from the wild and brought home as pets for many decades. According to the Service, throughout its range, over 100,000 individuals of this species existed in captivity prior to its listing in 1990.

Landfills

In the past, landfills had developed near all populated areas throughout the Northeastern Mojave Recovery Unit. As a result of the EPA regulations for landfills, Clark County has closed all but two landfill sites in the County; Apex and Laughlin. A majority of the solid waste in the County will be sent to the Apex site (USFWS, p. 77, 1995) Other landfills throughout the Northeastern Mojave Recovery Unit have been closed and regional, more closely regulated landfills established as a result of the EPA regulations. Unregulated landfills served as a food source to maintain populations of ravens and other natural predators of the tortoise.

BLM is in the process of identifying and closing illegal dumps which are located on public lands. Landfills in Searchlight, Mesquite, Indian Springs, Sandy Valley, Logandale, Overton, and Pahrump have been closed. Silver State Disposal has proposed the development of transfer stations throughout Clark County. A landfill has been opened on private land near Mesquite. A 30 year permit issued to Nye County became effective on February 10, 1995. It allows the incidental take of desert tortoise during construction and operation of the Pahrump landfill, which will affect 80 acres of desert tortoise habitat.

Urban Development

Clark County is one of the fastest-growing counties in the nation. Clark County contains nearly 65% of the population of Nevada. The Las Vegas Valley is the fastest growing metropolitan area in the United States. Approximately 4,000 new residents move to the area each month. The Las Vegas metropolitan area ranked second in the nation with an economic growth rate of 10.8 percent. From 1983 to 1993 Clark County's population increased from 535,108 to 919,388. By 2020 the population is expected to grow to 1,450,409.

(USFWS, p. 79, 1995). Urban development in Las Vegas Valley has all but eliminated what may have been one of the largest and densest tortoise populations in Nevada. In addition, the remaining habitat in the Las Vegas Valley has been seriously fragmented.

This explosive growth is expected to continue, resulting in an increasing demand on public lands in southern Nevada for infrastructure needs, utility and road corridors and recreational opportunities. Other portions of the Northeastern Mojave Recovery Unit including Moapa, Mesquite, Alamo and Ash Springs, southeastern Utah, Northwestern Arizona and southern California will likely also experience population growth. "Historically, habitat reduction and fragmentation have not been uniform throughout the desert tortoise's range, but have been concentrated around populated areas, such as; Las Vegas, Laughlin, and Mesquite, Nevada and St. George, Utah." (USFWS, p. 5823, 1994c).

On April 11, 1996 the Service issued a programmatic biological opinion to the Bureau's Las Vegas Field Station for implementation of multiple use activities within the Las Vegas Valley. Consultation was reinitiated on a 1991 opinion to expand the programmatic boundary from 263,267 acres to 378,956 acres to meet the needs of development in the Las Vegas Valley and to implement Bureau land use plans. The opinion concluded that increasing the acreage of desert tortoise habitat potentially affected within the expanded programmatic area to 121,000 acres, and taking all of the tortoise occurring on those lands was not likely to jeopardize the continued existence of the species. The programmatic area does not include desert tortoise critical habitat or areas proposed as areas of critical environmental concern.

Minimal development is expected over the next several decades within the proposed areas of critical environmental concern and desert wildlife management areas. Public lands within the proposed these areas would not be available for sale, lease or exchange. There is relatively more private land within the Coyote Springs Area of Critical Environmental Concern due to the Areojet Legislation. Some of this land is expected to be developed. About 170,000 acres of land in tortoise habitat in the Northeastern Mojave Recovery Unit is projected to be developed during the life of the plan.

Minerals

Mining activity has historically been minimal within the Northeastern Mojave Recovery Unit. Locatable and salable minerals have accounted for the majority of minerals surface disturbance within the recovery unit. The Nevada portions of the recovery unit have had the most activity with the resulting surface disturbance. Mineral potentials average between low to high for fluid minerals; low for non-energy leasables; high for locatable minerals; and high for mineral materials. Since 1992, changes in the mining regulations have resulted in approximately a 50% reduction in the number of mining notices filed annually within the Las Vegas Field Office. This is representative of the decline in notices throughout the Northeastern Mojave Recovery Unit.

Development of mineral materials (sand and gravel) appears to be the most economic type of mineral development during the past and is projected to be so into the future. Most of this development is from the demand created by the expansion of Las Vegas, and Mesquite, Nevada, and St. George, Utah. The total disturbance in the recent past is estimated to be 6,030 acres within the Northeastern Recovery Unit. This includes mineral material right of ways for the various state Departments of Transportation.

With the known mineral deposits in Nevada and the high mineral potential for locatable minerals, development is expected within the life of this plan. Exploration and development has been moderate with an estimated 1,012 acres of disturbance within the Northeastern Mojave Recovery Unit. Exploration and development of leasable minerals has been low and an estimated 22 acres of surface disturbance has occurred in the Northeastern Mojave Recovery Unit.

Extensive reclamation is being completed on minerals activities within the Northeastern Mojave Recovery Unit. All past surface disturbances for leasable minerals and an estimated 512 acres of locatable minerals activity has

been reclaimed. Mineral material pits have not been reclaimed and to meet the increasing demand a 200 acre community pit has been established in the Northeastern Mojave Recovery Unit. Total surface disturbance for mineral materials is 6,230 acres and 500 acres from locatable minerals. Within the Caliente Resource Area there has been an estimated 200 acres disturbed by mineral development which is in the process of being reclaimed.

Future development scenarios have been developed based on the potential future market demands and commodity prices. These scenarios are projections for analysis purposes only. Leasable minerals have been determined to have continued exploration in Nevada and potential development of a small producing field. This type of activity would result in development of roads, drill pads, geophysical exploration and field development. There would be an estimated 325 acres of disturbance for this type of activities.

It is expected that the exploration for locatable minerals will continue at it present rate. Most of the activity will occur in portions of the Northeastern Mojave Recovery Unit in Nevada but activity is expected in Utah and Arizona portions of the Northeastern Mojave Recovery Unit. This activity will mainly occur under notices outlined under 43 CFR 3809 regulations. These operations are usually under five acres and consist of exploration drilling and trenching. It is expected some minerals development would occur under plans of operation which would include larger exploration/development plans and mining operations. It is expected that any mining operation would be small in size and range between 50 to 150 acres. There would be an estimated 2,130 acres of additional disturbance from locatable mineral activity.

Demand for mineral materials would remain high. There would be the need for additional community pits and the expansion of existing material sources. A community pit would be opened once every five years and would be restricted to 20 acres, except in the Las Vegas Field Office where community pits may be several hundred acres in size. There would be an expansion of the current pits. The Nevada Department of Transportation anticipates the need for about three new material sites per year for the next three to five years and one per year thereafter adjacent to existing roadways in Clark, Lincoln and Nye Counties (Clark County, p. 53, 1994)). A maximum of about 2,400 acres of land may be developed as material sites over the thirty year term of the Service Section 10 (a) permit (Clark County, p. 53, 1994). While this permit includes the majority of desert tortoise habitat in Nevada, similar types of disturbances will occur in other portions of the Northeastern Mojave Recovery Unit in Utah, Arizona and California, but to a lesser degree since there is a lower rate of population growth in these rural areas. It is, therefore, estimated that there would be an additional 3,500 acres of surface disturbance form mineral materials throughout the Northeastern Mojave Recovery Unit. In the Las Vegas Field Office, expansion of existing material pits within tortoise Areas of Critical Environmental Concern would be limited to a cumulative total of 1,000 acres.

There are existing mining claims throughout the proposed Areas of Critical Environmental Concern in the Northeastern Mojave Recovery Unit. Some surface disturbance from exploration and mine development is expected to occur. Any Mining Plan of Operation, would be subject to Section 7 Consultation with the Service. There are three gypsum mineral patents in or near the Gold Butte Area of Critical Environmental Concern. However, due to the distance from the market, it is unlikely that they would be economical to mine in the near future. Should the patents be developed in the future the only access into the area is through the proposed Area of Critical Environmental Concern.

Off-Highway Vehicle Use

Off-highway vehicle use in the Northeastern Mojave Recovery Unit has increased and proliferated since the 1960s (USFWS, p. D-16, 1994a). "As of 1980, off-highway vehicle activities affected approximately 25% of all desert tortoise habitat in California, as well as substantial portions in southern Nevada." (USFWS, p. 5823, 1994c).

After the listing of the desert tortoise, Las Vegas District set a policy prohibiting high-speed off-highway vehicle events in Category 1 and 2 tortoise habitat. Traditional events were relocated to courses outside of Category 1

and 2 habitat, with minor exceptions where no other alternative was available. After approval of the Short-Term Habitat Conservation Plan, the BLM agreed to prohibit high-speed events in the Piute/Eldorado Tortoise Management Area except for that portion of Eldorado Valley and Nelson Hills where racing was currently ongoing. Based upon the Tortoise Recovery Plan and the designation of critical habitat, the areas closed to off-highway vehicle events were redefined to be the proposed tortoise Areas of Critical Environmental Concern. Some areas of category 2 habitat that were previously closed, were reopened to these types of events.

As of April 1, 1994, and for the next three years, the BLM determined that in the Ivanpah Valley Area, ten (10) off-highway vehicle events would be allowed annually. The BLM determined that in the Eldorado Valley Tortoise Management Area, nine (9) events would be allowed annually. In addition permits are issued for events in other parts of the District. About 25 to 30 events are permitted annually. A programmatic biological opinion (File No. 1-5-95-F-237) for speed based off-highway vehicle events in the Las Vegas District (Stateline and Caliente Resource Areas) and Battle Mountain District (Tonopah Resource Area) was issued to the Bureau on August 30, 1995, which encompassed or replaced previous biological opinions issued to the Bureau for off-highway vehicle events.

Off-Highway Vehicle events are a popular activity on public land in southern Nevada. These types of events are expected to continue increase in the future. Non-competitive events such as dual sport rides and poker runs will probably increase due to overall increased population within the Northeastern Mojave Recovery Unit. Also, mountain bike events are becoming very popular.

The Las Vegas District Resource Management Plan proposes to limit speed events to approximately one-third of the Las Vegas District. This will preserve most areas where racing is currently allowed while prohibiting racing in Tortoise Areas of Critical Environmental Concern. Most activity would be restricted to existing race courses which will limit new disturbance. Non-speed events may be allowed on designated roads within Tortoise Areas of Critical Environmental Concern. There would be no competitive off-highway vehicle events allowed off of designated roads in Desert Wildlife Management Areas or Areas of Critical Environmental Concern throughout the Northeastern Mojave Recovery Unit. Access would be limited to designated roads and trails. The Biological Opinion for off-highway vehicle races allows for transfer sections of one motorcycle rally annually in the Beaver Dam Slope Area of Critical Environmental Concern.

"The ruggedness of the terrain and relatively few roads, especially in the Gold Butte and Pakoon Basin areas, tend to limit human impacts to desert tortoise habitat. Recently, however, there have been noticeable increases in off-highway vehicle activity, especially both north and south of the Virgin River in Arizona and Nevada." (USFWS, p. 56, 1994b). The BLM in 1989 designated the Bitter Springs and Gold Butte Back Country Byways, which may have increased vehicle use in tortoise habitat.

Fire Management

During the period 1980 to 1990 a total of 5,126 fires burned 554,569 acres in the Mojave Desert (USFWS, p. D-24, 1994a). Over the years, fires have been more frequent and more intense within the Northeastern Mojave Recovery Unit because of the introduced annuals which dry out and serve as a flash fuel, and the presence of increasingly more people who can accidentally start fires. Grass fires have increased in the Mojave Desert since the 1970s (USFWS, 1991). BLM has reported that historically the Mojave Desert did not have enough vegetation to keep a fire burning more than a few yards. However, the introduction of the prolific non-native annuals provides a flash fuel source that easily carries fires, (USFWS Bio Op, p. 9, 1991). Many native desert shrubs did not evolve with fire and have no particular adaption to survive any but very low intensity fires. Intense fires and repeated burning lead to the replacement of native annual species by exotic species.

Full suppression of wildfires is done in tortoise habitats with restrictions on surface disturbing activities and with educational briefings for the fire crews. Fires are expected to increase in numbers with the increase in human population within the Northeastern Mojave Recovery Unit.

Domestic Livestock Grazing

Grazing by cattle and sheep has occurred in the Northeastern Mojave Recovery Unit since the mid 1800s, with an increase in intensity near the turn of the century to the mid-1930s (USFWS, p. 5824, 1994c). This has caused changes within portions of the Northeastern Mojave Recovery Unit including change in vegetation composition to include more exotic annuals, an increase in brush species and a reduction in perennial grasses, and increased soil compaction and erosion. "There is little doubt that livestock grazing has changed the vegetative composition in the Mojave Desert during the past 140 years..." (Oldemeyer, p. 97, 1994). Some trampling of tortoise, tortoise burrows and/or dens has also occurred. As recently as 1988, about 30,000 animal unit months of use occurred within the Las Vegas Field Office. This had decreased to 7,730 by 1994.

Due to the listing of the desert tortoise, BLM initiated Section 7 consultation on the Bureau's livestock grazing program in desert tortoise habitat. As a result of the biological opinion issued by the Service, full force and effect grazing decisions (69) were issued from January 1992 to March 1993 to implement the Biological Opinion pursuant to Section 7 of the Endangered Species Act. Approximately 70 additional full force and effect decisions have been issued since the first set of 69. These decisions prohibited livestock grazing from March 1 to June 14 in all Category I, II and III Intensive desert tortoise habitat. In category III non-intensive desert tortoise habitat grazing is restricted by percent utilization and not by season of use.

The "terms and conditions" of the Biological Opinion were included in grazing permits issued for allotments in the Las Vegas Field Office and the Caliente Resource Area in desert tortoise habitat. In category I, II and "intensive" III habitat areas livestock grazing in Nevada was restricted through full force and effect decisions to the period of June 14 to February 28 and utilization restrictions were established. The BLM decision to implement this seasonal restriction was initially stayed by an Administrative Law Judge and upheld by Interior Board of Land Appeals. However, on November 11, 1995 a decision by Adminstrative Law Judge Child upheld the BLM decisions on 49 grazing/tortoise appeals for decisions issued 1992 and 1994. The BLM and appellants have appealed his decision to Interior Board of Land Appeals.

Several programmatic and other biological opinions have resulted in limitations of grazing activities within desert tortoise habitat in California. Biological opinions have resulted in the limitation of sheep grazing to category 3 habitats on public land within the North Eastern Mojave Recovery Unit in California (USFWS, p. 5829, 1994c).

Under the Short-Term Habitat Conservation Plan, the BLM agreed to manage public lands in which Clark County acquired the grazing privileges on a willing seller basis as part of a "Tortoise Management Area" for the conservation of desert tortoises. From 1991 to 1995 Clark County acquired six grazing allotments. As a signatory to the Implementation Agreement for implementing the Habitat Conservation Plan, the BLM agreed to allow nonuse of the allotments for conservation reasons.

Approximately 540,000 acres of desert tortoise habitat have been conserved by federal land managers as a direct result of the Clark County's habitat conservation efforts. Grazing privileges on five allotments totaling 753,500 acres of BLM managed land have been purchased and put into non-use. Some of these allotments included National Park Service lands. Those portions of the allotments in Lake Mead National Recreation Area, 435,900 acres were closed to grazing. Approximately 594 ,900 acres in the Northeastern Mojave Recovery Unit (435,900 BLM and 159,000 National Park Service) has either been closed to grazing or is managed under voluntary non-use. An estimated 419,150 acres of this is tortoise habitat. A sixth allotment, Jean Lake, was purchased by Clark County but is not scheduled for closure under the Las Vegas Resource Management Plan.

The Desert Conservation Plan allowed for continued purchase of grazing privileges for two years after approval of the permit. This two year period has expired. Only allotments with transactions in progress now qualify for purchase by Clark County. Additional livestock grazing permits within the Northeastern Mojave Recovery Unit may be purchased in the future for the benefit of desert tortoise or other species, through other funding sources.

Negotiations involving the permittees on the Sand Hollow and Beacon allotments have been ongoing regarding the retirement of grazing privileges which include lands in the Beaver Dam Slope (Nevada) tortoise critical habitat unit. Once the Caliente Plan Amendment is completed, both the Sand Hollow and the Beacon allotments would be closed to grazing. Negotiations are also underway with the Moapa Piute concerning retirement of the grazing privileges on the Rox Tule allotment.

Predation

A variety of animals prey on the desert tortoise or their eggs including foxes, coyotes, raptors, badgers and ravens. Ravens are federally protected through the Migratory Bird Treaty Act. In general, raven populations have increased dramatically over historical levels and may have an negative impact on tortoise populations in some locations. "...the Fish and Wildlife Service's Breeding Bird Survey Program provided data to show a 15-fold increase in raven populations in the Mojave Desert..." (USFWS, p. 6, 1994a). Raven populations will likely continue to increase within the Northeastern Mojave Recovery Unit because of a combination of factors.

Populations of ravens have increased in the Northeastern Mojave Recovery Unit because of a variety of factors: increased numbers of landfills and feedlots which provide a source of food, range developments have provided a source of water, construction of electrical transmission lines provide an unnaturally high number of nesting and roosting sites, increased miles of roads and highways which result in increased road kills which ravens use as a food source and protection of the species under the Migratory Bird Treaty Act.

In 1994 a raven control program was initiated by the BLM in California in cooperation with the National Biological Service and the Wildlife Service. The need for such a program was based on such evidence as 250 juvenile tortoise shells being found beneath single raven nests. Because of public concern with killing of the ravens the program was short-lived and the effectiveness of the program could not be evaluated.

Utilities

A wide variety of utilities including transmission lines, telephone lines, fiberoptic lines, and pipelines have been installed throughout the Northeastern Mojave Recovery Unit, concentrated around population centers. This type of development has also resulted in surface disturbance in previously undisturbed, backcountry areas. The maintenance roads created to serve these linear facilities have provided access routes for the public into the desert backcountry.

Hoover Dam, constructed in the 1930s and 1940s is located northeast of the Piute/Eldorado Area of Critical Environmental Concern. A portion of the power generated at Hoover Dam is distributed locally by Nevada Power Company through its transmission network. However, the bulk of the power generated is transmitted to California through Southern Nevada Edison and Las Angeles Water and Power lines which cross the Area of Critical Environmental Concern. In addition, the Navaho-McCullough transmission line transmits power from Page, Arizona to southern California.
Several large interstate transmission lines cross the Mormon Mesa proposed Area of Critical Environmental Concern. In addition, the Kern River Natural Gas Pipeline crosses the proposed Area of Critical Environmental Concern and extends through the Beaver Dam Slope Area of Critical Environmental Concern.

There is an existing Nevada-McCullough powerline across the Utah, Beaver Dam Slope Area of Critical Environmental Concern. A mile wide corridor has been legislatively designated by the Nevada-Florida Exchange Authorization Act of 1988, which parallels US 93 on the east side of the highway. A corridor exists on the Moapa Indian Reservation, which extends 1,500 feet westerly from the Reid Gardner-Pecos transmission line and 1,500 feet easterly of the McCullough transmission line. The Intermountain Power Project transmission line traverses the Recovery Unit. These powerlines provide roosting and nesting sites for ravens and the associated maintenance roads provide public access into the backcountry. Utility transmission line corridors and access roads increase the visibility of tortoises to predators.

The Service and the BLM are currently developing a programmatic approach to long-term pipeline maintenance (USFWS, p. 5829, 1994c). A second yet unconstructed powerline will parallel the existing Navaho-McCullough ROW across the Beaver Dam Slope. Approx. 5,000 acres of lands in Areas of Critical Environmental Concern within the Las Vegas District could be disturbed due to anticipated utility corridors. Approximately 1,800 acres are in the Rainbow Gardens corridor which cannot be activated unless the Sunrise Mountain Wilderness Study Area is released from wilderness consideration.

The final Environmental Impact Statement for the Southwest Intertie Power Project has been completed and a Record of Decision issued. This project is anticipated to begin construction during the time frame of this analysis and is projected to disturb tortoise habitat along 52 miles of the line in the Coyote Springs Area of Critical Environmental Concern.

Approximately 30,000 acres within the proposed Areas of Critical Environmental Concern in the Las Vegas District would be designated as utility corridors. Approximately 13,000 acres of this are within the Northeastern Mojave Recovery Unit. There would be designated corridors through all of the proposed Areas of Critical Environmental Concern except for Gold Butte. In addition, about 12,400 acres of the Boulder City Conservation Easement is within reserved corridors. Approximately 6% of the Area of Critical Environmental Concern acreage within the Las Vegas District would be within designated utility corridors.

If the Sunrise Mountain Wilderness Study Area is released from wilderness consideration, it would open the Rainbow Gardens Corridor for use. This would increase the likelihood of transmission lines from northern Nevada going through the Boulder City Conservation Easement or the Piute/Eldorado Area of Critical Environmental Concern.

The Intermountain Power Project could have an additional powerline added to their corridor during the life of this plan. This would disturb additional tortoise habitat within the Northeastern Mojave Recovery Unit.

Human Predation

Desert tortoise served as a staple food for thousands of years for the aboriginal inhabitants of what is now the Northeastern Mojave Recovery Unit, as evidenced through data recovered through archeological sites such as tortoise roasting pits, and ethnographic reports of early explorers.

"Human 'predation' is a major factor in the decline of the desert tortoise" (USFWS, p.6, 1994a). Mortality of desert tortoise due to gunshot is common in many parts of the Mojave Region. "At the BLMs Western Mojave Desert Study Plots, 14.6% to 28.9% of all desert tortoise carcasses bore evidence of gunshots..." (USFWS, p. D-6, 1994a). Approximately 10% of the tortoise shell remains from a study plot near Littlefield, Arizona had gunshot wounds. (USFWS, p. 5823, 1994c) "The threat of collections should not be underestimated and will continue to remain high for three reasons. First, most new arrivals to the Southwest are unaware that desert tortoises are protected. Second, the presence of law enforcement officers in open desert lands is inadequate. And third, commercial poaching of rare, threatened, and endangered species is well documented, and in some cases, a lucrative business." (USFWS, p. D-5, 1994a). Tortoise are a traditional food in some developing countries and, "...many former residents of these areas are bringing their traditional practices with them as they migrate to...Las Vegas and elsewhere in the west." (USFWS, p. D-3, 1994a).

Wilderness Study Areas

There is total of 1,507,821 acres of BLM Wilderness Study Areas in the Nevada portion of the Northeastern Mojave Recovery Unit. A total of 406,266 acres of these have been recommended to Congress as "suitable" by the BLM for wilderness designation. A portion of these areas contain tortoise habitat, below 4,000 feet in elevation. These lands are managed under "interim management". The primary objective of the management of these lands is to manage them in such a manner as to not to impair their suitability for designation as wilderness

(FLPMA, section 603). Wilderness study area status would continue to provide interim protection from surface disturbance within some of the tortoise habitat in the Northeastern Mojave Recovery Unit. Portions of the existing Wilderness Study Areas are projected to be designated as Wilderness by Congress during the life of this plan. Portions of tortoise habitat released from wilderness consideration would still be subject to Section 7 Consultation with the Service or in some cases will be incorporated into Areas of Critical Environmental Concern.

Upper Respiratory Tract Disease

Upper Respiratory Tract Disease is a respiratory disease which is easily transmitted and is potentially fatal to the desert tortoise. It appears to be spreading and may have been introduced to wild populations through illegal releases of diseased captive desert tortoises. Reduced nutritional conditions for desert tortoise, as a result of alterations in native vegetation communities and the native forage species availability caused by years of livestock grazing, has increased desert tortoise susceptibility to this and other diseases. Wild desert tortoises with signs of Respiratory Tract Disease are commonly found near cities and towns with concentrations of captive tortoises (USFWS p. 5824, 1994c). Respiratory Tract Disease has been documented in Nevada and California tortoise populations.

WHAT RESOURCES WILL BE IMPACTED CUMULATIVELY

According to the BLM "Guidelines For Assessing and Documenting Cumulative Impacts" handbook, the amount of analysis that is necessary can be greatly reduced by limiting cumulative analysis only to those issues and resource values identified during scoping that are of major importance. The issues and resource values of major importance or public concern which will be analyzed for cumulative impacts are impacts to the desert tortoise and to OFF-HIGHWAY VEHICLE events.

IMPACT ANALYSIS

Desert Tortoise:

Introduction

This impact discussion is common to all action alternatives. All habitat disturbing actions and actions funded, authorized or carried out by Federal agencies which may affect the desert tortoise must undergo a section 7 consultation with the Service. The subsequent "terms and conditions" of the biological opinions would be incorporated in the decision document and the permit or grant issued. Federal actions within designated critical habitat would be more likely to result in a jeopardy opinion since this type of designation is evaluated for "adverse modification of habitat" as well as "take".

This is expected to be the case for the next 25 years, the earliest time at which the Service would consider delisting of the tortoise on a Recovery Unit basis. This would minimize the effects of activities on the desert tortoise throughout the Northeastern Mojave Recovery Unit.

Management Direction

There are 856,000 acres of designated critical habitat for the desert tortoise within the Northeastern Mojave Recovery Unit. These are managed by a variety of agencies. In the attempt to recover the desert tortoise, the goals and objectives of the Desert Tortoise Recovery Plan would be implemented through a combination of management directions including the Arizona Strip Plan Amendment; Tonopah Resource Management Plan; Las Vegas Resource Management Plan; Caliente Plan Amendment; Dixie, Utah Resource Management Plan; Lake Mead National Recreation Area General Management Plan; and the Clark, Washington and Lincoln Counties Habitat Conservation Plans. **Table 1** "Proposed Management Areas Within the Northeastern Mojave Recovery

Unit", shows the proposed acreage within each Desert Wildlife Management Area or Area of Critical Environmental Concern by jurisdictional unit.

There are approximately 1,780 square miles of desert tortoise habitat within the Northeastern Mojave Recovery Unit proposed for tortoise management by the BLM. An additional 280 square miles have been proposed for Area of Critical Environmental Concern designation for the management of tortoise, by the BLM. These Areas of Critical Environmental Concern would be managed for recovery of the desert tortoise. Additional acreage would be designated in the Ivanpah Valley in California by the National Park Service and California Desert District BLM, but further details are lacking. The Service and the National Park Service have committed to manage tortoise habitat on these administrative units in accordance with Recovery Plan recommendations. For a comprehensive overview of the implementation of management prescriptions on BLM administered lands in the Northeastern Mojave Recovery Unit, see **Table 2** "Proposed Management Prescriptions for Desert Tortoise Management Areas in the Northeastern Mojave Recovery Unit". The combination of protective designations and management prescriptions would implement the goals and objectives of the Recovery Plan and ensure management attention for the desert tortoise.

The combination of areas which are proposed for tortoise recovery can be seen on **Map 1**. The boundary of the combination of areas does not follow the preferred reserve design as recommended in the Recovery Plan, particularly in regard to having a low edge to area ratio, and being unfragmented. However, it is not be possible for two out of the five proposed Desert Wildlife Management Areas in the Northeastern Mojave Recovery Unit to meet the preferred reserve design. In regard to the Beaver Dam Slope Management Area, the Recovery Team states, "A more compact, circular shape would be preferred, but is not possible." (USFWS, p. 47, 1994b). In regard to the Gold Butte-Pakoon Area the Recovery Team states, "The Gold Butte-Pakoon Desert Wildlife Management Area should contain between 270 and 310 square miles in an elongate 'C' shape opening to the east..." (USFWS, p. 55, 1994b). An elongate "C" design does not meet the listed preferred reserve design.

The proposed combination of Desert Wildlife Management Areas/Areas of Critical Environmental Concern contain a high percentage of the best remaining habitat, much of which is relatively inaccessible to human disturbance. "The plan recommends reserves that are at least 1,000 sq. miles in extent with boundaries that include the best examples of desert tortoise habitat." (Duck, p. 7, 1996). The combination of agency proposals within the Northeastern Mojave Recovery Unit is almost twice that which is recommended in the Recovery Plan. This vast amount of acreage set aside and more intensive management for desert tortoise management compensates for the failure to meet all aspects of reserve design.

In addition to the acreage set aside for protection of desert tortoise, more intensive management is being proposed outside of the areas of critical environmental concern for tortoise within the Caliente Planning Area. As the Recovery Plan states on pages ii, 43 and 47; more intensive management of tortoise habitat can compensate for any lack of appropriate acreage within a Recovery Unit. Surface disturbance would be minimized within the Special Management Areas, thus protecting tortoise habitat.

Table 1. Proposed Management Area Within the Northeastern Mojave Recovery Unit.

MANAGEMENT AREA	UNIT	AREA (SQ. MI.)[1]	AREA (ACRES)[2]
COYOTE SPRING (NV BLM)	LAS VEGAS FIELD OFFICE	118	75,500
KANE SPRINGS (NV BLM)	CALIENTE FIELD STATION	103	65,900
MORMON MESA (NV BLM)	LAS VEGAS FIELD OFFICE CALIENTE FIELD STATION	237 172	151,400 109,700
PAKOON - GOLD BUTTE (AZ/NV BLM, NATIONAL PARK SERVICE)	LAS VEGAS FIELD OFFICE SHIVWITS RESOURCE AREA LAKE MEAD NAT. REC. AREA	293 128 81	187,400 81,900 51,800
BEAVER DAM SLOPE (AZ/NV/UT BLM)	CALIENTE FIELD STATION SHIVWITS RESOURCE AREA DIXIE RESOURCE AREA	69 76 64	44,000 48,400 41,100
VIRGIN SLOPE (AZ BLM)	SHIVWITS RESOURCE AREA	72	45,900
DESERT NATIONAL WILDLIFE RANGE	FISH AND WILDLIFE SERVICE	241	154,000
PIUTE/ELDORADO (BLM, NATIONAL PARK SERVICE)	LAS VEGAS FIELD OFFICE LAKE MEAD NAT. REC. AREA	327 83	209,800 53,400
IVANPAH VALLEY (NATIONAL PARK SERVICE, MOJAVE NATIONAL PRESERVE, CA BLM)	No data available on future designations. Total of approximately 450 sq. miles within NE Mojave Recovery Unit in California.		No data available on future designations. Total area within NE Mojave Recovery Unit in California is equal to approximately 300,000 ac.
TOTAL: w/no livestock grazing allowed TOTAL: w/livestock grazing allowed		1,783[3] 280	1,141,000[3] 179,400

1 - Area in sq. miles rounded to nearest mile.
2 - Area in acres rounded to nearest 100 acres.
3 - Area in California not included in total acreage.

Table 2. Proposed Management Prescriptions for Desert Tortoise Management Area in the Northeastern Mojave Recovery Unit.

DESERT TORTOISE RECOVERY PLAN IMPLEMENTATION - NORTHEASTERN MOJAVE RECOVERY UNIT DESERT WILDLIFE MANAGEMENT AREA/AREA OF CRITICAL ENVIRONMENTAL CONCERN PRESCRIPTION PROPOSALS				
RECOVERY PLAN RECOMMENDATION	SHIVWITS RESOURCE AREA, ARIZONA BLM	DIXIE RESOURCE AREA, UTAH BLM	CALIENTE FIELD STATION, NEVADA BLM	LAS VEGAS FIELD OFFICE, NEVADA BLM
PROHIBITED: All vehicle activity off of designated roads, all competitive and organized events on designated roads.	Limit vehicle activity to designated roads - no competitive or commercial organized events. Allow limited non-speed and other permitted events on existing, designated roads. Maintenance of designated roads.		Limit vehicle activity to designated roads - no competitive speed events allowed. Allow limited non-speed and other permitted events on existing, designated roads. Consider non-off highway vehicle events and commercial uses only on a case-by-case basis and evaluate any proposals against recovery objectives.	
PROHIBITED: Habitat destructive military maneuvers, clearing for agriculture, landfills, and any other surface disturbance that diminishes the capacity of the land to support desert tortoises, other wildlife, and native vegetation.				
PROHIBITED: Domestic livestock grazing.	Closed to sheep use. Pakoon Area: closed to grazing. Beaver Dam/Virgin Slopes: non-active season grazing from Oct. 15 to March 15.	Beaver Dam Slope: allow non-active season grazing from Oct. 15 to March 15.	Closed to sheep use. No domestic livestock grazing authorized inside Areas of Critical Environmental Concern w/following exception. Within Beaver Dam Slope: Allow non-active season grazing from Oct. 16, to March 14.	
Each BLM office that plans to continue to authorize livestock grazing on a seasonal basis would authorize non-use if requested by a permittee (for example, if an allotment were to be purchased by a conservative group).				
PROHIBITED: Grazing by wild burros and horses.	Set Tassi herd level to 0. Remove all burros from Pakoon Area.	N/A The Beaver Dam Slope has no burros or wild horses.	Set herd level at 0 within Areas of Critical Environmental Concern. Maintain herds outside of Areas of Critical Environmental Concern.	
PROHIBITED: Vegetation harvest, except by permit.	No commercial vegetation harvest, except on salvage basis after consultation.	No vegetative material sales.	Allow vegetative harvest on salvage basis only after consultation.	
PROHIBITED: Collection of biological specimens, except by permit.			No commercial collection of flora and fauna	
PROHIBITED: Dumping and littering.				
PROHIBITED: Deposition of captive or displaced desert tortoises or other animals, except under authorized translocation research projects.				
COMPATIBLE: Limited speed travel on designated, signed roads.	Allow organized, limited non-speed events on designated roads within Areas of Critical Environmental Concern. Casual use limited to designated roads and trails. Closed to speed competitive off-highway vehicle events.			
COMPATIBLE: Non-consumptive recreation (e.g., hiking, bird watching, casual horseback riding, and photography).	Non-consumptive recreation allowed subject to off-highway vehicle and commercial restrictions. Evaluate proposals against recovery objectives.			

DESERT TORTOISE RECOVERY PLAN IMPLEMENTATION - NORTHEASTERN MOJAVE RECOVERY UNIT DESERT WILDLIFE MANAGEMENT AREA/AREA OF CRITICAL ENVIRONMENTAL CONCERN PRESCRIPTION PROPOSALS				
RECOVERY PLAN RECOMMENDATION	SHIVWITS RESOURCE AREA, ARIZONA BLM	DIXIE RESOURCE AREA, UTAH BLM	CALIENTE FIELD STATION, NEVADA BLM	LAS VEGAS FIELD OFFICE, NEVADA BLM
COMPATIBLE: Parking and camping in designated areas.	Parking within 25 feet of designated roads, all areas open to camping. Camping limit 14 days.	Camping limit 14 days. Restrict camping within ¼ mile of catchments, guzzlers, designated waters.	Establish sites for parking and camping as appropriate and necessary. Camping limits of 14 days.	
COMPATIBLE: Fire suppression that minimizes surface disturbance.	Same as Recovery Plan. Emphasize aerial, hand attack. Minimize surface disturbances. Desert tortoise resource advisor on site whenever possible, firefighter education program. Locate camps and staging areas in previously disturbed areas wherever practical.			
COMPATIBLE: Permitted or otherwise controlled maintenance of existing utilities.	Non-emergency maintenance limited to inactive season.	No restrictions other than those in right-of-way grant specific for each utility.		
COMPATIBLE: Surface disturbances that enhance the quality of habitat for wildlife, enhance watershed protection, or improve non-motorized recreation opportunities.	Permitted activities include surface disturbance that enhance quality of other uses such as wildlife habitat, watershed protection, etc., including population enhancement of other wildlife species, except tortoise predators.	Surface disturbance allowed where no impact to listed or candidate species would occur.	Allow construction of upland game guzzlers and other waters for wildlife as long as it doesn't conflict with desert tortoises.	Allow construction of upland game guzzlers and other waters for wildlife as long as it doesn't conflict with desert tortoises.
Realty Actions/Rights-of-Way (Not addressed in Desert Tortoise Recovery Plan)	Retain all habitat in Public ownership. Areas of Critical Environmental Concern are avoidance areas; rights-of-way not allowed unless no reasonable alternative exists. Require compensation for unmitigated impacts.	Retain all habitat in Public ownership. Beaver Dam Slope is a right-of-way avoidance area, except within fenced boundary of Highway 91.	Retain in Public ownership. Consider as right-of-way avoidance areas; all applications evaluated on a case-by-case in the context of the recovery. New communication sites would be limited to existing sites whenever feasible. Areas of Critical Environmental Concern would be right-of-way exclusion areas for new material site rights-of-way under Federal Aid Highway Act.	Retain in Public ownership. Consider as right-of-way avoidance areas; all applications evaluated on a case-by-case in the context of recovery. New communication sites would be limited to existing sites whenever feasible. Outside of 1/2 mile corridor along highways, would be right-of-way exclusion areas for new material site rights-of-way.

DESERT TORTOISE RECOVERY PLAN IMPLEMENTATION - NORTHEASTERN MOJAVE RECOVERY UNIT DESERT WILDLIFE MANAGEMENT AREA/AREA OF CRITICAL ENVIRONMENTAL CONCERN PRESCRIPTION PROPOSALS				
RECOVERY PLAN RECOMMENDATION	SHIVWITS RESOURCE AREA, ARIZONA BLM	DIXIE RESOURCE AREA, UTAH BLM	CALIENTE FIELD STATION, NEVADA BLM	LAS VEGAS FIELD OFFICE, NEVADA BLM
COMPATIBLE: Mining on case-by-case basis, provided that cumulative impacts do not significantly impact desert tortoise habitat or populations, that any potential effects on tortoise populations are carefully mitigated during the operation, and that the land is restored to its pre-disturbance condition.	Locatable: Plan of Operation required. Same as Recovery Plan. Bonding as appropriate to assure restoration. Leasable: Seasonal restrictions; no surface occupancy authorized until after completion of consultation. Saleable: Closed to sales except hand picking of rocks within 100' of designated open roadways.	Locatable: Plan of Operation required. Leasable: Category 2 special stipulations. Saleable Minerals: Closed.	Locatable: Plan of Operation required. Same as Recovery Plan. Leasable: No surface occupancy. Saleable: Closed to sales except allow free-use material sales and rights-of-way to local government agencies within one mile of highways or county roads.	Locatable: Withdrawn Fluid Leasable: Open to development subject to no surface occupancy. Solid Leasable: Closed Saleable Minerals: Closed, except for existing designated material pits, community pits, and free use permits within 1/2 mile of specified roads and highways.
COMPATIBLE: Population enhancement of native wildlife species.	Same as Recovery Plan. Population enhancement of native wildlife species.	Enhancement of other species allowed when consistent with desert tortoise objectives.	Allow enhancement of native wildlife species if it is consistent with desert tortoise recovery.	Population enhancement of native wildlife species.

Importance of Cumulative Impacts

The desert tortoise was listed as threatened primarily because a variety of human impacts which cumulatively have resulted in widespread and severe desert tortoise population decline and habitat loss. "A variety of other human uses have caused significant quantitative and qualitative losses of desert tortoise habitat. Urbanization; agricultural development; construction and use of transportation routes and corridors; development of utility corridors; exploration for and development of hard rock minerals, sand and gravel pits, oil and gas, and other mineral resources; and concentrated visitor use are all important causes of widespread habitat destruction. In some portions of the desert, military activities...also contribute to the degradation and loss of tortoise habitat...The combined effects of these various activities have resulted in extirpations and population declines of desert tortoise throughout the Mojave region." (USFWS, p. 10, 1994a).

There would be long-term, cumulative impacts to the desert ecosystem, its wildlife and special status species from implementation of the combination of proposed actions throughout the Northeastern Mojave Recovery Unit. Protection of desert tortoise habitat through Area of Critical Environmental Concern designation, implementation of management actions and protection from disturbance on approximately 1.1 million acres of tortoise habitat in southern Nevada, Northwestern Arizona, southeast California and southwest Utah would provide additional protection for the habitat of many wildlife and plant species.

Tracking of Cumulative Impacts

The potential, future tracking system for analyzing cumulative impacts within the Areas of Critical Environmental Concern in the Las Vegas Field Office would help ensure that individually minor but collectively significant

impacts do not occur. This tracking system can be considered for use throughout the desert tortoise habitat on public lands. This is consistent with the Service Conservation Recommendation in their Biological Opinion of 8/14/91 which stated, that the BLM should use a Geographical Information System to analyze the cumulative impacts of livestock grazing on desert tortoise habitats on a range-wide basis.

Urbanization of Tortoise Habitat

According to the Final Environmental Impact Statement for the Desert Conservation Plan, "The greatest threat to the continued existence of the desert tortoise in Clark County has been and continues to be loss and degradation of habitat." (USFWS, Appendix A, p. 17, 1995). According to the Tortoise Group public information pamphlet, "The rapid destruction of habitat in the Las Vegas area was one of the major reasons for the Federal listing of the tortoise as a Threatened species". "Urban development in Las Vegas Valley has all but eliminated what may have been one of the largest and densest tortoise populations in Nevada" (USFWS, p. 68, 1995c). In addition, the remaining habitat in the Las Vegas Valley has been seriously fragmented.

The Las Vegas metropolitan area ranked second in the nation with an economic growth rate of 10.8 percent. From 1983 to 1993 Clark County's population increased from 535,108 to 919,388. By 2020 the population is expected to grow to 1,450,409 (USFWS, p 79, 1995). Over the next ten years the Valley as a whole is expected to gain over 215,000 residents, with about 43% of the increase occurring in the Valley's unincorporated areas (USFWS, p. 80, 1995b). This explosive growth is expected to continue, resulting in an increasing demand on public lands in southern Nevada for infrastructure needs, utility and road corridors and recreational opportunities. Other portions of the Northeastern Mojave Recovery Unit including Moapa, Mesquite, Alamo and Ash Springs, southeastern Utah, Northwestern Arizona and southern California will likely also experience population growth.

According to the Companion Document to the Recovery Plan, (USFWS, 1994b) few human activities are expected over the next several decades within the mostly undisturbed, isolated and rugged terrain of the proposed Gold Butte-Pakoon and Coyote Springs Areas of Critical Environmental Concern. This is probably an accurate statement for Gold Butte-Pakoon. However, Coyote Springs has a state highway intersecting it from north to south, as well as designated utility corridors and extensive private land which may be developed in the future.

"Population declines or extirpations attributable to cumulative impacts have occurred ... near Las Vegas, Laughlin, and Mesquite, Nevada; and St George, Utah... Future extirpations can be expected in the vicinities of all cities, towns and settlements." (USFWS, p. 3, 1994a) There are inherent impacts to the tortoise at the interface of the urban areas and desert tortoise habitat including uncontrolled dogs, off-highway vehicle use, indiscriminate shooting, collecting of tortoise and vandalism.

Human population growth and urbanization is projected to continue within the Northeastern Mojave Recovery Unit which will have localized severe impacts on tortoise populations primarily through loss of habitat but also from increases in killing and harassment from people, vehicles, and domestic and feral dogs. Desert tortoise habitat around cities and towns will continue to be sacrificed to urbanization. Land disposal and conversion of habitat would continue to be one of the most important impacts to the desert tortoise and tortoise habitat. However, public lands within the proposed Areas of Critical Environmental Concern would not be available for sale, lease or exchange.

It is estimated that more than 170,000 acres of public lands, mostly in the Las Vegas Valley, would be transferred into private ownership within the Northeastern Mojave Recovery Unit during the life of this plan. Much of this land would be developed and become unsuitable as tortoise habitat but will be mitigated through collection of an off-site mitigation fee which would go into one of two tortoise conservation funds adminstered by Clark County. The Clark County Desert Conservation Plan requires the collection of an off-site mitigation fee

of $550 per acre prior to development of private property. This money is used to fund the Habitat Conservation Plan. Through Section 7 consultation, the Service requires the payment of an off-site mitigation fee on federal actions. This fee is currently $578 per acre but will be indexed for inflation annually. Section 7 money would be used to support efforts to recover and delist the tortoise.

Habitat Conservation Plans in place within the Northeastern Mojave Recovery Unit include the Washington County, Utah, Pahrump Landfill and the Clark County Desert Conservation Plan. The Ash Springs and the Lincoln County Plans are currently under consideration. These Plans provide a mechanism for community growth, incidental take of tortoise, and destruction of tortoise habitat while providing money to fund projects, purchase habitat and research to help insure the survival of the species. The Clark County Desert Conservation Plan may impact up to 113,900 acres, less than 4% of the more than 3.5 million acres of desert tortoise habitat in the county. Of that 113,900 acres, 80% is likely to support desert tortoise habitat.". It is projected that during the life of the permit (1994-2023) $44,757,642 will be raised to be used for conservation of the desert tortoise (USFWS, 1995).

The Harrick Investments property (formerly Aerojet) includes some of the best remaining undisturbed tortoise habitat in Coyote Springs/Kane Springs Valleys (Karl, 1981). The future of this property is unknown. If it were to return to federal ownership, it would be managed for tortoise conservation purposes. Conversely, if more land were to be developed in this area, human impacts would increase in the Coyote Springs Areas of Critical Environmental Concern.

Habitat fragmentation from human impacts would continue in tortoise habitat throughout the Northeastern Mojave Recovery Unit. These impacts would be minimized in the Areas of Critical Environmental Concern which would be managed to preserve and/or restore their natural integrity. In these areas the affects of existing habitat fragmentation would be lessened through reclamation and public lands within these areas would be retained in public ownership.

Management Oversight Group

The majority of land in the Northeastern Mojave Recovery Unit is public land, which facilitates recovery of the tortoise. The fact that these public lands are managed by a variety of agencies could potentially hamper efforts to achieve a consolidated approach to desert tortoise recovery. However, the Management Oversight Group, as an interagency coordinating committee includes representatives of all affected agencies to ensure a coordinated effort in regard to implementation of the goals and objectives of the Recovery Plan.

Monitoring

The Tortoise Recovery Plan recommends extensive population monitoring to determine progress toward recovery. Several methods of monitoring have been tested by the Biological Resources Division of U.S. Geological Survey and a monitoring method has been selected by the Management Oversight Group. The coordination of monitoring by the Interagency Monitoring Committee which is proposed in the Arizona Strip and the Caliente Land Use Plan Amendments would help to provide accurate information on population numbers and trends in order to successfully evaluate recovery of the desert tortoise. It is likely that State wildlife agencies, the Service and the Geological Survey would take the lead in tortoise population monitoring while the land management agencies would take the lead in habitat monitoring.

Transportation Routes and Corridors

Tortoises would continue to be killed by vehicles on the roads and highways in proportion to the volume of traffic during the tortoise active season and the density of the tortoise population. Disruption would also occur from construction, maintenance and loss of habitat. New barriers to movements would be created by the addition of roads within the Northeastern Mojave Recovery Unit. As the volume and speed of traffic increases in the

Northeastern Mojave Recovery Unit there would be the potential for increased numbers of tortoise killed on roads. This trend would be tempered by the construction of highway fences and road barriers as required in Clark County's Sec. 10(a) permit for their Desert Conservation Plan. Also, the impact would be reduced by modification of existing culverts to allow tortoises to move under fenced roads and highways.

Nevada Department of Transportation manages approximately 1,000 miles of roadway throughout desert tortoise habitat in Clark, Lincoln, Nye, Esmeralda, and Mineral Counties. About 900 miles of this is within the Northeastern Mojave Recovery Unit. These highways would continue to be maintained and upgraded as needed to provide for continued growth in the Northeastern Mojave Recovery Unit. In addition there are many miles of County and BLM roads throughout tortoise habitat. The Clark County Habitat Conservation Plan allows for incidental take of desert tortoise in connection with the maintenance of roads, highways and material sites.

All roads within the proposed northern Areas of Critical Environmental Concern (Coyote Springs, Mormon Mesa and Gold Butte-Pakoon) have been surveyed using Global Information Systems. The BLM will use this information to determine appropriate road designations so that when the planning process are completed the road designations can be made and the signs posted. Roads selected for closure may be reclaimed.

Interstates such as I-15, US 93 and US 95, and railroads, concentrated around major population centers, would continue to form important barriers to movement of the desert tortoise throughout the Northeastern Mojave Recovery Unit. The high speed roads constitute major barriers to tortoise movements and have created "sinks" where as tortoise are killed on roads, other tortoise move into the area to take their place, only to meet the same fate. The modification of existing underpasses would allow for movements and gene flow between populations. The proposed tortoise proof fencing along roads would limit their movement but would reduce the number of road kills. The proposed road closures in Special Management Areas and limitations of casual use to designated roads and trails would protect the tortoise by limiting and directing public backcountry use.

Mining

There is relatively little surface disturbance from active mining or oil and gas activities throughout the Northeastern Mojave Recovery Unit. Sand and gravel extraction is expected to be the most active future mining use. The Nevada Department of Transportation anticipates 26 road widening projects resulting in 494 acres of disturbance and the need for about three new materials sites per year for the next three to five years and one per year thereafter adjacent to existing roadways in Clark, Lincoln and Nye Counties (Clark County, p. 53, 1994)). A maximum of about 2,400 acres of land may be developed as material sites over the thirty year term of the Service Section 10 (a) permit (Clark County, p. 53, 1994). While this permit includes the majority of desert tortoise habitat in Nevada, similar types of disturbances will occur in other portions of the Northeastern Mojave Recovery Unit in Utah, Arizona and California, but to a lesser degree since there is a lower rate of population growth in these rural areas. The Las Vegas Field Office will limit material site rights-of-way within Areas of Critical Environmental Concern to a cumulative total of 1,000 acres of expansion of existing rights-of-way.

The material sites created to provide sand and gravel for the roads would destroy tortoise habitat. However, Nevada Department of Transportation has agreed to relinquish four material sites rights-of-way in the Piute/Eldorado Area of Critical Environmental Concern. They would also be locating their regional material sites outside of any Special Management Areas. No new material sites would be located within the designated Areas of Critical Environmental Concern for tortoise. Existing sites within these areas would be rehabilitated once they are relinquished by the permit holder.

Military Activities

According to the biological opinion for the Nellis Air Force Range, continued weapons testing/training at Nellis Air Force Base may affect an estimated 12 desert tortoises annually. Plus, these activities would further annually degrade 971 acres of disturbed desert tortoise habitat associated with target impact zones. Desert tortoise may be

impacted by vehicles on maintenance roads or traveling off-road, by ordnance activities within unfenced target impact zones, wildfires caused by ordnance, illegal collecting of tortoise, or from noise and vibrations. Weapons testing/training on the Desert National Wildlife Range would likely continue, although the lands involved may be transferred to the Air Force at some future date. No impacts to desert tortoise from military activities would occur in Areas of Critical Environmental Concern.

Department of Energy

Any activity on the Nevada Test Site which may affect desert tortoise is carefully regulated and efforts are made to minimize negative impacts. Access is highly restricted. This protects tortoises from collection or harassment by the public. Since Nevada Test Site is restricted access, no permits for commercial or competitive events are issued. Department of Energy, Nevada security and management guidelines prohibit grazing, hunting, trapping, carrying firearms, off-road driving and harassing wildlife. Use of hazardous materials is strictly controlled. Employees and contractors must complete a tortoise education program (U.S. Department of Energy, Nevada Field Office, Biological Assessment of the Effects of Activities of the U.S. Department of Energy, Field Office, Nevada on the Threatened Desert Tortoise, July 1991). Tortoise habitat on the Nevada Test Site is not contiguous with proposed Areas of Critical Environmental Concern and activities on the site would not affect tortoise recovery efforts by BLM.

Wilderness

More than one and a half million acres within the Northeastern Mojave Recovery Unit are under consideration for designation as wilderness. Some of these lands include tortoise habitat. The eventual designation as wilderness would serve to provide additional long term protection for these areas. For the tortoise habitat within wilderness study areas which are released from consideration for wilderness, Section 7 consultation with the Service would provide a mechanism to minimize impacts to tortoises. Those portions of Areas of Critical Environmental Concern within wilderness study areas which are released from further consideration as Wilderness would be managed under their respective desert tortoise protective designation.

Upper Respiratory Tract Disease

Upper Respiratory Tract Disease would continue to be endemic within the tortoise population and continue to cause fatalities. At this time, there is no known cure for infected tortoise. Public education, law enforcement and limitations on public access would help to minimize release of diseased tortoises and spread of the disease. The tortoise populations within the more isolated habitats would be less likely to contract the disease since release of infected tortoise is unlikely to occur in the more remote locations. Improved nutrition for the desert tortoise through improvement in their habitat will likely cause the tortoise to be less susceptible to this and other diseases.

Environmental Education

The combination of environmental education efforts by the variety of agencies would promote public awareness and should help to reduce vandalism, unauthorized collection and the spread of Upper Respiratory Tract Disease. Education of the public on road designations within Areas of Critical Environmental Concern should reduce degradation of habitat from off road activity and reduce the number of road killed tortoises.

Law Enforcement

Implementation of the goals and objectives of the Recovery Plan would strengthen existing regulatory mechanisms to protect tortoise and their habitat. Since the listing of the desert tortoise as threatened, protection of their habitats would also be a higher priority for law enforcement. Designation of Areas of Critical Environmental Concern and implementation of completed BLM Land Use Plans would increase regulatory

controls in these areas. The Clark County Desert Conservation Plan currently provides funding for two full time law enforcement positions in the Las Vegas District. These postitions are dedicated to patroling the tortoise Areas of Critical Environmental Concern.

Off-Highway Vehicle Activities

Motorized travel would be limited to designated roads and trails within all Areas of Critical Environmental Concern, once established through the BLM planning process. This would reduce degradation of tortoise habitat from off-road vehicle activities and road kill of tortoises. Impacts to tortoise habitat in these would be minimized by closing some of the existing trails, restricting organized off-highway vehicle events to designated roads, and limiting casual use to designated roads and trails. Recreational use of tortoise habitat would continue to cause direct mortality of tortoise, habitat damage, and result in collection and unauthorized release of tortoise. "The use of off-highway vehicles appears to have a significant effect on tortoise abundance and distribution. Although road closures have been implemented in some areas illegal vehicle route proliferation has also occurred in many areas and can result in significant cumulative loss of habitat." (USFWS, p, 5824, 1994c). Casual off-highway vehicle activity not associated with organized events occurs continuously, is not regulated and likely has a much greater effect on the desert tortoise and its habitat than regulated events.

Outside of Areas of Critical Environmental Concern, impacts of off-highway vehicle events would continue and would include habitat impacts such as loss of soil from erosion, soil compaction, destruction of plants, burrows, and crushing of some individual tortoises. Spectators at competitive events can have as much or more impact on tortoise and their habitat as the actual participants. This would be controlled through the use authorization and law enforcement. Casual recreational use on public lands is expected to increase.

Human Predation

According to the Recovery Plan, (USFWS, p. D-3, 1994a) many former residents of other countries are bringing their traditional practices of using tortoise for human consumption as they immigrate to Las Vegas and elsewhere in the west. Also, "...commercial poaching of rare, threatened, and endangered species is well documented, and in some cases, a lucrative business." (USFWS, p. D-5, 1994a). Human predation and vandalism of desert tortoise would continue but at a lesser rate in spite of the increasing human population. Factors which would contribute to this decrease consist of the variety of environmental education efforts ongoing and proposed, increased law enforcement activity, and limitations on public access into the tortoise Areas of Critical Environmental Concern.

Predation

Common raven populations have increased significantly in the southwestern deserts since the 1940s. Human use and activities have increased available foraging, roosting and nesting opportunities for ravens. These birds are highly opportunistic in their feeding habits and concentrate on easily available seasonal sources of food such as juvenile tortoise (USFWS, p. 5824, 1994c). "Predation by the common raven *(Corvus corax)* is intense on younger age classes of the desert tortoise and the Fish and Wildlife Service's Breeding Bird Survey Program provided data to show a 15-fold increase in raven populations in the Mojave Desert...from 1968 to 1988..." (USFWS, p. 6, 1994a). "Berry (1990, as amended) believes that predation pressure from ravens probably has resulted in such high losses of juveniles in some portions of the Mojave region that recruitment of immature desert tortoises into the adult population has been halted." (USFWS, pp. 6-7, 1994a).

The closure of the scattered open dumps throughout the Northeastern Mojave Recovery Unit would help to limit the raven and coyote population, both of which prey on the tortoise. In spite of this effort the trend of an increase in the raven population within the Northeastern Mojave Recovery Unit is expected to continue from a

combination of factors including road kills as a food source, refuse, feedlots, range water developments and the raven's status as a Federally protected species. The anticipated increase in the raven population would increase the raven's detrimental impact to small tortoises, mostly less than 4 inches in shell length.

"Towers supporting transmission lines also provide predatory birds with new perching and nesting sites which are otherwise scarce in the generally treeless habitat of the Mojave region..." (USFWS p. D-14, 1994a). In one three year California study 62% of the 564 shells of juvenile desert tortoise were found associated with raven perch or nest sites, most of which were along powerlines (USFWS, p. D33, 1994a). The transmission towers would continue to serve as perches from which ravens will continue to prey on tortoise. Designation of utility corridors through many of the Areas of Critical Environmental Concern would allow for the construction of additional perches for ravens.

Because raven populations are projected to increase throughout the Northeastern Mojave Recovery Unit they will continue to have a serious impact on survival of juvenile tortoise. The Recovery Plan recommends raven control to reduce predation on juvenile tortoise for portions of the Northeastern Mojave Recovery Unit (USFWS, p. F-14, 1994a). Localized control on predator populations, as proposed in the Caliente Amendment, and the Dixie Resource Management Plan would allow for survival of a greater number of juvenile tortoise to a reproductive age. The proposed management actions which limit their food source, nesting and roosting opportunities may result in lower rates of population increase.

Forage Utilization

Grazing by domestic livestock has changed the vegetative composition within the Northeastern Mojave Recovery Unit (Oldemeyer, p. 97, 1994). There is scientific disagreement as to whether or not this change in vegetation is permanent. With the existing surface disturbance, the establishment of exotic annuals and the fire re-burn cycle, the native perennial may never be able to become predominate again. Even with limitations on grazing in tortoise habitat, the low precipitation zones which exist throughout the Northeastern Mojave Recovery Unit would not allow for rapid improvement in vegetative conditions for tortoise. Shreve and Hinkley (1937) and other researchers have shown slow increases in native perennial grass cover in deserts with protection from grazing. Sid Slone, Wildlife Biologist for the BLM, has observed an increase in bush muhly in the Piute Valley since grazing was eliminated (Slone, 1997, personal communication).

If grazing privileges are retired as anticipated, then 36,900 acres of tortoise critical habitat in the Nevada portion of the Beaver Dam Slope Area of Critical Environmental Concern and 25,600 acres of the Rox Tule Allotment would be closed to grazing. In addition, efforts are underway to fund the purchase of allotments in the Pakoon Basin which would then be retired. The combination of these proposals would lessen grazing use in the Northeastern Mojave Recovery Unit and potentially provide more forage for the tortoise as well as improve the quality of forage in the long term.

One livestock grazing allotment and parts of three others would be closed to livestock grazing in Arizona. Five allotments in Arizona would have no spring or summer grazing. Grazing on one entire allotment and two pastures of a second allotment in Utah would be restricted to the period October 15 to March 15 of each year. In Caliente, three entire allotments and portions of 6 others, affecting approximately 12 operators would be closed. Monitoring of livestock grazing and vegetation utilization in grazed allotments would help to maintain vegetation for the tortoise and other users. In the Las Vegas Field Office, 39 allotments over approximately 2.2 million acres would be closed to grazing. Of these, about 12 of these overlap or are within Areas of Critical Environmental Concern in the Northeast Mojave Recovery Unit.

The designated critical habitat within the Northeastern Mojave Recovery Unit is overlapped by 45 different grazing allotments. Approximately 100% of the acreage within the designated critical habitat has been grazed by

livestock in the past (USFWS, 1997b). Twenty three percent (349,225 acres) of the of the critical habitat within the Northeastern Mojave Recovery Unit is not grazed by livestock because of voluntary non-use for conservation purposes under the Clark County Desert Conservation Plan.

Limitations on grazing by domestic livestock and wild horses would increase the amount of spring forage available for desert tortoise and reduce the trampling of shallow dens. In the long term, the amount of perennial grasses would increase, improving forage and cover for desert tortoise. Outside of the tortoise Areas of Critical Environmental Concern, grazing would be managed in accordance with the modified 1991 Biological Opinion on livestock grazing in tortoise habitat.

Throughout the Northeastern Mojave Recovery Unit tortoise would benefit in the long term from reduction in grazing pressure from cattle since desert tortoise and cattle have an overlap in food habits (Oldemeyer, p. 100, 1994). The lessened competition would be most beneficial during the spring months. Although, recent data compiled by the Smithsonian Institution indicates that perennial grasses may be an important food item for desert tortoise and a standing crop of perennial grasses, particularly bush muhly and Indian ricegrass, may be important for tortoises yearlong. An increase in perennial cover also would provide additional cover sites for desert tortoise. "An analysis of exclosures and other protected areas revealed the perennial-grass cover in deserts has increased with protection from grazing...The rate of succession is controlled to a large extent by the moisture conditions of the substrate...thus one expects deserts to improve very slowly after reductions in livestock numbers. However, the ecological condition may never improve as long as exotic annuals are a permanent component of the flora." (Oldemeyer, p. 98, 1994). Thus, the moisture conditions and the presence of exotic annuals will be determining factors as to whether or not there are changes in ecological condition after removal of grazing.

The results of the spring 1997 Ely Field Office ecological status inventory of critical desert tortoise habitat within Lincoln County predicted that change in the vegetation to a dominance of native perennial plants after removal of grazing would not occur during the short term, and probably not during the life of the plan (25 years), but could occur in some portions of the Recovery Unit at some unidentifiable point in the future.

Grazing by wild horses and burros would be excluded from the Special Management Areas in order to preserve the habitat for desert tortoise. This would result in the reduction of 20-75 animals and the loss of 2 herd management areas.

The limitations on grazing would result in a change in the vegetation composition over the long-term in portions of the Northeast Mojave Recovery Unit to native perennials becoming a greater component in relationship to annual exotics. This would help to meet tortoise nutritional needs and likely result in greater reproductive success and better resistance to disease. The vegetation change would also provide for more escape cover from predators. If tortoise nutrition is improved they would grow to an adult size more quickly and there would be fewer years during which each individual would be vulnerable to predation.

Fire

Fires become more frequent as they feed on the exotic annuals. The cured annuals would also carry the fires into the desert shrub communities which can eliminate important thermal cover for the tortoise. Fire causes loss of vegetation cover, changes in plant species composition and diversity, an increase in soil erosion and flooding, and direct mortality of desert tortoise (or their eggs). The effect on desert tortoise populations has not been quantified, but is potentially considerable.

Fire and suppression activities in the Northeastern Mojave Recovery Unit would continue to affect tortoise and their habitat in direct and indirect ways. The direct effects include injury or death from heat or smoke, and crushing of the tortoise or their burrow from vehicles used in suppression activities. Indirect effects include the invasion of exotic annuals leading to a more flammable fuel type, more frequent, larger and intense fires; and a

loss of shrubs which provide important thermal cover for tortoise. Fire suppression activities may create additional access into previously unroaded areas. Fire management would be done in accordance with the Recovery Plan and with consideration of the direction provided by the fire management guidance from the interagency effort at the Boulder City Fire Management for the Desert Tortoise Conference in January of 1995.

Habitat Restoration

The Las Vegas Field Office will develop a land disturbance rehabilitation plan for the Piute-Eldorado Area of Critical Environmental Concern so that on-the-ground rehabilitation can commence in FY 1998. Likewise the BLM will develop a rehabilitation plan for the other Areas of Critical Environmental Concern. These rehabilitation plans could serve as a model for the rest of the Northeastern Mojave Recovery Unit. Over the long-term, desert tortoise would benefit from the rehabilitation of their native habitats. One of the primary benefits would be closure of undesignated roads within Areas of Critical Environmental Concern. This would reduce fragmentation of habitat, off-road vehicle traffic and the potential for road kill or harassment of tortoises. Revegetation of denuded areas would also provide additional cover for hatchling and juvenile tortoises. However, based upon helicopter surveys of the Areas of Critical Environmental Concern in the Las Vegas Field Office, existing disturbed areas are generally small and comprise a very small percentage of the critical habitat. For example, exclusive of roads, less than 1% of the Piute/Eldorado Area of Critical Environmental Concern is disturbed from past surface disturbing activities. This does not include dispersed disturbance due to livestock grazing.

Utilities

Powerline and telephone line structures would continue to provide nesting and roosting sites for predators of the desert tortoise. The maintenance and access roads for these facilities would provide for public access routes into the backcountry. Underground pipe lines and fiber optic lines would result in degradation of habitat and additional road access into tortoise habitat. In the Las Vegas Field Office, there is a designated utility corridor through all the Areas of Critical Environmental Concern with the exception of Gold Butte. The location of Hoover Dam in southern Nevada ensures that there will be a demand for utility lines through critical tortoise habitat in southern Nevada for the life of the plan. Expanding human populations would result in continually increasing demand for electricity, natural gas and telephone service.

Off-Highway Vehicles

The varied management strategies for non-speed off-highway vehicle events among BLM Offices would have the effect of limiting these types of events to the most restrictive management prescription in all cases where the event would cross administrative boundaries. The Code of Federal Regulations (43 CFR 8372.1-1) requires a special recreation permit to be issued in most circumstances involving 50 or more vehicles. Although the Ely Field Office continues to rely on this threshold for requiring a permit, the Las Vegas Field Office would require a permit for any organized event involving 25 or more vehicles.

Together with other regulatory differences between jurisdictions, promoters would be faced with navigating through a variety of differences to conduct a multi-jurisdictional organized event. For instance, the Ely Field Office would allow a group of 35 vehicles to conduct a non-speed event through Areas of Critical Environmental Concern on designated roads at any time of year without a special recreation permit. However, if the event originated within the Las Vegas Field Office jurisdiction, the event would not be allowed at all between April 1 and June 1, or between August 15 and October 15. Outside of those dates, the event would likely be allowed, subject to approval of a special recreation permit (because the event would involve more than 25 vehicles).

By the same token, the same event originating within the Ely Field Office jurisdiction would not be allowed to pass into the Las Vegas area without meeting their requirements. Since the Ely Field Office would not require a permit, the event organizer would have to apply for approval from the Las Vegas Field Office. Similar

circumstances exist between Ely or Las Vegas, and the Arizona Strip District, which would not allow the event to be conducted during the tortoise active season. Events that could be allowed during the tortoise active season by either Ely or Las Vegas would not be allowed to pass into the jurisdiction of the Arizona Strip District.

Of the six corridors designated for use by non-speed off-highway vehicle events by the Ely Field Office, only one -- Kane Springs Road -- lies entirely within that Office's jurisdiction. The Kane Springs Road, which branches off highway 93 some 75 miles north of Las Vegas (and approximately 75 miles west of Mesquite via state highway 168) would be an unlikely place for an event promoter to begin their event since it would involve considerable shuttle time and cost for participants. It would not be expected to receive many, if any, events displaced by surrounding restrictions, but might be expected to be used as a corridor for events permitted through Las Vegas and using other lands within Clark County. Even if Kane Springs Road became the target of displaced events from other areas, the character of the road -- a wide, hard-surface, county-maintained road -- would easily accommodate events without disturbing additional tortoise habitat.

The inconsistency between jurisdictions could result in confusion among event organizers, and perhaps a concomitant level of inadvertent non-compliance with restrictions in the more restrictive areas, at least in the short term. However, because there is no substantial population base in the vicinity of the planning area to originate events from the less-restrictive Ely Field Office jurisdiction, very few, if any, events would be likely to originate in Lincoln County and cross into the more restrictive surrounding jurisdictions. Virtually all events would continue to originate in Las Vegas, or Mesquite, Nevada; and St. George, Utah.

In the long term, the restrictions imposed in some areas would reduce use levels in the adjacent, less restrictive areas. Even though the Ely Field Office has not adopted the regulatory strategy of the surrounding field offices, use levels might be expected to drop off in Lincoln County due to event promoters' inability to navigate through surrounding field office's regulations in order to gain access to southern Lincoln County, and points north.

Within the Las Vegas Field Office restrictions on off-highway vehicle events have been in place since the listing of the desert tortoise. Therefore, events have already been relocated outside of proposed Areas of Critical Environmental Concern and little change in use levels is anticipated. Beneficial impacts to desert tortoise and their habitat in the Areas of Critical Environmental Concern have already been realized. Negative impacts to tortoise and habitat would continue outside of Areas of Critical Environmental Concern.

Conclusion

For an overview of the cumulative impacts as they specifically relate to the desert tortoise see the Cumulative Impacts Summary **Table 3** at the end of this section. According to the Recovery Plan (USFWS, p. C-12, 1994a) the most important condition of extinction which desert tortoise must contend with today are the extrinsic forces which have increased to levels never encountered by the desert tortoise during its evolutionary history. These include urbanization, Upper Respiratory Tract Disease, raven predation, habitat fragmentation and changes in the vegetative composition. "... maintaining high survivorship of adult tortoises is the key factor in the recovery of this species." (USFWS, p. 27, 1994a).

It is the cumulative impacts which have led to the listing of the species as threatened, not any one factor. Some of the important contributors to the demise of the desert tortoise are impossible to halt, such as the continued urbanization in the prime tortoise habitat of the Las Vegas Valley. Addressing all of the controllable factors which minimize the extrinsic forces and maintain survivorship of adult tortoises will maximize the potential for recovery and delisting.

"An obstacle to past and current research is the preponderance of unpublished literature and lack of scientific hypothesis, especially on studies of desert tortoise (G. agassizii). Important management decisions have been made without adequate knowledge about the biology of the affected species." (Germano, p. 187, 1994). "Retention of the threatened status of the tortoise is a conservative strategy for the conservation of natural

resources but should be reassessed when additional data are available." (Corn, p. 85, 1994). The increasing knowledge of tortoise biology and the interagency monitoring of tortoise populations and trends will combine to provide the data needed to determine whether the goals and objectives of the Recovery Plan are being met.

There is professional disagreement regarding whether or not livestock can be allowed to graze and still provide for recovery of the desert tortoise. The cost of waiting to proceed until the agencies have more definitive information on this subject has been considered. Delaying implementation of the goals and objectives of the Recovery Plan until definitive studies of the interaction between livestock and desert tortoise have been completed, could be detrimental to the species within the Northeastern Mojave Recovery Unit.

Implementation of the goals and objectives of the Recovery Plan as coordinated by the Management Oversight Group throughout the Northeastern Mojave Recovery Unit would help maintain portions of the Northeastern Mojave Recovery Unit in a natural condition; and would have important local, but minor regional social and economic impacts.

The cumulative effect implementation of the **Desert Tortoise Recovery Plan** throughout the Northeastern Mojave Recovery Unit, would preserve and protect an adequate amount of habitat to meet the goals and objectives of the Desert Tortoise Recovery Plan. Additionally, adverse impacts from human activities would be reduced in accordance with the Recovery Plan. Implementation of the goals and objectives of the Recovery Plan throughout the Northeastern Mojave Recovery Unit would result in a long-term increase in the desert tortoise population and meeting the de-listing criteria ultimately justifying the delisting of the species. There will be a period of time, however, during which beneficial impacts to the tortoise would still be forthcoming. "These populations grow slowly, and significant improvement in the status of the Mojave population will be a very long process..." (USFWS, p. 5823, 1994c).

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Management Direction	No special status prior to the state laws protecting tortoise. The 1988 BLM Rangewide Plan attempted to prevent the need for listing of the species by the Service. Listed as Threatened in 1990 by the Service. Critical habitat of 846,000 acres within the Northeast Mojave Recovery Unit designated in 1994. Recovery Plan completed in 1994.	Land management agencies within the Northeastern Mojave Recovery Unit are implementing the goals and objectives of the Recovery Plan through modification of land use plans. The Management Oversight Group is coordinating the effort. Land management agencies are consulting with the Service under Section 7 of the Endangered Species Act when their actions affect desert tortoise or their habitat.	Implementation of the goals and objectives of the Recovery Plan within the Las Vegas Field Office.	Implementation of the goals and objectives of the Recovery Plan throughout the Northeastern Mojave Recovery Unit by the land management agencies. More intensive management within Areas of Critical Environmental Concern on approximately 2,000 square miles of tortoise habitat within the Northeastern Mojave Recovery Unit. Improved public education could result in fewer impacts to desert tortoise even outside of special management areas.	The individual agencies efforts to recover and delist the desert tortoise would not, by themselves, achieve the purpose of the Recovery Plan. The proposed management actions, in combination, would enhance the probability of the tortoise being delisted after 25 years within the Northeast Mojave Recovery Unit.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Predation	Major natural predators have been ravens and coyotes.	Ravens are Federally protected species. Raven population increasing tremendously within the Northeastern Mojave Recovery Unit.	Some direct control of natural predators is proposed. Indirect control of predator populations through cleanup of dumps, routing of transmission lines, and placement of anti-perching devices on existing structures.	Continued increase in raven population in the Northeastern Mojave Recovery Unit in spite of the direct and indirect control. Some localized control of predator populations.	Increasing raven predation on juvenile tortoise throughout the Northeastern Mojave Recovery Unit. Localized predator control would minimize predation within small portions of the Northeastern Mojave Recovery Unit. Higher survival of juvenile tortoise in those areas with predator control. Predicted long-term increase in perennial vegetation would provide for escape cover from predators.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Human Predation	Historic use as food by Native Americans. Collection of the tortoise as pets or for food. Indiscriminate shooting of tortoise in the past especially near urban areas.	Public education efforts to prevent shooting and collection. Tortoise available to be adopted from Centers.	Law enforcement presence for control of human use within Areas of Critical Environmental Concern. Environmental education efforts to minimize human predation. Restrictions on public access.	Continued public education and law enforcement efforts and monitoring of road closures.	Less human predation, vandalism and collection of the tortoise as pets throughout the Northeastern Mojave Recovery Unit.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Urbanization/Development of Habitat	Establishment of cities and towns throughout the Northeastern Mojave Recovery Unit within tortoise habitat.	Growth of the cities and towns throughout the Northeastern Mojave Recovery Unit. Use of Habitat Conservation Plans to allow growth of cities while mitigating impacts to tortoise.	Lands within the Areas of Critical Environmental Concern and within designated critical habitat would be retained in public ownership.	Continued urbanization within portions of the Northeastern Mojave Recovery Unit. Development of more Habitat Conservation Plans to allow for community growth and mitigation for habitat destruction. Protection of 2,000 square miles of habitat from urbanization.	Desert tortoise habitat around cities and towns would be sacrificed to urbanization. Money raised through an impact mitigation fee would be used to promote recovery efforts for the tortoise. Critical habitat and lands within Special Management Areas would be retained in public ownership. Surface disturbances within Special Management Areas would be minimized. 2,000 square miles of habitat would be protected from urbanization.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Transportation Routes and Corridors	Development of a transportation network to connect and service the population centers and provide public access has created barriers to tortoise movements and created "sinks" where tortoise are killed.	Expansion and maintenance of the transportation routes.	Public access limited into the Special Management Areas by restricting travel to designated roads and trails. Close some roads and trails.	Future expansion and maintenance of the transportation routes would consider impacts to the tortoise in the design plans and mitigate impacts. Tortoise barriers would be erected to keep tortoise off of some of the roads. Underpasses created where tortoise can safely cross.	Barriers to tortoise movements mitigated and road kills lessened to the extent of the effectiveness of the tortoise proof fences and underpasses. The major barriers of highways and railways would remain in some areas.
Visitor Use of Tortoise Habitat	Relatively little recreation use of the backcountry in the Northeastern Mojave Recovery Unit.	Expanding recreation use of the backcountry within the Northeastern Mojave Recovery Unit as a result of increasing population, road proliferation and increasing ownership of off-road vehicles.	The Las Vegas Resource Management Plan would direct intensive recreational use away from Management Areas and designated critical habitat. Public education efforts in regard to avoiding harm to tortoise while visiting the backcountry. Increased law enforcement presence to control visitor use.	Control public use of Management Areas, designated critical habitat and all others areas within known tortoise habitat. Continue public education and law enforcement efforts.	Control of public recreational use, public education efforts, and increased law enforcement efforts should lessen backcountry visitors impacts on tortoise in spite of the projected increase in visitors. Vehicle use in management areas would be limited to designated roads and trails.

TABLE 3: DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Fire	Historically, there were few fires within the Northeastern Mojave Recovery Unit. The introduction of non-native annuals provided a fuel source to carry fire within the Northeastern Mojave Recovery Unit.	Fire size, intensity and frequency has increased over the past due to fuel buildup and the presence of more people who can accidentally start fires.	Maximum fire control with minimum impact to the tortoise and it's habitat.	Do fire control in accordance with accepted practices within tortoise habitat. Minimize acreage burned within management areas.	Fire would continue to have direct and indirect impacts to tortoise. Minimum impacts to tortoise habitat from fire control methods. Wet years would create greater potential for larger and more intense fires with direct and indirect impacts to tortoise. The reburn cycle would lessen the potential of conversion of ecological sites from exotic annuals to native perennials.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Forage Utilization	Introduction of domestic livestock and buildup of wild horse herds within the Northeastern Mojave Recovery Unit. Grazing by domestic livestock for the past 140 years.	Wild horses are being kept within appropriate management levels within herd management areas. Livestock use throughout the Northeastern Mojave Recovery Unit much reduced over historic levels. Purchase by Clark County of grazing privileges within tortoise management areas on a willing seller basis.	Close allotments within Tortoise Areas of Critical Environmental Concern in the Las Vegas Field Office. Close any allotment purchased by Clark County for conservation purposes. Eliminate wild horses from within the tortoise Areas of Critical Environmental Concern.	Purchase of grazing privileges within tortoise management areas on a willing seller basis. Some allotments closed to grazing. Allotment evaluations will be completed which could result in adjustments to grazing. Allotments outside of tortoise management areas would remain open to grazing.	Less grazing within the Northeastern Mojave Recovery Unit, and none or very limited grazing within the tortoise management areas. More total forage and essential spring forage available for tortoise. Some change from exotic annuals to native perennials would occur but the change would be slow and would only be expected over the long term (>25 years). Lessened predation expected from an increase in escape cover. Tortoise nutritional needs more adequately met which would likely lead to more reproduction and better tolerance to diseases.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Upper Respiratory Tract Disease	Probably introduced to the populations of wild tortoise by release of infected pet tortoise.	Public education efforts to prevent spread of the disease to wild tortoise. Research into the prevention of the disease.	Public education and law enforcement efforts. Additional research in treatment or prevention of the disease.	Continued public education and law enforcement. Additional research in treatment or prevention of the disease.	Respiratory Tract Disease would continue to be endemic in the tortoise population and contribute to mortality. Less transmission of the disease with fewer pet tortoise released into the wild, and less relocation of wild tortoise.
Habitat Acquisition	None	Habitat is being secured through funds generated through Habitat Conservation Plans.	Secure habitat as opportunity allows. If the Aerojet property or the Harrick Investment lease returns to Federal ownership, incorporate into the Coyote Springs Area of Critical Environmental Concern.	There is very limited opportunities for habitat acquisition in the Northeastern Mojave Recovery Unit since the proposed management areas are virtually all public lands with the exception of Harrick Investment and Aerojet lands in Coyote Springs Valley.	Any habitat acquisition would protect habitat from development and enhance tortoise recovery.

TABLE 3. DESERT TORTOISE CUMULATIVE IMPACT ANALYSIS SUMMARY

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Off-Highway Vehicle Use	Historical increase in off-highway vehicle use throughout the Northeastern Mojave Recovery Unit. Little to no regulation.	Use concentrated around population centers. Close regulation of competitive events, ongoing casual use with little restriction.	Use limited to designated roads and trails within Areas of Critical Environmental Concern. Some roads and trails closed to limit public access. No competitive events within Areas of Critical Environmental Concern.	Increasing use throughout the Northeastern Mojave Recovery Unit. Limit use in Areas of Critical Environmental Concern, through road closures, law enforcement and public education. Increasing disturbance outside of the management areas from casual use.	Minimal disturbance of tortoise habitat within the Areas of Critical Environmental Concern. Increasing disturbance outside of the management areas from casual use.
Mining	Little surface disturbance from mining activities within the Northeastern Mojave Recovery Unit.	High interest in mineral materials to serve the needs of the expanding communities.	Withdraw Areas of Critical Environmental Concern from locatable mineral entry. Close to leasable. No surface occupancy for fluid minerals. Limit salable minerals to governmental entities.	There would be an estimated 6,000 acres of surface disturbance from mining activities throughout the Northeastern Recovery Unit during the life of the plan.	Tortoise habitat would be impacted by surface disturbance from projected mining activities. Required reclamation would help to minimize this impact. Over the long-term, withdrawal from locatable mineral entry would reduce the potential for future mining activity.

Issue	Past Actions	Present Actions	Proposed Action or Reasonable Alternative	Future Actions	Cumulative Effects
Utilities	Powerlines, transmission lines and telephone lines constructed throughout the Recovery Unit, often with an developed maintenance road.	Maintenance of existing structures, lines and roads. Expansion of the utility network.	Avoidance of the tortoise management Areas in routing of new lines, and/or the attempt to confine lines to designated corridors. Mitigation of impacts for new lines.	Continued expansion of the utility network to serve the growing population needs.	Continued existence and expansion of the utility structures from which predatory birds can predate on tortoise and build nests, in an otherwise generally treeless desert. Maintenance roads for the utilities would continue to provide public access into the backcountry.
Wilderness	Designation of over 1.5 million acres within the Recovery Unit as Wilderness Study Areas.	Maintenance of the wilderness characteristics of these areas through application of the Interim Management Policy.	Wilderness Study Areas within Areas of Critical Environmental Concern which are released from consideration for wilderness would be managed as part of the Area of Critical Environmental Concern.	It is unknown when the wilderness designations will take place. It is also unknown which portions of the study areas will be designated as wilderness. Portions of the Recovery Unit will be designated as wilderness. Portions will also be released from wilderness consideration.	Interim protection of the desert tortoise habitat that is within Study Areas. Perpetual protection of the desert tortoise habitat that is included within the designated wilderness.

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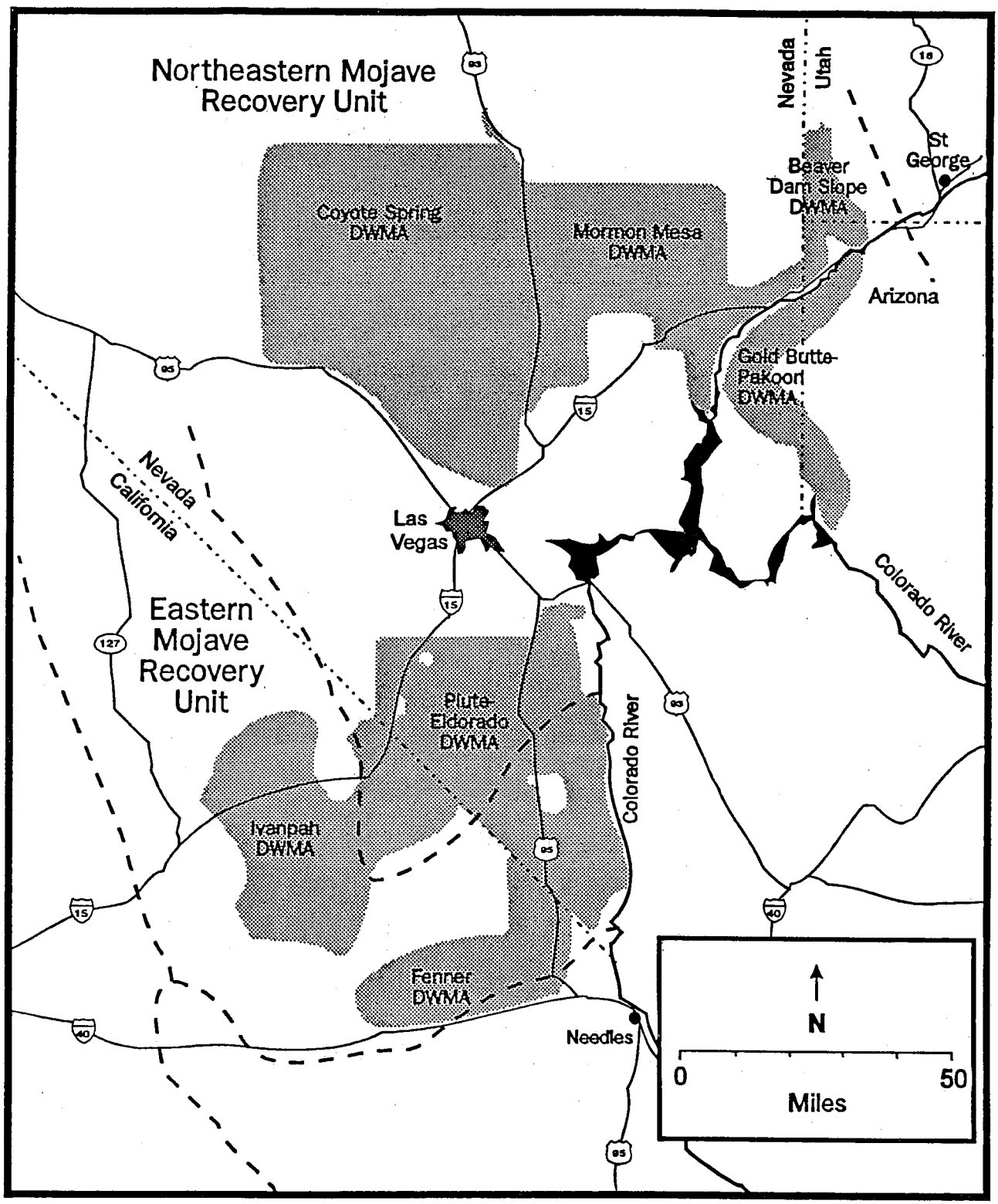

MAP 1: Proposed Desert Tortoise Recovery Areas, Northeastern Recovery Unit

APPENDIX J

Terms and Conditions and Supplemental Stipulations Applicable to Special Recreation Permits necessary to protect desert tortoises.

The following Terms and Conditions and Supplemental Stipulations have been adapted from U.S. Fish and Wildlife Service Biological Opinion 1-5-95-F-237, stipulations commonly used by BLM and discussions of the Non-speed OHV working group. The following terms and conditions, special stipulations and use limits apply to all tortoise habitat within the planning area covered by the Resource Management Plan.

Terms and Conditions for OHV events in tortoise habitat

The Bureau proposes to issue special recreation use permits for speed and non-speed OHV events and horse endurance rides in desert tortoise habitat in the Las Vegas District. Events outside areas of critical environmental concern, determined to have no effect on the desert tortoise will not be subject to these terms and conditions. Determination of effect will be based on: (1) Location of the event, (2) type of habitat, (3) tortoise survey data, and (4) type of event, as described below.

Speed-based sections of OHV events will not be authorized in Areas of Critical Environmental Concern (ACECs). The Bureau will reinitiate consultation if the final designations of ACEC boundaries differ substantially from those that are currently proposed.

Outside of proposed ACECs, events will be authorized on existing roads and trails. Such events may include truck/buggy races, motorcycle races, all-terrain vehicle (ATV) races, rallys, mountain bike events, dual sport rides, poker runs and horse endurance rides.

Within the Las Vegas District, events will be permitted on existing roads and trails over the majority of the District. In designated open areas, such as the Nellis Dunes Recreation Lands or dry lake beds, events may be permitted off-road (generally, there are no consistent roads on sand dunes or dry lake beds). If the RMP varies from this **Description of the Proposed Action** with regard to types of events within ACECs, designated routes, and seasonal restrictions, the Bureau should reinitiate consultation.

Speed events will be authorized in critical habitat in Nelson Hills and McCullough Pass, and will be limited to those agreed to in consultation with the Service and the Clark County Habitat Conservation Plan Implementation and Monitoring (I&M) Committee. Nelson Hills and McCullough Pass are not included in the Bureau's proposed ACECs. The number of proposed events for the Eldorado Valley and Nelson Hills was determined in consultation with the Service and the Clark County I&M Committee, and was limited to nine (which is the number of events allowed in the past). These events will be limited to previously used courses. Minor modifications to existing courses may be made to resolve other resource conflicts, in coordination with the Service, (i.e., to avoid sections made impassable by rain, or to avoid areas designated as critical habitat). However, in no case will "new" courses be created. Substantial portions of some courses in the Eldorado Valley are now on lands owned and controlled by Boulder City due to a purchase under the provisions of the Eldorado Valley Lands Sale Act.

Outside of critical habitat, new areas for spectators to observe OHV events may be established. These areas will be selected in coordination with the Service and, in general, will be areas that have been previously disturbed. If spectators are able to see exciting portions of an event from a specific location, they are less likely to drive cross-county to try to get to a better vantage point. New spectator areas should make crowds easier to control, and should decrease habitat disturbance. The primary problem areas for spectator control are Ivanpah Valley and Nellis Dunes.

Types of Events

1. ORV Races are speed events which involve ATVs, motorcycles, trucks, or buggies. Vehicles do not have to be street legal. The winner is the participant who completes the course in the least amount of time. There may be spectators. ORV races will not be allowed in ACECs. ORV races may be allowed in critical habitat in the Nelson Hills and McCullough Pass areas, outside of an ACEC, only during tortoise inactive periods. Non-speed (transfer) sections of speed events may pass through ACECs on existing roads in conformance with the terms and conditions for nonspeed events. Pit and spectator areas will not be authorized in ACECs nor will ACEC roads be used by pit crews or spectators to travel from one section of race course to another.

2. Dual Sport Events are non-speed, non-competitive, non-spectator self-guided motorcycle scenic touring. Motorcycles are street legal, licensed and are off-road capable. Events occur on existing roads and motorcycle trails. The purpose of these events is back country scenic viewing and camaraderie. A permittee/promoter provides entrants with a map of the route to be followed. Entrants follow detailed maps of the route and navigate the route on their own. Entrants may opt to terminate their participation at numerous points and return home on existing County and State roads and highways. All entrants must adhere to posted speed limits and highway laws.

3. Poker Runs are non-speed, non-spectator, competitive events. Entrants follow a predefined route and stop at check points to pick up a playing card. The winner is the entrant with the best poker hand at the end of the event. All entrants must adhere to posted speed limits and highway laws.

4. All-Terrain Bike Races are organized, speed events involving the use of mountain bikes. The winner is the participant who completes the course in the least amount of time. These events will not be allowed in tortoise ACECs.

5. Mini-Events involve minors, and are held either the day before or the morning of the main event. The course is near the start/finish area, with the length depending on the age of the minors (i.e., 1/4 mile for young children and up to 2 miles for teenagers). These events are associated with races and will not be allowed in tortoise ACECs. They may be allowed in critical habitat in the Nelson Hills and McCullough Pass areas, outside of an ACEC, only during the tortoise inactive season.

6. Publicity Runs are held prior to ORV races and allow participants an opportunity to see the course. Participants are escorted by the race promoter or a Bureau employee, who sets the speed and keeps it limited to 25 miles per hour. These events are associated with races and will not be allowed in tortoise ACECs. They may be allowed in critical habitat in the Nelson Hills and McCullough Pass areas, outside of an ACEC, only during the tortoise inactive season.

7. High-Speed Testing is sometimes allowed prior to competitive events on a portion of the designated course. The distance can be a few hundred yards for motorcycles and ATVs, and up to several miles for buggies. Participants accelerate their vehicles to high speeds to determine if adjustments are needed to the carburetor or other engine components. These activities are associated with races and will not be allowed in tortoise ACECs, but may be allowed in critical habitat in Nelson Hills during the tortoise inactive season.

8. Horse Endurance and Trail Rides are organized, horseback events. Horse endurance rides are competitive, "speed" events. The rider who completes the course in the shortest amount of

time, while keeping their horse in a state of good health, wins the event. A trail ride is a non-competitive event, where a group of riders follows a predetermined trail. The event is primarily social and riders enjoy the scenery along the trail. Speed of the horses varies at the discretion of the riders. There are no requirements for the riders to keep their horses at a walk. However, given the length of most trail rides, horses would either be walking or jogging the majority of the time.

Description of Proposed Action (management of OHV events)

The following tables and 17 mitigation measures outline restrictions which will apply to each type of event in the Las Vegas District. For speed events in critical habitat, the number of entrants will be limited to preclude the large races which traditionally attract more spectators.

The Bureau proposes the following Reasonable and Prudent Measures to avoid or mitigate adverse effects to the desert tortoise and its habitat from the proposed action:

1. Entrants, pit crew members, crowd control officials, race monitors, checkpoint personnel, and clean-up crews shall be informed, either through a presentation or a pamphlet, of the occurrence of desert tortoises in the race area, and the threatened status of the species. All such personnel shall be advised of the definition of "take," the potential for impacts to the desert tortoise, and the potential penalties (up to $25,000 in fines and 6 months in prison) for taking a threatened species in a manner not permitted in the incidental take statement. The permit holder shall provide a written statement for signature acknowledging receipt of information regarding the desert tortoise and any special stipulations in place for tortoise protection from all entrants. All race monitors and check-point personnel shall be provided the race stipulations and the procedures for reporting permit violations.

   Minors and responsible adults participating in mini-events shall be informed that they shall not ride their ATVs or motorcycles in the desert after they finish a mini-event. This includes the open desert as well as roads and trails. Failure to comply with this condition by any child associated with a particular rider shall result in the disqualification of that rider.

2. If a vehicle breaks down, it will be moved to the side of the race course, avoiding damage to vegetation to the extent possible. Participants who stop to rest will pull over onto side roads or areas devoid of perennial vegetation. Riders who retire from the race will either wait along the course for their crew to pick them up, or travel along the course to a pit area. Chase crews will be limited to retrieving vehicles that are broken down along the course. All chase vehicles must have a pit pass, retrieval pass or other form of access permission.

3. Spectator vehicles will be allowed in designated spectator areas only. Within critical habitat, outside areas of critical environmental concern, spectator areas shall be confined to existing disturbed areas. Outside critical habitat, new spectator areas shall be selected in coordination with the Service.

   Within critical habitat, temporary or permanent fences/boundary markers shall be installed around spectator areas to clearly delineate the boundaries of these areas from adjacent desert habitat. The promoter will be required to mark the boundaries of the spectator area so that spectators can readily tell where the boundary is located. Rope or wire with warning triangles or other similar sturdy materials shall be used. A monitor will be placed at each spectator area to ensure that spectators remain within the designated boundary. Anyone found outside of the designated area(s) will be subject to citation by a Bureau law enforcement officer.

TABLE 1: RESTRICTIONS ON SPEED EVENTS

	INSIDE ACECs	CRITICAL HABITAT (outside ACECs)	OUTSIDE CRITICAL HABITAT AND OUTSIDE ACECs
MAXIMUM NUMBER ENTRANTS (BUGGY RACES)	No races permitted	100	determine on case-by-case basis
MAXIMUM NUMBER ENTRANTS (MC[1]/ ATV RACES)	No races permitted	60	determine on case-by-case basis
MAXIMUM NUMBER LAPS	N/A	5	determine on case-by-case basis
MAXIMUM NUMBER EVENTS ANNUALLY	N/A	5 MC/ATV[2] 4 BUGGY[2]	38 VARIOUS TYPES
SEASONAL CONSTRAINTS (BUGGY)	N/A	Allow racing 11/1 - 2/28(29)	no seasonal restrictions
SEASONAL CONSTRAINTS (MC/ATV)	N/A	Allow racing 11/1 - 2/28(29)	no seasonal restrictions
PUBLICITY RUN ALLOWED	NO	11/1 - 2/28(29)	no seasonal restrictions
MINI-EVENTS ALLOWED	NO	YES[2]	YES
STARTING INTERVAL (BUGGY)	N/A	1 every 30-60 seconds	1 to 2 every 30-60 seconds
STARTING INTERVAL (MC/ATV)	N/A	2 every 30 seconds	By class, on a case-by-case basis, not to exceed 12 at a time[3]
HIGH SPEED TESTING ALLOWED	NO	YES (Nelson Hills only)	YES

[1] Motorcycle
[2] Nelson Hills and McCullough Pass (Boulder City Conservation Easement)
[3] The starting interval is 5 to 10 minutes, depending on the size of the vehicle.

TABLE 2: RESTRICTIONS ON NON-SPEED EVENTS AND NON-SPEED SECTIONS OF EVENTS

	INSIDE ACECs	CRITICAL HABITAT (outside ACECs)	OUTSIDE CRITICAL HABITAT AND ACECs
MAXIMUM NUMBER ENTRANTS (3/1-31, 6/2-8/14, 10/16-11/1)(ALL USES)	100	100	determine on case-by-case basis
MAXIMUM NUMBER ENTRANTS (11/1-2/28(29)(ALL USES) [1]	300	300	determine on case-by-case basis
MINIMUM NUMBER ENTRANTS REQUIRING PERMIT	26	26	50
MAXIMUM NUMBER LAPS OR PASS THROUGHS	1	5	determine on case-by-case basis
MAXIMUM NUMBER EVENTS ACTIVE SEASON 3/1-31, 6/2-8/14, 10/16-11/1)	10 with no more than three events per ACEC.	Include within 10 allowed in ACEC limit.	NONE
MAXIMUM NUMBER EVENTS INACTIVE SEASON 11/1-2/28(29)	12 with no more than four events per ACEC.	Include within 12 allowed in ACEC limit.	NONE
SEASONAL CONSTRAINTS - DATES [2]	No events 4/1-6/1 and 8/15-10/15	No events 4/1-6/1 and 8/15-10/15	NONE
PUBLICITY RUN ALLOWED	NO	NO	determine on case-by-case basis
MINI-EVENTS ALLOWED	NO	NO	NO
STARTING INTERVAL	determine on case-by-case basis	determine on case-by-case basis	determine on case-by-case basis
HIGH SPEED TESTING ALLOWED	NO	NO	NO

[1] Existing Barstow to Vegas Dual Sport Ride at 500 entrants as long as CA BLM maintains that as an allowable limit.

[2] Dates will be adjusted annually due to calendar changes to ensure a complete (Sat/Sun) weekend if 4/1 falls on a Sunday and 3 full weekends prior to (or including) 11/1. October opening date will range between 10/12 and 10/18.

4. Pit crews will use only authorized pit areas. Whenever possible, pits shall be confined to existing disturbed areas. On buggy races with pits, pit areas will be marked with a sign stating that a pit pass is required. A maximum of 10 pit passes will be issued to each entrant. Pit passes will have the name and date of the event and will be affixed to the windshield of the vehicle. If not removed, vehicles without pit passes will be towed at the owners' expense.

   Within critical habitat, outside areas of critical environmental concern, pit area boundaries will be clearly marked to delineate the pit from the surrounding desert. This barrier will be made from rope or wire with warning triangles, temporary fencing, or other similar sturdy materials. A monitor will be placed at each pit area to ensure pit crew members remain within the designated boundary. Anyone found outside of the designated area will be subject to citation by a Bureau law enforcement officer.

5. All event-related activities will be confined to authorized vehicle routes, pit areas, spectator areas and the course itself, and will not stray into vegetated areas. All major access routes leading into restricted areas will be monitored, or marked closed and bannered off. Road markers, vehicle barriers or signs will be installed either the day of the race or the day before the race. Personnel shall be stationed at these areas, as appropriate, to enforce access restrictions. Directional signs to spectator and pit areas will be posted at all main access points. Race-in-progress signs will be posted at each location where the race crosses another road. Other disqualification or hazard zones will be monitored periodically during the event.

6. Bureau staff will be present to check for compliance with stipulations of the race permit. The importance of staying on the race course will be stressed to all participants by the Bureau and promoter.

7. A sufficient number of monitors and crowd control officials, as determined by the Bureau, will be required to enforce compliance with stipulations of the race permit. A monitor shall be stationed at all disqualification or hazard areas to record any violations.

8. Permittees shall be responsible for trash and litter clean-up along the course and in spectator and pit areas. Stakes, flagging materials, temporary facilities, litter, and all other event-related materials shall be removed from the course and pit, parking, and spectator areas. The race courses and parking areas shall be restored, at a minimum, to pre-race conditions within 15 days after the event. Garbage and food will be removed from the site of the event and will be disposed of in authorized sanitary landfills.

9. To reduce casual use within the vicinity of race courses, on a case-by-case basis race areas may be legally closed to casual use on the day of the race. The determination as to whether to close the race area will be made after reviewing the type of event, number of spectators and pit crews expected, location, ability to access the race area and history of similar events. If an area is closed, the promoter will be required to station monitors and/or post signs at road intersections, prohibiting public access, where the general public is likely to access the race course. If the promoter can or does not control access, BLM will perform this function and bill the promoter for costs. A Federal Register notice providing authority to close race areas in the Las Vegas District will be issued on an as-needed basis. This will allow Bureau law enforcement officers to enforce regulations. A legal notice will be published in the *Las Vegas Review Journal*, or other appropriate publication, before the permitted events take place. (A Federal Register notice was published in July 1994 and is currently in effect for the Stateline Resource Area.)

10. During permitted activities, any desert tortoises found on or adjacent to the race course shall be moved into undisturbed desert within 1,000 feet by Bureau personnel experienced or trained in the handling of tortoises or Bureau contractors experienced and trained in the handling of tortoises according to current approved protocol. This protocol is found in "Guidelines for Handling Desert Tortoises During Construction Projects (Desert Tortoise Council 1994, revised 1996)". Tortoises shall be deliberately moved solely for the purpose of moving them out of harm's way. Desert tortoises shall not be placed on lands not under the ownership of the BLM without the written permission of the landowner. All personnel involved in tortoise capture shall obtain appropriate permits from the Nevada Division of Wildlife (NDOW) prior to handling any desert tortoise. All road repair and course cleanup crews shall be accompanied by Bureau personnel or their designee to ensure that no tortoises or tortoise burrows are harmed during repair and cleaning operations.

11. Mitigation measures 1, 2, 7, 8, 10, 13, and 14 shall apply to publicity runs and mini-events.

    Because mini-events are held in conjunction with larger race events, mitigation measures 3, 5, 7, 12, and 15 already will be in effect.

    On publicity runs, event-related vehicular activity will be confined to authorized routes and the course itself, and will not stray into vegetated areas.

12. To the extent possible, the race course shall be cleared of all unauthorized vehicles and personnel prior to each race.

13. A representative shall be designated who will be responsible for overseeing compliance with the reasonable and prudent measures, terms and conditions, reporting requirements, and reinitiation requirements contained in this Biological Opinion. The designated representative shall provide coordination among the permit holder, the Bureau, and the Service.

14. Participants in each event who violate any stipulation for that event shall be disqualified from the event.

    Additionally, failure to comply with the above stipulations by any member of the support team or spectators associated with a particular driver or rider shall result in the disqualification of that driver or rider.

15. To help control spectators, the event promoter will station at least one person at the primary entrance to the spectator area for at least 2 hours before the start of the race and one hour after the start of the race. This individual will stop all cars coming into the area, give the occupants information on the limits of the spectator area, and advise them where they can and cannot park. (This will not apply to the Nellis Dunes Recreation Lands, which are primarily sand dunes and gypsum hills. The area supports low densities of tortoises, and receives high casual use by the public.)

16. BLM will develop a monitoring plan in coordination with the Service to monitor impacts to the Piute-Eldorado ACEC from speed OHV events in the adjacent Nelson Hills and Eldorado Valley.

17. ACECs shall be designated as Special Areas under 43 CFR 8372 and the following additional stipulations and specifics in Tables 1 and 2 above applied:

    a) Speed events shall not be permitted.

b) Allow non-speed events subject to the following limitations:

1) For events involving more than 25 vehicles, require Recreation Use Permits.

2) For events involving more than 100 vehicles, issue permits only during the tortoise inactive season (Nov. 1 through end of February). To maintain consistency with California vehicle limit restrictions, limit the number of vehicles in any one event to 300 motorcycles or 300 four-wheeled vehicles (including All Terrain Vehicles). With the exception that if a alternative route for the Barstow-to-Vegas event is not found, resulting in the need to traverse the Piute Area of Critical Environmental Concern, the number of entrants permitted in Nevada will be consistent with that permitted by California.

3) Do not permit off-highway vehicle non-speed events between approximately April 1 to June 1 and between August 15 to October 15 (dates may vary slightly from year to year to provide a full Saturday/Sunday weekend if April 1 is during the weekend and to provide three full weekends for events prior to or including November 1).

4) Allow a maximum of 10 permitted non-speed events annually with no more than three events per ACEC during the tortoise active season (March 1 to October 31), with specific allowed dates being between March 1 to 31, June 1 and August 14, and October 16 to October 31 (see date variances in directly preceding guidance). Based on historic use, an exception to this guidance will be granted to allow an event from Mesquite through the Mormon Mesa ACEC. This event, having as many as 200 entrants and constituting two of the three annual events, will be limited to a one-way route (north-south or south-north).

5) Allow a maximum of 12 permitted non-speed events annually during the tortoise inactive season (November 1st to end of February), with no more than four events per Area of Critical Environmental Concern.

6) Restrict speed of vehicles in permevents (including but not limited to motorcycle or buggy rallies and mountain bike rides) to the legal, posted or unposted, speed limit of roads used during the event. (Note: Clark County has 25 miles per hour speed limit for unposted roads.)

7) Vehicles shall not exceed the legal speed limit (posted or unposted) of the roads used during the event (43 CFR 8341.1(f)(2). Speed limit for unposted roads in Clark County is 25 MPH.

18. Horse Endurance Rides - Horse endurance rides will be limited to existing roads and trails. Horse endurance rides will not be permitted in tortoise ACECs between 4/1 and 10/31 unless the Service concurs that the proposed use will have no impact on the tortoise. Use in other ACECs will be evaluated on a case-by-case basis. A maximum of 10 horse endurance rides will be allowed annually within the planning area.

Supplemental Stipulations - Typical Off-Highway Vehicle Permit

******** Off-Highway Vehicle RACE**
Special Recreation Permit Stipulations

The following are additional stipulations of the special recreation permit (SRP) NV5-9*-**. Stipulations 1-16 are located on the reverse side of the special recreation permit application.

Proposed Activity

Publicity Run

17. A publicity run is authorized by this permit. Participants shall be escorted by the race promoter or a Bureau employee, who sets the speed and keeps it limited to 25 miles per hour. On publicity runs, event-related vehicular activity will be confined to authorized routes and the course itself, and will not stray into vegetated areas. Mitigation measures 1, 2, 7, 8, 10, 11 ,13, & 14 apply to publicity runs (FWS, 11).

Casual Use/Spectator Control

18. Permittee is responsible for clearing all unauthorized vehicles and personnel prior to each race (FWS, 12).

19. To help control spectators, the permittee shall station at least one person at the primary entrance to the spectator area for at least two hours before the start of the race and one hour after the start of the race. This individual will stop all cars coming into the area, give the occupants information on the limits of the spectator area, and advise them where they can and cannot park (FWS, 15).

20. Race officials are responsible for enforcing 'no racing or vehicle free-play' within spectator areas Minors and responsible adults participating in events shall be informed that they shall not ride their ATVs/MC in the desert after they finish an event.

21. Race officials will ensure that spectators remain fifty feet from the course in all spectator areas.

22. Spectator vehicles will be allowed in designated spectator areas only.

23. Within critical habitat (outside ACECs), temporary or permanent fences/boundary markers shall be installed around spectator areas to clearly delineate the boundaries of these areas from adjacent desert habitat. The promoter shall mark the boundaries of the spectator area so that spectators can readily tell where the boundary is located, using strudy materials such as plastic fencing. (FWS, 3).

24. A monitor shall be placed at each spectator area, to ensure spectators remain within the designated boundary. Anyone found outside of the designated area will be subject to citation by a Bureau law enforcement officer (T&C).

Maximum Number of Laps

25. Maximum number of laps permitted is five.

Maximum Number of Entrants

26. Maximum number of entrants is 100 people within critical habitat (outside ACECs).

Mandatory Drivers Meeting

27. Permittee shall conduct a mandatory drivers meeting in the form of a mass meeting to inform participants of the permit stipulations.

Pit Areas/Pit Passes

28. Pit crews shall use only authorized pit areas. Pit areas will be marked with a sign stating that a pit pass is required. A maximum of 10 pit passes will be issued to each entrant. Pit passes will be identified by color or a unique number with the name and date of the event and distinguish the pit to which the pass applies, and will be affixed to the windshield of the vehicle. If not removed, vehicles without pit passes will be towed at the owners' expense (FWS, 4). Unauthorized duplication of pit passes will result in disqualification of the entrant and this shall be stated on each pass.

    Within critical habitat, pit area boundaries shall be clearly marked to delineate the pit from the surrounding desert. This barrier shall be made from rope or wire with warning triangles, temporary fencing, or other similar sturdy materials, such as temporary fencing (FWS, 4).

29. A monitor shall be placed at each pit area, to ensure pit crew members remain within the designated boundary. Anyone found outside of the designated area will be subject to citation by a Bureau law enforcement officer (T&C).

Course & Passing Restrictions

30. Participants shall be informed that passing on buggy, ATV, and motorcycle courses will be limited to the disturbed areas of roads, trails, and washes and will not occur in vegetated areas adjacent to the course (FWS,T&C).

31. Permittee shall inform participants about the importance of staying on the race course (FWS, 6)

Pre-running & Mass Starts

32. Pre-running and mass starts are prohibited.

Starting Interval

33. Starting interval for race entrants shall be one participant every 30-60 seconds (FWS).

Access Routes

34. All event-related vehicular activities will be confined to authorized vehicle routes and the course itself, and will not stray into vegetated areas. All major access routes leading into restricted areas will be monitored, or marked closed and bannered off. Road marker, vehicle barricades, or signs will be installed either the day of the race or the day before the race. Personnel shall be stationed at these areas, as appropriate, to enforce access restrictions. Directional signs to spectator and pit areas will be posted at all main access points. *Area Closed* signs will be posted at each location where the race crosses a road. Other disqualification or hazard zones will be monitored periodically during the event (FWS, 5).

35. *Area Closed* signs will include the organization's name, type of event, date and time. This information will be displayed with four inch letters (minimum size). Signs will be posted the day before the event and checked prior to the race to ensure that they have not been taken down.

Course Monitors

36. A sufficient number of monitors and crowd control officials shall be present to enforce compliance with the permit stipulations (FWS-7). During daylight hours of each race, a monitor shall be stationed at all disqualification or hazard areas to record any violations (FWS-T&C).

37. Permittee is responsible for stationing monitors and/or post signs at road intersections, prohibiting public access, where the general public is likely to access the race course (FWS, 9).

38. All race officials and course monitors must be easily identifiable as race-related personnel.

Course Markings & Signs

39. Course marking and signs that are displaced, removed or destroyed shall be replaced the day before the race.

Spark Arrester

40. The permittee shall ensure all race vehicles are equipped with U.S.D.A. approved spark arresters.

Broken Vehicles

41. If a vehicle should break down, it shall be moved to the side of the race course, avoiding damage to vegetation to the extent possible. Participants who stop to rest shall pull over onto side roads or areas devoid of perennial vegetation. Riders who retire from the race shall either wait along the course for their crew to pick them up, or travel along the course to a pit area (FWS, 2).

Road & Other Repairs

42. The permittee shall be responsible for repair/restoration to roads on public lands. Other repairs and/or restorations shall be accomplished within 72 hours after notification by BLM.

43. All road repair and course cleanup crews shall be accompanied by Bureau personnel or their designee to ensure that no tortoises or tortoise burrows are harmed during repair and cleaning operations (FWS, T&C).

44. The permittee shall be responsible for the prompt repair of any race-related damages to utilities and related improvements to a condition which is at least as good as the condition just prior to the race. The permittee will be responsible for the repair and/or restoration of any improvements placed on public lands by BLM or its authorized users that may be damaged as a result of the event.

Course Clean-up

45. Permittee shall be responsible for trash and litter clean-up along the course and in spectator and pit ares. Stakes, flagging materials, temporary facilities, litter, and all other event-related materials will be removed from the course, pit, parking, and spectator areas. The race course and parking ares will be restored, at a minimum, to pre-race conditions within 15 days after the event. Garbage and food will be removed from the site of the event and will be disposed of in authorized sanitary landfills (FWS, 8).

Disqualification

46. Permittee shall disqualify any participant who violates any stipulation of the permit. Additionally, failure to comply with the permit stipulations by any member of the support team or spectators associated with a particular driver or rider shall result in the disqualification of that driver or rider (FWS, 14).

Chase Vehicles

47. Chase crews shall be limited to retrieving vehicles that are broken down along the course. All chase vehicles must have a pit pass or another form of access permission from BLM (FWS, T&C).

48. Chase crews towing vehicles will travel the same direction as race traffic. Vehicles towed will be towed to the closest pit.

Fees/Post-Use Report/Tortoise Acknowledgement Forms

49. Use-fees will be computed as follows: 3% of the gross receipts or $2.00 per participant (whichever is greater).

50. Use-fees, post-use report, and tortoise acknowledgement forms are due 15 days following the event. Send to the Bureau of Land Management, 4765 W. Vegas Drive, Las Vegas, Nevada 89108.

Natural Resources

51. Painting of rocks or establishment of other permanent markers or improvements is prohibited.

Public Health and Safety

52. The permittee shall be responsible for ensuring that adequate sanitation facilities for participants and spectators are provided.

53. Permittee shall provide first-aid services sufficient to ensure that any accident victim can be located, treated, and evacuated immediately following receipt of an accident report.

54. Permittee is responsible for public safety in the event area.

55. Permittee shall notify the BLM immediately and confirm it within 24 hours after an event-related incident/accident. The BLM will supply the necessary forms for reporting the incident.

Wildlife

56. The permittee shall do everything possible to ensure that race participants and spectators do not harass or collect wildlife, plants, or livestock.

Threatened and Endangered Species

57. Entrants, pit crew members, crowd-control officials, race monitors, checkpoint personnel, and cleanup crews shall be informed, either through a presentation or pamphlet, of the occurrence of desert tortoises in the race area, and the threatened status of the species. All such personnel shall be advised of the definition of "take," the potential for impacts to the tortoise, and the potential penalties (up to $25,000 in fines and 6 months in prison) for taking a threatened species. The permittee shall provide a written statement for signature acknowledging receipt of information regarding the desert tortoise and any special stipulations in place for tortoise protection from all entrants. All race monitors and check-point personnel shall be provided with the race stipulations and the procedures for reporting permit violations (FWS, 1).

58. During race activities, any desert tortoise found on or adjacent to the race course shall be moved into undisturbed desert within 1,000 feet by Bureau personnel experienced and trained in the handling of tortoises or Bureau contractors experienced and trained in the handling of tortoises according to current approved protocol. This protocol is found in Guidelines for Handling Desert Tortoises During Construction Projects (Desert Tortoise Council 1994). Tortoises shall be deliberately moved solely for the purpose of moving them out of harm's way. Desert tortoise shall not be placed on lands not under the ownership of the Federal Government without the written permission of the landowner. All personnel involved in tortoise capture shall obtain appropriate permits from the Nevada Division of Wildlife (NDOW) prior to handling any desert tortoise (FWS, 10).

59. If any desert tortoise are killed or injured during the event, the permittee shall notify Bureau personnel as soon as possible, but no later than two days following the event, disclosing the location and condition of the tortoise.

Cultural Resources

60. If archaeological resources are discovered prior to, during, or after the event in the proposed use area, the ADM for Renewable Resources will be notified immediately. These resources shall not be removed or disturbed in any way.

Hazardous Material

61. Permittee is responsible for clean-up of and assumes liability for any and all releases of hazardous substances and/or oil as defined in the National Oil and Hazardous Substances Contingency Plan.

62. Permittee shall immediately notify the Authorized Officer of any release of hazardous substances and/or oil on public land.

63. Permittee shall not dispose of any hazardous substance or oil on public land.

General

64. The Authorized Officer, or any other duly authorized representative of the BLM may examine any of the permittee's records or other documents related to the permit.

65. This permit does not give permission to cross over or use any private lands during the event. The permittee will be fully responsible for all trespass on and/or damages to private land which result from the conduct of the event.

Compliance

66. Non-compliance with any permit stipulation will be grounds for denial of future permits, and/or race cancellation.

1. (FWS) - This symbol denotes a requirement of the biological opinion (File Number 1-5-95-F-237) issued by the U.S. Fish and Wildlife Service for this event. A number following this symbol indicates that it is a mitigation measure of the biological opinion and T&C indicates that the requirement is a term and condition of the document.

APPENDIX K

SUMMARY OF THE ACEC NOMINATION SCREENING PROCESS

ACEC NOMINATIONS

More than 80 individual nominations for various ACECs were received during the planning process. Many of the nominations were vague and some did not include any maps or legal locations. Often, only a general place name was used to identify the area. Many areas overlapped with areas nominated by other individuals or areas nominated internally by the BLM.

We developed a form (ACEC Nomination Evaluation) which was filled it out for each area nominated. When the same area was nominated by more than one group or individual, the nominations were combined onto one form. The staff specialist in each given area filled out the forms for the nominations pertaining to their expertise (ie: the archeologist filled out the form for cultural sites). The staff specialist was responsible for evaluating the nomination against the relevance and importance criteria based upon their expertise and available data, and providing rational for a determination.

Based upon the evaluation, a recommendation was made on whether to carry the nomination forward or not. Several nominations were made for private property or lands managed by other federal agencies. A form was filled out for these but, they were not evaluated against the relevance and importance criteria because the BLM had no jurisdiction. Some nominations were not evaluated because they were too vague to measure against the criteria. However, in all cases except those discussed below, a form was filled out for each nomination.

In some cases, several smaller areas located close to one another were combined into one larger ACEC. Appropriate boundaries for ACECs were determined by the staff specialists and coordinated with other team members to eliminate conflicts. Boundaries for the potential ACECs were developed based upon maps submitted with the nominations, input from BLM specialists and the intent of the nomination.

Several ACECs was nominated internally by BLM staff. We failed to fill out a form for Amargosa Mesquite ACEC. Therefore, although the ACEC was included in chapter two of the Draft RMP, there was no evaluation of it in Appendix E of the Draft. One additional ACEC was nominated internally during development of the Supplemental RMP (Arden Historic Sites). Since Appendix E was not in the Supplemental RMP, there has never been an evaluation of Arden Historic Site ACEC published.

Appendix E is carried forward into the Proposed RMP/Final EIS as Appendix K. Evaluations for Amargosa Mesquite and Arden Historic Site ACECs will be included in the Proposed RMP.

Since publishing the Draft, additional information has become available on the distribution and abundance of bear poppy, a special status plant species. During the original nomination process, several areas supporting bear poppy populations were nominated. Based upon the information available at the time, it was determined that the areas did not meet the relevance and importance criteria. Using updated information, it appears that several of these areas do meet the criteria. These areas will be reconsidered for ACEC status through a plan amendment process.

ACEC NOMINATION EVALUATION

NAME: Ash Meadows LOCATION: T17-18S, R50E, Nye County, NV

SIZE: 4,518-7,296 acres NOMINATED BY: USFWS-Desert Range Complex, USFWS-Reno, Howard Booth, UNLV-Biological Sciences, Sierra Club (only lands within current boundary) & BLM.

RATIONALE: Federally listed threatened and endangered species, and candidate species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **Yes; special status species**
3. Natural process or system? **Yes; unique riparian habitat, springs and meadows**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Thirteen threatened, endangered or candidate species occur on public lands outside the Ash Meadows National Wildlife Refuge (NWR), of which seven are endemic. There are no similar resources within the planning area with which to make a comparison. Some portions of Death Valley National Monument support similar resources. Ash Meadows NWR supports a total of 25 endemic species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Seven endemic species on public lands; large acreage of riparian and meadow habitat surrounded by desert; some species are restricted to a single spring.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8)of FLPMA and the Endangered Species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The nominated area meets both the relevance and importance criteria. Special management attention is needed to protect and preserve the large number of sensitive biological resources found in this unique area.

ACEC NOMINATION EVALUATION

NAME: Big Dune

LOCATION: Amargosa Valley, Nye Co, NV.

SIZE: About 1,680 acres

NOMINATED BY: USFWS-Reno, Nature Conservancy, NORA (Nevada Outdoor Recreation Association), Sierra Club and BLM.

RATIONALE: Endemic, special status species

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **Yes; special status species unique to the area**
3. Natural process or system? **Yes; dune ecosystems**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Three special status species which are endemic to Big Dune.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for four special status species, three of which are endemic to Big Dune. Big Dune is one of only three dune ecosystems in the planning area.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102 (a)(8) of FLPMA and Bureau Manual 6840.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

This area meets the relevance and importance criteria. Due to the extremely limited extent of the ecosystem and lack of other similar ecosystems in the planning are, special management attention is needed to protect and preserve both the biological values and the scenic integrity of the area.

ACEC NOMINATION EVALUATION

NAME: Sunrise-Frenchman Mtns., Rainbow Garden and Gypsum Cave

LOCATION: East of Las Vegas, Clark Co., NV.

SIZE: 33,000 acres

NOMINATED BY: UNLV-Geosciences, Nature Conservancy, NORA and Sierra Club

RATIONALE: Geological values (educational, scientific and recreational), special status plant and animal species and cultural/historic

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic and cultural**

2. Fish and wildlife resource? **None unique to the area**

3. Natural process or system? **Yes; geological features and gypsiferous soils which support a unique plant community**

4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Gypsum Cave is eligible for the National Register of Historic Places and is regionally to nationally significant. Frenchman Mountain exposes strata of the Grand Canyon in an easily accessible area. The area is used for university research and field trips.**

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The Sunrise Mtn./Frenchman Mtn. complex is a visual landmark from Las Vegas and is one of the most photographed mountains in aviation photography due to its proximity to Nellis Air Force Base. Exposure of Paleozoic and Mesozoic strata similar to the geology of the Grand Canyon. Proximity to Las Vegas results in heavy use by the public (OHV, target shooting, illegal trash dumping, etc.). The area provides habitat for bear poppy (*Arctomecon californica*) a special status species.**

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes. Proximity to Las Vegas results in heavy use by recreationists, including target shooting, drinking, illegal trash dumping, etc.**

5. Poses a significant threat to human life and safety or to property? **Potentially dangerous due to amount of illegal activities and high visitation.**

RECOMMENDATION

The area meets the relevance and importance criteria, and due to its "landmark" status in the Las Vegas area and the types and amount of public use of the area, special management attention is required in order to resolve ongoing problems and preserve the geological and scenic integrity of the area.

ACEC NOMINATION EVALUATION

NAME: Toquop Wash LOCATION: North of Mesquite, Clark Co., NV.

SIZE: Unspecified NOMINATED BY: Nature Conservancy

RATIONALE: Habitat for *Astragalus triquetrus* and *Eriogonum viscidulum*, both special status plant species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; low density desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for desert tortoise, a threatened species .**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for two special status plants, *Eriogonum viscidulum*, and *Astragalus triquetrus* and desert tortoise.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102 (a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria to a limited extent. Existing laws and regulations, including the Endangered Species Act and the National Historic Preservation Act, provide an adequate level of protection to the values in the area. Although surveys are still incomplete, it appears that these species are more widely distributed than once thought. In addition, much of the habitat supporting these species is either on National Park Service Lands or within the Mormon Mesa and Gold Butte ACECs.

ACEC NOMINATION EVALUATION

NAME: Virgin and Muddy River LOCATION: Virgin & Muddy Rivers, Clark Co., NV.

SIZE: Unspecified NOMINATED BY: USFWS-Reno

RATIONALE: These rivers provide habitat for threatened and endangered species, including the endangered Virgin River round-tail chub, Moapa dace, woundfin minnow and southwest willow flycatcher.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **Yes; threatened and endangered fish**
3. Natural process or system? **Yes; riparian habitat**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for endangered fish species. Moapa National Wildlife Refuge is located on the Muddy River and Overton Wildlife Management Area (State of Nevada) is located on the Virgin River. Breeding habitat for Southwest willow flycatcher, an endangered species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Riparian and aquatic habitats are very sensitive to changes in stream flow, salinity and erosion. Habitat for endangered and special status fish species. Riparian habitat is rare in the resource area and provides habitat for a large number of plant and animal species. Breeding habitat for Southwest willow flycatcher.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, Section 102(a)(8) of FLPMA applies to the Virgin River floodplain. The Muddy River is primarily owned by private, state or other federal agencies and thus would not fall under FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

Public lands along the Virgin River provide habitat for endangered species and are riparian in nature; these lands therefore meet the relevance and importance criteria, and special management attention is warranted to protect those values.

There are no public lands along the Muddy River that provide potential habitat for the endangered fishes, and the potential for riparian habitat is extremely limited due to the small acreage of public lands and the land ownership pattern; these lands do not meet the relevance and importance criteria and special management attention is not warranted.

ACEC NOMINATION EVALUATION

NAME: Goodsprings Valley LOCATION: Near Goodsprings, Clark Co., NV.

SIZE: Unspecified NOMINATED BY: Nature Conservancy

RATIONALE: Sensitive plants and animals, threatened and endangered species

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; historical mining district**
2. Fish and wildlife resource? **None unique to the area; desert tortoise and gila monster habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for the desert tortoise, a federally listed, threatened species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Desert tortoise habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The portion of the area that is desert tortoise habitat meets the relevance and importance criteria and warrants special management attention in order to ensure the continued existence of the desert tortoise. However, this area was not designated as critical desert tortoise habitat, nor was it identified in the Tortoise Recovery Plan as a Recovery area. Therefore, it was not carried forward into the proposed RMP as an ACEC. The remainder of the area does not meet the relevance and importance criteria and therefore does not warrant special management attention.

ACEC NOMINATION EVALUATION

NAME: Crystal Pass LOCATION: South Spring Mountains, near Goodsprings, Clark Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Geological features

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known; possibly historic values**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **Yes; formation of crystals**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Some crystals found in the area are uncommon but don't appear to be more than locally significant.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Yes. Hewett (1931) recognized cerargyrite (Agcl) and iodyrite (AgI), both found at Crystal Pass, as being uncommon.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

Although the area meets the relevance and importance criteria to a limited extent, there are no unique values present in the area, and special management attention is not warranted.

ACEC NOMINATION EVALUATION

NAME: Gold Butte Native American Sites LOCATION: Gold Butte Area, Clark Co., NV

SIZE: Seven sites of various sizes NOMINATED BY: Moapa Band of Paiutes

RATIONALE: Significance to the Moapa Band of Paiutes

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural significance to Moapa Band of Paiutes**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat, gila monster habitat and *Phainopepla***
3. Natural process or system? **Vegetation used as food and medicine by the Moapa Band of Paiutes**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The values present in the nominated areas are of significance only to the Moapa Band of Paiutes.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Most of the areas identified are located around springs and riparian habitat which is rare in the planning area and sensitive to disturbance.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The areas meet the relevance and importance criteria to a limited extent, and special management attention is warranted to protect the riparian habitat, Several special status plant and animals and other vegetation in the areas.

ACEC NOMINATION EVALUATION

NAME: Whitney Pockets LOCATION: Gold Butte, Clark Co., NV

SIZE: Unspecified NOMINATED BY: Sierra Club, Moapa Band of Paiutes

RATIONALE: Cultural, scenic and geological values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural and historic values**
2. Fish and wildlife resource? **None unique to the area; gila monster and desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Yes, the area is critical desert tortoise habitat and contains significant cultural and historical resources.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Yes, critical desert tortoise habitat, cultural and historic sites.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the cultural and biological values of the area.

ACEC NOMINATION EVALUATION

NAME: Virgin Mountains LOCATION: Virgin Mountains, Clark Co., NV

SIZE: Unspecified NOMINATED BY: Howard Booth and Sierra Club

RATIONALE: Designated Natural Area, riparian habitat, scenic, remnant ponderosa pine and white fir community, wildlife habitat and both Great Basin and Colorado Plateau vegetation.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**

2. Fish and wildlife resource? **None unique to the area; potential peregrine falcon habitat**

3. Natural process or system? **Yes; pinyon-juniper/mixed conifer ecosystem unique to the area in Nevada**

4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Occurrence of conifer vegetation type within the Mojave Desert ecosystem is restricted to a few mountain ranges, and this one is the only mountain range administered entirely by the BLM. Part of the Virgin Mountains are a designated Natural Area and as such is regionally significant.**

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Designated natural area of 6,560 acres, relic stand of ponderosa pine and white fir, southern most stand of douglas fir in Nevada, and the only occurrence of Arizona cypress known in Nevada. All these rare or remnant vegetation types are vulnerable to loss by fire, disease or insects.**

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA. The area is currently managed under IMP- all designated natural areas are currently Instant Study Areas (Section. 603 (a)). In addition, Bureau manual 1623.3 requires that all designated natural areas be designated as ACEC's.**

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**

5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and special management attention is warranted to preserve the unique biological resources of the area.

ACEC NOMINATION EVALUATION

NAME: Virgin Mountain (Whitney Pockets area, south toward Bitter Ridge).

LOCATION: South of Virgin Mountains, Clark Co., NV

SIZE: Unspecified

NOMINATED BY: Nature Conservancy

RATIONALE: Special status plants and animals

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; historic and cultural values**
2. Fish and wildlife resource? **None unique to the area; gila monster and desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for a federally listed threatened species and significant cultural and historical values.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Cultural resources and historic sites; critical desert tortoise habitat; Habitat for California Bear Poppy, *Arctomecon californica*, and gila monster, *Heloderma suspectum*, both special status species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to help ensure that the cultural and biological values are protected.

ACEC NOMINATION EVALUATION

NAME: Virgin Valley scenic area LOCATION: South of Mesquite, Clark Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Geology, scenery, cactus and succulents and Devil's Throat sinkhole

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural values**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **Geological process resulting in Devil's Throat sinkhole**
4. Natural hazard? **Yes, Devil's Throat sinkhole**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Critical desert tortoise habitat). Sinkholes are uncommon in desert regions.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Critical desert tortoise habitat and Devil's Throat sinkhole.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Devil's Throat sinkhole is approximately 165 feet deep and 80 feet in diameter and is located in a relatively flat area. Presently, the sinkhole is fenced to prevent vehicular access.**
5. Poses a significant threat to human life and safety or to property? **If an individual fell or drove into the sinkhole, the probability of serious injury or death would be high.**

RECOMMENDATION

The area meets the relevance and importance criteria, and special management attention is warranted to both protect the scenic, cultural, geological, and biological values of the area, and to ensure public safety and welfare due to the presence of a natural hazard.

ACEC NOMINATION EVALUATION

NAME: Gold Butte Scenic Area

LOCATION: South of Mesquite, Clark Co., NV. Area runs from the Saint Thomas Gap Road south to Lake Mead NRA.

SIZE: Unspecified (>90,000 acres)

NOMINATED BY: NORA

RATIONALE: Scenery, vegetation and springs

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; historic values**
2. Fish and wildlife resource? **None unique to the area; low to moderate density desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for a threatened species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Historical sites and desert tortoise habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

Portions of the area meet the relevance and importance criteria and special management attention is needed to protect biological and cultural values. The remainder of the area does not warrant special management attention.

ACEC NOMINATION EVALUATION

NAME: Bitter Ridge

LOCATION: SW end of the Virgin Mountain range, near Overton Arm of Lake Mead, Clark Co., NV

SIZE: 17,920 acres

NOMINATED BY: National Park Service, Lake Mead

RATIONALE: Scenic and wildlife values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural resources**
2. Fish and wildlife resource? **None unique to the area; low density desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Desert tortoise habitat and significant cultural values.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for a threatened species, sensitive species, and cultural values.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

Portions of the area meet the relevance and importance criteria and special management attention is needed to protect and preserve the values within that area.

ACEC NOMINATION EVALUATION

NAME: Joshua Tree Natural area LOCATION: S. Eldorado and N. Piute Valleys, Clark Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Scenic values and Mojave Desert ecosystem.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Yes; threatened species habitat.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Yes; critical desert tortoise habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under section 102.(a)(8) of FLMPA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

A portion of the area meets the relevance and importance criteria and warrants special management attention to protect the biological values of that area.

ACEC NOMINATION EVALUATION

NAME: Desert View Natural Environment Area

LOCATION: Lee Canyon Road NW of Las Vegas, Clark Co., NV.

SIZE: Unspecified

NOMINATED BY: NORA, Nature Conservancy

RATIONALE: Mojave Desert vegetation, potential habitat for special status animals and plants, and the area is shown on several maps as a designated natural area.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**

2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat and potential gila monster habitat**

3. Natural process or system? **None unique to the area**

4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The area was nominated as a "Natural Area" during the last planning phase and has been shown on most BLM maps as a "Natural Environment Area", but records indicate that the area was never officially designated.**

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The area is habitat for a threatened species (desert tortoise) and several special status species. The plant species mentioned by the nominator are; Rosy King's Sandwort, Arenaria kingii var. rosea, Clokey's milk-vetch, Astragalus aequalis, and Half-ring pod milk-vetch, Astragalus mohavensis var. hemigyrus. The first two species occur in Clark County, the third species, half-ring pod milk vetch, is apparently relatively rare in Nevada.**

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, Section 102(a)(8) of FLPMA. The area does not qualify under Bureau Manual 1623.3 as it was never formally designated as a natural area although it is shown as such on several maps.**

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**

5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The portion of the area that is desert tortoise habitat meets the relevance and importance criteria and warrants special management attention to protect the biological values of that area. The remainder of the nominated area does not meet the relevance criteria, and existing laws and regulations, including the Endangered Species Act, provide an adequate level of protection. Part of this area was incorporated into the Red Rock Canyon National Conservation Area, designation as an ACEC is unnecessary. The remainder of the area, although desert tortoise habitat was not designated as critical habitat or recommended as a recovery area in the Tortoise Recovery Plan. Therefore, the ACEC designation was not carried forward into the Proposed RMP.

ACEC NOMINATION EVALUATION

NAME: Indian Springs LOCATION: Near Indian Springs, Clark Co., NV.

SIZE: Unspecified NOMINATED BY: Nature Conservancy

RATIONALE: Sensitive and special status plant species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Yes. Habitat for a threatened species (desert tortoise) and two special status plant species. Merriam bear poppy, Arctomecon merriami is widely distributed and is found on the Desert Natl. Wildlife Refuge where it is well protected. Half-ring pod milk-vetch, Astragalus mohavensis var.hemigyrus, is fairly rare in Nevada and the type locality is Indian Springs. This species also occurs in California.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The portion of the area that is desert tortoise habitat meets the relevance and importance criteria and warrants special management attention. However, it was not designated as critical tortoise habitat or identified in the Tortoise Recovery Plan as a Recovery area, therefore, the ACEC designation was not carried forward into the Proposed RMP.

ACEC NOMINATION EVALUATION

NAME: Highland Range LOCATION: NW of Searchlight, Clark Co., NV

SIZE: Unspecified NOMINATED BY: City of Boulder City, Nature Conservancy

RATIONALE: Habitat for sensitive and special status plant and animal species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **A cause for concern is the low numbers of bighorn the range currently supports. The habitat is good and much of the range is watered by several springs. The area should support a larger resident herd. Competition with livestock around waters may be a factor. The riparian habitat around the springs is degraded. The mountain range is also high in scenic value. The Highland Range was designated as crucial bighorn sheep habitat and is shown on BLM maps as the "highland Range Bighorn Habitat Area".**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes. under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria to a limited extent. The values present in the area are not unique, however, and existing laws and regulations provide an adequate level of protection for the biological values of the area.

ACEC NOMINATION EVALUATION

NAME: Arrow Canyon, Hidden Wash and Pahranagat Wash. LOCATION: N end of the Arrow Canyon Range, Clark Co.

SIZE: Unspecified NOMINATED BY: NORA, Howard Booth, Sierra Club

RATIONALE: Cultural and geological resources

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Arrow Canyon is regionally significant in the Great Basin Region for cultural resources. It is eligible for the national register of historic places. It is also significant for paleontological resources, including the type locality for many species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Slot canyon, petroglyphs, displays numerous layers of Paleozoic carbonates and paleontological resources. Habitat for the desert tortoise, a threatened species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect the cultural, geological, and biological resources of the area.

ACEC NOMINATION EVALUATION

NAME: River Mountains LOCATION: North of Boulder City, Clark Co.

SIZE: 10,880 acres NOMINATED BY: Natl. Park Service-Lake Mead, City of Boulder City, City of Henderson and BLM

RATIONALE: Habitat for a sensitive species (desert bighorn)

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Veiwshed for Boulder City and Henderson**
2. Fish and wildlife resource? **None unique to the area; bighorn sheep, gila monster and chuckwalla**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **This range supports one of the highest density herds of bighorn sheep in southern Nevada. Three hundred and forty-one bighorn, from this herd, have been transplanted into 18 different mountain ranges in four states. Habitat for two special status species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Population pressures from Henderson, Boulder City and Las Vegas are placing an increasing demand on the area. There is a potential for adverse impacts to the River Mountain bighorn sheep herd and its habitat from increased human use of the area.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria. Based on the area's importance to Nevada's overall desert bighorn management program, including providing transplant and reintroduction stock for unoccupied desert bighorn habitat both in Nevada and other states, and its proximity to the most populated area in Nevada, special management attention is warranted.

ACEC NOMINATION EVALUATION

NAME: Arden Historic Sites LOCATION: Southwest Las Vegas Valley, Clark Co., NV

SIZE: 6,320 acres NOMINATED BY: BLM

RATIONALE: Cultural values and threats to those values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The area contains the remains of a 10 mile long pipeline project constructed in 1905 to supply water to steam engines. The remains of several construction and mining related sites are also located in the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Significant cultural resources occur in the area. The integrity of the sites is threatened by urban development.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and based on the high level of use of the area and potential for future impacts, special management attention is warranted to protect the values of the area.

ACEC NOMINATION EVALUATION

NAME: Keyhole Canyon LOCATION: W. side of Eldorado Mtns, Clark Co., NV

SIZE: Unspecified NOMINATED BY: Howard Booth and Sierra Club

RATIONALE: Scenic, geologic and cultural values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Keyhole canyon is on the National Register of Historic Places.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Significant cultural resources occur in the area and are being impacted. The area is heavily used by a variety of recreationists, including rock climbers and OHV enthusiasts, and the area is also close to the mining area of Nelson, making it subject to mining related impacts.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and based on the high level of use of the area and potential for future impacts, special management attention is warranted to protect the values of the area.

ACEC NOMINATION EVALUATION

NAME: Cholla Forest LOCATION: E. of Searchlight, Clark Co., NV

SIZE: 19,200 acres NOMINATED BY: Natl. Park Service-Lake Mead

RATIONALE: Occurrence of teddy bear cholla, Opuntia bigelovii

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **Disjunct plant community is representative of the Sonoran Desert**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **This id one of the northernmost extension of Opuntia bigelovii; and may also be the densest stand of teddy bear cholla in Nevada.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Unusually dense stand of teddy bear cholla; May be the densest stand of teddy bear cholla in Nevada. Critical habitat for desert tortoise, a threatened species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria. Based on the areas location adjacent to a heavily used National Recreation Area, its designation as critical desert tortoise habitat and two areas historic mining areas, special management attention is warranted to preserve this unique resource.

ACEC NOMINATION EVALUATION

NAME: Newberry Mountains LOCATION: NW of Laughlin, Clark Co., NV

SIZE: 26,240 NOMINATED BY: Natl. Park Service-Lake Mead

RATIONALE: Scenic values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes**
2. Fish and wildlife resource? **None unique to the area; bighorn sheep, gila monster and chuckwalla**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Spirit Peak, which is culturally significant to the Chemehuevi Indians is immediately adjacent to the proposed ACEC. Spirit Peak is regionally significant as a traditional lifeway candidate. This sacred mountain of the Mohave is also known as Avikwame. It is regarded as the place of creation for all the Yuman groups contiguous to the Lower Colorado River. In addition, it is sacred to the Diegueno and Kamia.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The area supports an isolated stand of pinyon-juniper which, although uncommon, is found in widely scattered locations throughout the Mojave desert. Habitat for two special status species of wildlife.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria to a limited extent, but no critical resources or values unique to the area are known. Existing laws and regulations provide an adequate level of protection for the values in the area, and therefore special management attention is not warranted. That portion of the Newberry Range which includes Spirit Mountain is within the Piute-Eldorado ACEC.

ACEC NOMINATION EVALUATION

NAME: North McCullough Mountains LOCATION: S. of Las Vegas, Clark Co., NV

SIZE: Unspecified NOMINATED BY: Nature Conservancy

RATIONALE: Rare and sensitive plants and animals

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes, cultural**
2. Fish and wildlife resource? **None unique to the area; gila monster, chuckwalla and bighorn sheep habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The Sloan Petroglyph National Historic Register site.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The North McCulloughs are volcanic in origin and exhibit many good examples of volcanism. This mountain range also supports some Sonoran desert plants such as teddy bear cholla. The North McCulloughs supports a herd of desert bighorn sheep.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria to a limited extent. Existing laws and regulations, including the National Historic Preservation Act, provide an adequate level of protection for the area and therefore, special management attention is not needed.

ACEC NOMINATION EVALUATION

NAME: Old Spanish Trail/Mormon Trail LOCATION: S. Pahrump Valley, Nye Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Cultural and historic values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; historic and cultural resources**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Stump springs cultural site is eligible for the National Register of Historic Places. Five miles of the Old Spanish Trail/Mormon Trail in Pahrump Valley is eligible for the National Register of Historic Places (eligible section begins at Stump Spring and runs east for five miles).**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Significant cultural and historical resources and habitat for a threatened species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

Portions of the area meet the relevance and importance criteria and warrant special management attention to preserve the integrity of the cultural resources; the remainder of the area is adequately protected by existing laws and regulations.

ACEC NOMINATION EVALUATION

NAME: Buffington Pockets LOCATION: Muddy Mountains, Clark Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Cultural sites, scenic, geology and vegetation

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural resources**
2. Fish and wildlife resource? **None unique to the area; desert tortoise, bighorn sheep, gila monster and chuckwalla habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **A series of cultural sites in this area potentially could qualify as an archeological district. Some sites may be eligible for the National Register of Historic Places.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Cultural sites and habitat for special status species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA. This site is within the portion of the Muddy Mountain WSA which is recommended as not suitable.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

Portions of the area meet the relevance and importance criteria to a limited extent. Existing laws and regulations, including the National Historic Preservation Act, provide an adequate level of protection and therefore, special management attention is not needed.

ACEC NOMINATION EVALUATION

NAME: Southwest Boundary Area LOCATION: Gale Hills, Muddy Mountains, boundary between BLM and Lake Mead National Recreation Area

SIZE: Unspecified NOMINATED BY: Sierra Club

RATIONALE: Scenic and geological values.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; low density desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for desert tortoise, a threatened species and fragile soils. Gypsiferous soils provide habitat for several special status plants, including bear poppy, *Arctomecon californica, Enceliopsis argophylla* and *Eriogonum corymbosum* var. *aureum*.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, Section 102(a)(8). Partially within the Muddy Mountain WSA, but the majority of the nominated area is outside of the recommended suitable portion of the WSA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

A determination was made in the Draft RMP that the values of the area do not warrant ACEC designation. Existing laws and regulations, including the Endangered Species Act, would provide an adequate level of protection the values of the area, and therefore special management attention is not warranted. However, since that time additional data on the distribution, abundance and threats to bear poppy have become available. Portions of this area may be reevaluated for ACEC status through the plan amendment process.

ACEC NOMINATION EVALUATION

NAME: Hidden Valley LOCATION: Muddy Mountains, Clark Co., NV

SIZE: Unspecified NOMINATED BY: Howard Booth and Sierra Club

RATIONALE: Eligible for the National Register of Historic Places, cultural sites, bighorn sheep habitat, geology and scenic values.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural resources**
2. Fish and wildlife resource? **None unique to the area; desert bighorn sheep**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Preliminary data indicates that Hidden Valley is a potential cultural district with several sites which are eligible for the National Register of Historic Places.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Significant cultural resources. The area has some of the few natural waters in the Muddy Mountains, making the area very important for resident wildlife.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLMPA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The values of the area meet both the relevance and importance criteria, and special management attention is needed to protect the integrity of the area and its cultural resources.

ACEC NOMINATION EVALUATION

NAME: Echo Basin Scenic Area LOCATION: E. of Las Vegas, Muddy Mountains, Clark Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Geological formations and scenic values.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; low density desert tortoise habitat**
3. Natural process or system? **Gypsiferous soils support a unique plant community**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Has potential for an archeological district, but more surveys are needed for a conclusive analysis.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for desert tortoise, a threatened species and fragile soils. Gypsiferous soils provide habitat for several special status plants, including bear poppy, *Arctomecon californica*, *Enceliopsis argophylla* and *Eriogonum corymbosum* var. *aureum*.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, Section 102(a)(8). This area is partially within the portion of the Muddy Mountain WSA that was recommended as non-suitable.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

A determination was made in the Draft RMP that the values of the area do not warrant ACEC designation. Existing laws and regulations, including the Endangered Species Act, would provide an adequate level of protection for the values of the area, and therefore special management attention is not warranted. However, since that time additional data on the distribution, abundance and threats to bear poppy have become available. Portions of this area may be reevaluated for ACEC status through the plan amendment process.

ACEC NOMINATION EVALUATION

NAME: White Basin Scenic Corridor

LOCATION: E. of Las Vegas, Muddy Mountains, Clark Co., NV

SIZE: Unspecified

NOMINATED BY: NORA

RATIONALE: Geology and rare plants

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Possibly historic/cultural values**
2. Fish and wildlife resource? **None unique to the area; low density desert tortoise habitat**
3. Natural process or system? **Gypsiferous soils support a unique plant community**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Preliminary data indicates that the area has the potential of qualifying as an archeological district. The Bitter Springs Trail Backcountry Byway traverses the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The area contains highly erodible, cryptogamic soils and provides habitat for the desert tortoise, a threatened species. Gypsiferous soils provide habitat for several special status plants, including bear poppy, *Arctomecon californica*, *Enceliopsis argophylla* and *Eriogonum corymbosum* var. *aureum*.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

A determination was made in the Draft RMP that the values of the area do not warrant ACEC designation. Existing laws and regulations, including the Endangered Species Act, would provide an adequate level of protection for the values of the area, and therefore special management attention is not warranted. However, since that time additional data on the distribution, abundance and threats to bear poppy have become available. Portions of this area may be reevaluated for ACEC status through the plan amendment process.

ACEC NOMINATION EVALUATION

NAME: Valley of Fire-BLM (White Basin) LOCATION: E. of Las Vegas, Muddy Mtns., Clark Co., NV

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Geological, scenic, cultural and riparian habitat.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat and potentially gila monster habitat**
3. Natural process or system? **Gypsiferous soils support a unique plant community**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Highly erodible, cryptogamic soils, cultural sites, low density tortoise habitat, scenic viewshed, and at least one special status plant species, *Arctomecon californica*. Gypsiferous soils provide habitat for several special status plants, including bear poppy, *Arctomecon californica*, *Enceliopsis argophylla* and *Eriogonum corymbosum* var. *aureum*.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, Section 102(a)(8). Outside of the Muddy Mountain WSA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

A determination was made in the Draft RMP that the values of the area do not warrant ACEC designation. Existing laws and regulations, including the Endangered Species Act, would provide an adequate level of protection the values of the area, and therefore special management attention is not warranted. However, since that time additional data on the distribution, abundance and threats to bear poppy have become available. Portions of this area may be reevaluated for ACEC status through the plan amendment process.

ACEC NOMINATION EVALUATION

NAME: Bowl of Fire/Bitter Spring Valley LOCATION: E. of Las Vegas, Muddy Mts, Clark Co., NV

SIZE: 40,960 acres NOMINATED BY: National Park Service-Lake Mead, Nature Conservancy

RATIONALE: Protect scenic values from Northshore Road, Candidate plant species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise and bighorn sheep**
3. Natural process or system? **Gypsiferous soils support a unique plant community**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known; Potentially an archeological district.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Low density tortoise habitat, cultural and historic sites, scenic viewshed, highly erodible soils. Viewshed from Lake Mead area. Gypsiferous soils provide habitat for several special status plants, including bear poppy, *Arctomecon californica*, *Enceliopsis argophylla* and *Eriogonum corymbosum* var. *aureum*.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, Section 102(a)(8). The area nominated is partially within the portion of the Muddy Mountain WSA which was recommended as non-suitable for wilderness.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

A determination was made in the Draft RMP that the values of the area do not warrant ACEC designation. Existing laws and regulations, including the Endangered Species Act, would provide an adequate level of protection for the values of the area, and therefore special management attention is not warranted. However, since that time additional data on the distribution, abundance and threats to bear poppy has become available. Portions of this area may be reevaluated for ACEC status through the plan amendment process.

ACEC NOMINATION EVALUATION

NAME: Red Rocks Canyon Recreation Lands (RRCRL) LOCATION: Spring Mts., Clark Co., NV

SIZE: Approximately 62,000 acres NOMINATED BY: BLM

RATIONALE: Ten separate ACEC nominations were submitted for Red Rocks. Rather than have several small ACECs scattered throughout Red Rocks, it would be easier to designate the entire area. The entire recreation area is a special management area and as such qualifies as an ACEC according to Bureau policy.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic, cultural and historic values**
2. Fish and wildlife resource? **None unique to the area; Forty-five species of mammals, more than 100 species of birds and 30 species of reptiles and amphibians**
3. Natural process or system? **Yes; several different plant communities and at least 7 endemic plant species**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Approximately 1/2 million people visit Red Rocks annually. Brownstone Canyon is on the National Register of Historic Places. Red Rocks is an internationally recognized rock climbing area. The escarpment is potentially suitable nesting habitat for the peregrine falcon, an endangered species. Expansion of Las Vegas is putting increasing demands on the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Numerous cultural sites; Diverse flora and fauna including several special status species; Potential nesting habitat for peregrine falcon, an endangered species; Relic stands of ponderosa pine and possibly white fir.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) and Section 103.(a) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **The proximity to Las Vegas and the high number of visitors increases the potential for accidents, violence and unlawful actions. Many visitors attempt to climb the cliffs, requiring search and rescue efforts by Bureau Rangers.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Pine Creek Canyon LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: NORA, Howard Booth, Sierra Club, Walter Barbuck

RATIONALE: Relic stands of ponderosa pine, riparian habitat, rare and endemic plants and animals, designated natural area and current heavy use by visitors.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic, historic and possibly cultural values**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **Yes; relict ponderosa pine stand**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The area is a designated Research Natural Area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The lowest elevational occurrence of ponderosa pine in the Las Vegas District, riparian habitat, and historical/cultural sites.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA. Bureau Manual 1623.3 requires that all designated natural areas be designated as ACECs.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **The proximity to Las Vegas and the high number of visitors increases the potential for accidents, violence and unlawful actions. Many visitors attempt to climb the cliffs, requiring search and rescue efforts by Bureau Rangers.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Brownstone Canyon LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: NORA, Sierra Club, Howard Booth

RATIONALE: Cultural Resources, wildlife habitat, eligible for the National Register of Historic Places, remnant stands ponderosa pines and current heavy use and abuse by visitors.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural and scenic values**
2. Fish and wildlife resource? **None unique to the area; gila monster and chuckwalla habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Brownstone Canyon is on the National Register of Historic Places.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Cultural resources, heavy use by recreationists, and uncommon vegetative communities.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, heavy visitation and natural hazards.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Calico Basin LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: Nature Conservancy, NORA

RATIONALE: Rare and candidate plant and animal spp., geology and riparian habitat.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic and possibly cultural values**
2. Fish and wildlife resource? **None unique to the area; potentially gila monster habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Calico Basin is located within the Red Rock Canyon Recreation Area. Approximately 1/2 million people visit Red Rocks annually. Red Rocks is an internationally recognized rock climbing area. The escarpment is potentially suitable nesting habitat for the peregrine falcon, an endangered species. Expansion of Las Vegas is putting increasing demands on the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **High visitor use and proximity of private property to wildlife habitat and riparian systems; habitat for alkali mariposa lily, *Calochortus striatus*, a special status species which appears to be uncommon in Nevada.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, high visitor use and natural hazards.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Red Rock Canyon Joshua Forest LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Mojave Desert flora and scenic values

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic values**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The area is located within the Red Rock Canyon Recreation Area. Approximately 1/2 million people visit Red Rocks annually. Red Rocks is an internationally recognized rock climbing area. The escarpment is potentially suitable nesting habitat for the peregrine falcon, an endangered species. Expansion of Las Vegas is putting increasing demands on the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **High visitor use and proximity of private property to wildlife habitat and riparian systems; desert tortoise habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, high visitor use and natural hazards.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: First Creek LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Riparian habitat, Mojave Desert flora and scenic values

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic and possibly cultural values**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **First Creek is located within the Red Rock Canyon Recreation Area. Approximately 1/2 million people visit Red Rocks annually. Red Rocks is an internationally recognized rock climbing area. The escarpment is potentially suitable nesting habitat for the peregrine falcon, an endangered species. Expansion of Las Vegas is putting increasing demands on the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **High visitor use and proximity of private property to wildlife habitat and riparian systems; desert tortoise habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, high visitor use and natural hazards.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Blue Diamond Hill LOCATION: RRCRL

SIZE: Various unspecified sizes NOMINATED BY: Nature Conservancy, Howard Booth, Sierra Club

RATIONALE: Habitat for category 1 plant species, geology (cave), vandalism of cave fossils and scenic values compatible with Red Rocks.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; Blue Diamond Hill screens the Red Rocks area from Las Vegas**

2. Fish and wildlife resource? **None unique to the area**

3. Natural process or system? **None unique to the area**

4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for many-jointed whipple cholla, *Opuntia whipplei var. multigeniculata*, a candidate species; limestone cave; many fossils; Blue Diamond Hill is part of the viewshed of Red Rocks.**

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, high visitor use.**

5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria due to its location as a visual screen between the largest population center in Nevada and one of BLM's most visible and highly used recreation areas. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Rocky Gap-Red Rock Summit LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: Howard Booth

RATIONALE: Historic values, riparian habitat, remnant stands of ponderosa pine, abuse by OHV enthusiasts, lack of ranger patrol and wildlife habitat.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; historic, cultural and scenic values**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Rocky Gap-Red Rock Summit is located within the Red Rock Canyon Recreation Area. Approximately 1/2 million people visit Red Rocks annually. Red Rocks is an internationally recognized rock climbing area. The escarpment is potentially suitable nesting habitat for the peregrine falcon, an endangered species. Expansion of Las Vegas is putting increasing demands on the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Scenic values; geology; riparian habitat, and wildlife habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, high visitor use.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Rainbow and Bootleg Springs LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: Howard Booth and Sierra Club

RATIONALE: Perennial springs with riparian habitat, wildlife habitat, cultural sites and damage to springs and riparian habitat via OHV and camping.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural and scenic values**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Riparian habitat; cultural values; perennial spring provides water for many wildlife species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The values of the area meet the relevance and importance criteria to a limited extent, but in and of themselves do not warrant special management attention. Taken in the greater context of the Red Rock Canyon National Conservation Area, however, the area does warrant special management attention. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Oak Creek Canyon LOCATION: RRCRL

SIZE: Unspecified NOMINATED BY: Howard Booth and Sierra Club

RATIONALE: Scenic values, riparian habitat, wildlife habitat, Mojave Desert flora, potential interpretive area, riparian habitat and extensive impacts from current heavy use by visitors.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; scenic values**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **Yes; cliffs up to 3,000 feet of vertical relief**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Oak Creek is located within the Red Rock Canyon Recreation Area. Approximately 1/2 million people visit Red Rocks annually. Red Rocks is an internationally recognized rock climbing area. The escarpment is potentially suitable nesting habitat for the peregrine falcon, an endangered species. Expansion of Las Vegas is putting increasing demands on the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Riparian habitat, wildlife habitat and heavy use by visitors.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Yes, heavily used day use and camping area.**
5. Poses a significant threat to human life and safety or to property? **Red Rocks receives an extremely high level of visitation because of it's proximity to the largest population center in Nevada; when combined with the terrain, the result is a very high potential accidental injury or death.**

RECOMMENDATION

The area meets the relevance and importance criteria and special management attention is needed to protect and preserve the scenic, biological, cultural, and geologic values of the area. This area has been designated as a National Conservation Area, providing sufficient protection and management attention to the area. Designation as an ACEC is no longer appropriate.

ACEC NOMINATION EVALUATION

NAME: Desert Tortoise Management Areas LOCATION: Various

SIZE: Various NOMINATED BY: USFWS-Reno, Sierra Club, NORA

RATIONALE: Habitat for a federally listed, threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Many of these areas are designated as critical tortoise habitat and included in the Tortoise Recovery Plan as areas essential for the recovery of the desert tortoise.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for desert tortoise, a federally listed, threatened species.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The areas meet the relevance and importance criteria, and although the Endangered Species Act provides an adequate level of protection for the biological values of the area, special management attention is needed to ensure the "recovery" of the desert tortoise.

ACEC NOMINATION EVALUATION

NAME: Tortoise Management Areas (TMA) LOCATION: Various

SIZE: Six TMAs of 60,000-187,000 acres NOMINATED BY: BLM
Total approximately 757,000 acres

RATIONALE: Habitat for a federally listed, threatened species

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; some areas include cultural and/or historic values**

2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**

3. Natural process or system? **None unique to the area**

4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Many of these areas are designated as critical tortoise habitat and included in the Tortoise Recovery Plan as areas essential for the recovery of the desert tortoise.**

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for desert tortoise, a federally listed, threatened species.**

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973, as amended.**

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**

5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The areas meet the relevance and importance criteria, and although the Endangered Species Act provides an adequate level of protection for the biological values of the area, special management attention is needed to ensure the "recovery" of the desert tortoise.

ACEC NOMINATION EVALUATION

NAME: Las Vegas-Goodsprings-Ivanpah TMA LOCATION: SW Las Vegas Valley south through Goodsprings and Ivanpah valleys to the CA border

SIZE: Approximately 170,000 acres NOMINATED BY: BLM

RATIONALE: Habitat for desert tortoise, a federally listed, threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for desert tortoise, a federally listed, threatened species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for desert tortoise; Upper Respiratory Tract Disease has been documented in the population; rapid rate of habitat loss due to the expansion of Las Vegas, Jean and Stateline.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria. However, the Endangered Species Act provides an adequate level of protection for the biological values of the area. This area was not designated as critical desert tortoise habitat. Ongoing and future development of the area make long-term management for desert tortoise recovery unfeasible in this area.

ACEC NOMINATION EVALUATION

NAME: Mormon Mesa TMA LOCATION: NE Clark County, north of I-15.

SIZE: Approximately 93,000 acres NOMINATED BY: BLM

RATIONALE: Habitat for a federally listed, threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for desert tortoise, a threatened species. This area is part of the Northeastern Mojave Recovery unit and was identified in the tortoise recovery plan as being important for the recovery of the desert tortoise.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Critical habitat for desert tortoise.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and although the Endangered Species Act provides an adequate level of protection for the biological values of the area, special management attention is needed to ensure the "recovery" of the desert tortoise.

ACEC NOMINATION EVALUATION

NAME: Piute Valley TMA LOCATION: S. Eldorado Valley and Piute Valley to the CA border, Clark Co., NV

SIZE: Approximately 187,000 acres NOMINATED BY: BLM

RATIONALE: Habitat for a federally listed, threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Critical desert tortoise habitat. This is the only TMA in Nevada within the Eastern Mojave Recovery Unit. This unit is characterized by rapid rates of population declines. Upper Respiratory Tract Disease has been documented in California tortoise populations and has resulted in high mortality. Habitat in Piute Valley is adjacent to tortoise habitat in California. This area was identified in the Tortoise Recovery Plan as being important for the recovery of the desert tortoise.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Critical habitat for desert tortoise, a threatened species; An apparent die-off occurred in this population between 1979 and 1983.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and although the Endangered Species Act provides an adequate level of protection for the biological values of the area, special management attention is needed to ensure the "recovery" of the desert tortoise.

ACEC NOMINATION EVALUATION

NAME: Arrow Canyon TMA

LOCATION: Between the Arrow Canyon Range and the Desert National Game Range

SIZE: Approximately 60,000 acres

NOMINATED BY: BLM

RATIONALE: Habitat for a federally listed, threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural values**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **This area in Nevada supports a high density tortoise population which appears to be healthy with the limited data which is available. The area is designated as critical tortoise habitat and is within the Northeastern Mojave Recovery Unit. This area was identified in the Tortoise Recovery Plan as being important to the recovery of the desert tortoise.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Critical habitat for desert tortoise, threatened species; cultural sites; migration route for bighorn sheep; high scenic values.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and although the Endangered Species Act provides an adequate level of protection for the biological values of the area, special management attention is needed to ensure the "recovery" of the desert tortoise.

ACEC NOMINATION EVALUATION

NAME: Pahrump Valley TMA LOCATION: Pahrump Valley, Nye Co., NV

SIZE: Approximately 102,000 acres NOMINATED BY: BLM

RATIONALE: Habitat for a threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural and historic values**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for desert tortoise, a threatened species; Old Spanish Trail/Mormon Trail is eligible for National Register of Historic Places.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for desert tortoise; cultural and historic sites.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered species Act of 1973, as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria. However, the Endangered Species Act and Historic Preservation act provide an adequate level of protection for the values of the area. This area is not designated as critical desert tortoise habitat and is not identified in the Tortoise Recovery Plan as a potential recovery area.

ACEC NOMINATION EVALUATION

NAME: Gold Butte TMA LOCATION: N. of Lake Mead and E. of Virgin River, Clark Co., NV.

SIZE: Approximately 145,000 acres NOMINATED BY: BLM

RATIONALE: Habitat for a threatened species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural and scenic values**
2. Fish and wildlife resource? **None unique to the area; critical desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Critical habitat for desert tortoise, a federally listed, threatened species; Part of the Northeastern Mojave Recovery Unit for desert tortoise, this area was identified in the Tortoise Recovery Plan as being important for the recovery of the species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Critical habitat for desert tortoise; The limited data available indicates low recruitment in this tortoise population; it is adjacent to critical tortoise habitat in Arizona; Moderately high density tortoise population; many cultural sites.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973 as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria, and although the Endangered Species Act provides an adequate level of protection for the biological values of the area, special management attention is needed to ensure the "recovery" of the desert tortoise.

ACEC NOMINATION EVALUATION

NAME: Critical gila monster habitat LOCATION: unspecified

SIZE: Unspecified NOMINATED BY: NORA

RATIONALE: Special status plants and state listed rare reptiles.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Unable to assess**
2. Fish and wildlife resource? **None unique to the area; potentially gila monster habitat**
3. Natural process or system? **Unable to assess**
4. Natural hazard? **Unable to assess**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Habitat for the only poisonous lizard in the United States and one of only two species world wide.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **The gila monster is considered rare in Nevada and is unique in that it is the only poisonous lizard in the United States.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA. However, the gila monster is not a listed species. Critical habitat is not designated for unlisted species. Data on the distribution of gila monsters within the district is lacking. Sufficient gila monster habitat should be included in other ACEC nominations to cover the intent of this nomination. If future inventories identify areas which are crucial to the survival of the species in Nevada, additional ACECs could be nominated at that time.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Unable to assess.**
5. Poses a significant threat to human life and safety or to property? **Unable to assess.**

RECOMMENDATION

The area does not conclusively meet the relevance and importance criteria, nor is the nomination sufficiently defined to allow a definitive analysis of an area. Furthermore, the federal status of the gila monster is such that no foreseeable danger to the continued existence of gila monster exists. As stated above, vast areas of potential gila monster habitat will be protected under the umbrella of other ACECs, and therefore, further special management attention is not warranted.

ACEC NOMINATION EVALUATION

NAME: Mesquite Valley LOCATION: Mesquite Valley, near Sandy, Nye Co., NV

SIZE: Unspecified NOMINATED BY: Nature Conservancy

RATIONALE: Special status plant species.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known on public lands in the area**
2. Fish and wildlife resource? **None unique to public lands in the area**
3. Natural process or system? **None unique to public lands in the area**
4. Natural hazard? **None known on public lands in the area**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known on public lands in the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for two special status plant species, *Arctomecon merriami* and *Eriogonum bifurcatum*.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **No. The area indicated on the map included with the ACEC nomination was private land and does not fall under the mandates of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known on public lands in the area.**
5. Poses a significant threat to human life and safety or to property? **Not known for public lands in the area.**

RECOMMENDATION

The nominated area is located on private lands, and is therefore not eligible for ACEC consideration.

ACEC NOMINATION EVALUATION

NAME: Park Service Buffer

LOCATION: All public lands adjacent to National Park Service Lands.

SIZE: Unspecified

NOMINATED BY: National Park Service-Western Region

RATIONALE: Protect National park boundaries.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Unable to assess**
2. Fish and wildlife resource? **Unable to assess**
3. Natural process or system? **Unable to assess**
4. Natural hazard? **Unable to assess**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Unable to assess.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Unable to assess.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Unable to assess.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Unable to assess.**
5. Poses a significant threat to human life and safety or to property? **Unable to assess.**

RECOMMENDATION

The area nominated was not specific enough to allow for an analysis of the values, if any, of the "buffer lands".

ACEC NOMINATION EVALUATION

NAME: Yucca Mountain

LOCATION: E. of Beatty, Nye Co., NV

SIZE: 4,255 acres

NOMINATED BY: State of Nevada, Agency for Nuclear Projects, Nuclear Waste Project Office

RATIONALE: Habitat for a federally listed, threatened species, volcanic origin, potential impacts to ground water

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area; desert tortoise habitat**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **The area has been designated by Congress as the only site to be studied for the nation's first long-term high-level nuclear waste repository.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Habitat for the desert tortoise, a threatened species, and part of the groundwater basin for the Ash Meadows area and Amargosa River.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLMPA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **Not known.**

RECOMMENDATION

The area meets the relevance and importance criteria to a limited extent, but existing laws and regulations, including the Endangered Species Act, provide an adequate level of protection for the biological and cultural values of the area, and special management attention is not warranted to protect the area for further study for a nuclear waste repository.

ACEC NOMINATION EVALUATION

NAME: Yellow Plug LOCATION: Near Mt. Potosi, South Spring Range, Clark Co., NV

SIZE: Unspecified NOMINATED BY: Howard Booth, Sierra Club

RATIONALE: Cultural and historic values.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known on public lands in the area**
2. Fish and wildlife resource? **None unique to the public lands in the area**
3. Natural process or system? **None unique to the public lands in the area**
4. Natural hazard? **None known on public lands in the area**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known on public lands in the area.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **None known on public lands in the area.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **No. The Yellow Plug site and most of the archeological district is located on National Forest Service lands. Any protective actions for these lands would be under the jurisdiction of the Forest Service.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known on public lands in the area.**
5. Poses a significant threat to human life and safety or to property? **Not known for public lands in the area.**

RECOMMENDATION

The nominated area is located on US Forest Service lands, and is therefore not eligible for ACEC consideration.

ACEC NOMINATION EVALUATION

NAME: Colorado River Frontage

LOCATION: Between Laughlin and the Fort Mohave Indian Reservation.

SIZE: 3-4 miles

NOMINATED BY: Sierra Club

RATIONALE: Riparian and wildlife habitat, rapid growth of Laughlin

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **None known**
2. Fish and wildlife resource? **None unique to the area**
3. Natural process or system? **None unique to the area**
4. Natural hazard? **Yes; flood prone area**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **None known.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Riparian habitat and fisheries; heavy visitor use demands on the Colorado River.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **No. This area is withdrawn by the Bureau of Reclamation (Secretarial order 10-16-1931, PL 31-522-1953).**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **The area is subject to periodic flooding.**
5. Poses a significant threat to human life and safety or to property? **Potentially during flooding.**

RECOMMENDATION

The area is located on public lands withdrawn by the Bureau of Reclamation and are therefore not eligible for ACEC consideration.

ACEC NOMINATION EVALUATION

NAME: Fort Piute LOCATION: California Desert District

SIZE: Undetermined NOMINATED BY: Howard Booth

RATIONALE: Historic area, riparian habitat, threatened by OHV and pumping of water from the aquifer.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Not applicable**
2. Fish and wildlife resource? **Not applicable**
3. Natural process or system? **Not applicable**
4. Natural hazard? **Not applicable**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Not applicable.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Not applicable.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Not applicable.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Not applicable.**
5. Poses a significant threat to human life and safety or to property? **Not applicable.**

RECOMMENDATION

The area is located outside of the planning area and is therefore not eligible for ACEC consideration in this RMP.

ACEC NOMINATION EVALUATION

NAME: Areas of Critical Mineral Potential LOCATION: Various

SIZE: Various NOMINATED BY: American Borate; Miners and Prospectors Assn. of Southern Nevada

RATIONALE: Strategic, industrial and precious metals with high economic importance.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Unable to asses**
2. Fish and wildlife resource? **Unable to assess**
3. Natural process or system? **Geologic/mineralization (including sand and gravel, and gypsum).**
4. Natural hazard? **Unable to assess**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Possibly in the case of strategic minerals. More specific information is needed to make a determination.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Unable to assess.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Unable to assess.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Unable to assess.**
5. Poses a significant threat to human life and safety or to property? **Unable to assess.**

RECOMMENDATION

The area nominated was not specific enough to allow for an analysis. BLM is legally required to identify and manage ACECS, the concept of which is to ensure the continued integrity of significant biological, cultural, scenic, recreational, and geologic values in a specified area; this protection is usually achieved by restricting, or eliminating, mineral exploration and development and other surface disturbing activities in the ACEC. It would appear that the intention of nominating and designating an "Area of Critical Mineral Potential" would be to ensure that the area is available for mineral exploration and development, however, the public lands are available for mineral exploration and development unless specifically withdrawn or closed. The two concepts appear to be in direct conflict.

ACEC NOMINATION EVALUATION

NAME: Riparian Areas LOCATION: Various

SIZE: Various NOMINATED BY: BLM

RATIONALE: Uncommon, often disjunct, vegetation type associated with water and extremely critical to a wide variety of wildlife species; important to water quantity and quality

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RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Yes; cultural and historic**
2. Fish and wildlife resource? **Yes; threatened and endangered species endemic to some areas**
3. Natural process or system? **Riparian ecosystems**
4. Natural hazard? **None known**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Riparian areas and associated aquatic habitat along the Virgin River, Muddy River, and Ash Meadows either support, or potentially could support, populations of special status plant and animal species.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **This habitat type is extremely restricted in desert environments and its importance to native wildlife populations is way out of proportion to the small acreage involved. Any disturbance in these areas carries with it the potential to irrevocably alter the riparian and aquatic habitat.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes, under Section 102(a)(8) of FLPMA and the Endangered Species Act of 1973 as amended.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **None known.**
5. Poses a significant threat to human life and safety or to property? **None known.**

RECOMMENDATION

Riparian areas and associated aquatic habitat meet the relevance and importance criteria, and special management attention is warranted to ensure their continued existence. Many riparian areas were included within larger ACECs. The Muddy River is located mostly on private land and is not eligible for ACEC designation.

ACEC NOMINATION EVALUATION

NAME: Milo Hurst Property

LOCATION: A portion of T.22 N., R.59 E., Section 7, NW¼SE¼ (in the vicinity of Blue Diamond)

SIZE: Unknown

NOMINATED BY: Dr. Larry Butler, and Penelope and Neil Ingraham

RATIONALE: Proximity to Red Rock Canyon; "buffer zone; water conservation: local history, and natural hazard area (rock slides)

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Not applicable**
2. Fish and wildlife resource? **Not applicable**
3. Natural process or system? **Not applicable**
4. Natural hazard? **Not applicable**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Not applicable.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Not applicable.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Not applicable.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Not applicable.**
5. Poses a significant threat to human life and safety or to property? **None known.**

RECOMMENDATION

The nominated area is currently private property and therefore the BLM has no jurisdiction regarding current or future land uses of the nominated area.

ACEC NOMINATION EVALUATION

NAME: Amargosa Mesquite LOCATION: T17S, R51E, Nye County, NV

SIZE: 6,080 acres NOMINATED BY: BLM

RATIONALE: Mesquite bosque habitat is very limited in Nevada, it is rapidly being lost and degraded due to urban development, illegal firewood harvest and fires. Mesquite is important habitat for migrant and resident song birds.

RELEVANCE (must contain one or more of the following):

1. Significant historic, cultural, or scenic value? **Significant cultural resources**
2. Fish and wildlife resource? **Important habitat for song birds**
3. Natural process or system? **Mesquite bosque, a rare vegetative community in southern Nevada**
4. Natural hazard? **Not applicable**

IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource? **Mesquite habitats provide important food sources and cover for migrating and resident song birds.**
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change? **Mesquite habitats are rare in Nevada and are being lost and degraded due to urban development and illegal firewood harvest.**
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA? **Yes under Section 102(a)(8) of FLPMA.**
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare? **Not applicable.**
5. Poses a significant threat to human life and safety or to property? **None known.**

RECOMMENDATION

The nominated area meets the relevance and importance criteria and special management attention is warranted to protect the biological and cultural values of the area.

APPENDIX L

BUREAU OF LAND MANAGEMENT
STANDARDS AND GUIDELINES FOR NEVADA

INTRODUCTION

The purpose of these Standards and Guidelines is to ensure that the Bureau of Land Management's (BLM) administration of grazing helps preserve currently healthy rangelands and restore healthy conditions to those areas that are not functioning properly. Standards and Guidelines provide specific measures of rangeland health and will identify acceptable or best management practices. The authority for these Standards and Guidelines is found in 43 CFR 4180.

STANDARD AND GUIDELINES IMPLEMENTATION PROCESS

Upon approval of the Standards and Guidelines by the Secretary of the Interior, permits and leases shall contain terms and conditions that insure conformance with the approved Standards and Guidelines.

The implementation process for Standards and Guidelines will occur under two separate processes as described below:

1. During the supervision and/or monitoring of an allotment, if it is determined that the existing terms and conditions of a grazing permit are not in conformance with the approved Standards and Guidelines and that livestock grazing was determined to be a significant factor in the non-attainment of a standard, then as soon as possible, or no later than the start of the next grazing year, the terms and conditions of the permit/lease will be modified to ensure that the grazing management practices or the levels of the grazing use will be in conformance with the Standards and/or Guidelines.

The modification of the terms and conditions of the permit/lease will be implemented by agreement and/or by decision.

2. The allotment evaluation process will continue to be the process used to determine if existing multiple uses for allotments are meeting or making progress towards meeting land use plan objectives, allotment specific objectives, Rangeland Program Summary objectives and land use plan decisions, in addition to the Standards and Guidelines for grazing administration.

Additionally, allotment specific objectives may have to be developed or amended, objectives in the land use plans further quantified at the allotment specific level, and terms and conditions of permits changed or revised to reflect the Standards and Guidelines. Allotment evaluations will continue to be completed based on district priorities.

a. The allotment evaluation consists of or involves:

1.) The evaluation of current grazing use by all users (livestock, wild horses, wildlife) based on monitoring data analysis and interpretation;

2.) Recommendations to change or adjust grazing systems;

3.) Recommendations to change or adjust stocking levels; and

4.) Establishment of stocking levels for wild horses.

b. The allotment evaluation also serves as the basis for either issuing multiple use decisions, agreements, or a no change determination. Multiple use decisions are prepared subsequent to completion of land use plans and are based on the attainment or non-attainment of objectives established in the land use plans and allotment evaluations.

During the evaluation process, the existing terms and conditions of a permit will be evaluated to determine if they are in conformance with the approved Standards and Guidelines. If it is determined that the existing terms and conditions are not in conformance and that livestock grazing was a significant factor in the non-attainment, then as soon as possible or no later than the start of the next grazing year, the terms and conditions of the permit/lease will be modified to ensure that the grazing management practices or the levels of grazing use will be in conformance.

At the conclusion of the evaluation process, the multiple use decision process will continue to be used to establish:

1.) The terms and conditions of the grazing permits;

2.) The appropriate management level for wild horses and burros that occur within the allotment; and

3.) Any recommendations for wildlife populations or habitat management actions required if it is determined that these actions are necessary.

The preamble to the final regulations contains additional information regarding what action BLM would take upon becoming aware that a standard is not being met. The following preamble language is found on page 9956 of the Federal Register notice:

"... The Department intends that failing to comply with a standard in an isolated area would not necessarily result in corrective action.

"The Department recognizes that it will sometimes be a long-term process to restore rangelands to proper functioning condition. The Department intends that Standards and Guidelines will result in a balance of sustainable development and multiple use along with progress towards attaining healthy, properly functioning rangelands. For that reason, wording has been adopted in the final rule that will require the authorized officer to take appropriate action upon determining that existing grazing management practices are failing to ensure appropriate progress toward the fulfillment of standards..."

"In some areas, it may take many years to achieve healthy rangelands, as evidenced by the fundamentals, established standards, and guidelines. The Department recognizes, that in some cases, trends may be hard to even document in the first year. The Department will use a variety of data, including monitoring records, assessments, and knowledge of the locale to assist in making the "significant progress" determination."

The acceptance of progress toward reaching the desired end state is also addressed in the regulatory text in 43 CFR 4180.1 Fundamentals of Rangeland Health which includes the "making significant progress toward" language in each of the four fundamentals.

The concept of "making progress toward" is a specific consideration when determining a course of action during implementation. Determining whether a standard is being met is a distinctly different concept from determining whether progress is being made toward or away from the standard. Determining a course of action is then dependent on a variety of factors, one of which is whether progress is being made toward the standard.

With regard to actions, it is the BLM's policy and intent to work in a collaborative manner to achieve or maintain the Standards necessary for healthy, productive rangelands. It is not the policy or intent of the BLM to arbitrarily and immediately remove all livestock from an entire allotment based solely on finding a range site that is not meeting a standard. As a practical matter the BLM has neither policy, intent, desire nor capability to arbitrarily remove all livestock where acceptable progress is being made toward meeting the Standards.

GEOGRAPHICAL AREA COVERED BY THE STANDARDS AND GUIDELINES

As shown below the three Resourc Advisory Council (RAC) areas in Nevada are based on combinations of major land resource areas as developed by the Natural Resource Conservation Service for Nevada. This land classification system is recognized by the Bureau of Land Management, the Forest Service and other agencies as a basis for ecosystem data collection and analysis. The soil, vegetal and geophysical characteristics of each of the three areas are different and the text offered by the three RACs incorporates their understanding of the differing physical and biological needs of the rangeland ecosystems.

Recognition of these differences is critical to the successful protection of rangelands in Nevada. As a result of basing the RAC boundaries according to an ecosystem approach as opposed to strictly an administrative or jurisdictional approach, the RAC's advice and recommendations are more ,relevant to the on-the-ground management of natural resources. The area covered by the Standards and Guidelines is as follows. Adjustments will be made for grazing allotments that overlap the boundaries between the RAC areas.

1. Mojave-Southern Great Basin Resource Advisory Council recommends actions to the Nevada BLM State Director for all or portions of Clark, Nye, Esmeralda, and Lincoln Counties. This includes portions of the Ely, Las Vegas and Battle Mountain Districts. The Standards and Guidelines would apply to lands within the Southern Nevada Basin and Range and Sonoran Basin and Range major land resource areas as defined by the Natural Resource Conservation Service.

2. Sierra Front-Northwestern Great Basin Resource Advisory Council recommends actions to the Nevada BLM State Director for all or portions of Humbolt, Pershing, Washoe, Carson City, Douglas, Lyon, Mineral, Storey and Churchill Counties in Nevada and Lassen, Plumas, Sierra and Alpine Counties in California. This includes the Winnemucca and Carson City Districts. The Standards and Guidelines would apply to lands within the Sierra Nevada, Malhuer High Plateau, Humbolt Fallon-Lovelock and Carson Basin major land resource areas as defined by the Natural Resource Conservation Service.

3. The Northeastern Great Basin Resource Advisory Council recommends actions to the Nevada BLM State Director for all or portions of Elko, White Pine, Eureka, and Lander Counties. This includes all of the Elko District and portions of the Ely and Battle Mountain Districts. The Standards and Guidelines would apply to lands within the Owyhee High Plateau and Central Nevada Basin and Range major land resource areas as defined by the Natural Resource Conservation Service.

STANDARDS AND GUIDELINES

1. See Appendix A for the Mojave-Southern Great Basin recommended Standards and Guidelines.

2. See Appendix B for the Sierra Front-Northwestern Great Basin recommended Standards and Guidelines.

3. See Appendix C for the Northeastern Great Basin recommended Standards and Guidelines.

APPENDIX A

MOJAVE-SOUTHERN GREAT BASIN AREA

PREAMBLE

The Standards and Guidelines for grazing administration on BLM lands in southern Nevada apply to livestock grazing. The Mojave-Southern Great Basin Resource Advisory Council (RAC) intends that the Standards and Guidelines will result in a balance of sustainable development and multiple use along with progress, over time, toward attaining desired rangeland conditions. Standards are expressions of physical and biological conditions required for sustaining rangelands for multiple uses. Guidelines point to management actions related to livestock grazing for achieving the Standards. Guidelines are options that move rangeland conditions toward the multiple use Standards. Guidelines are based on science, best rangeland management practices, and public input. Thus Guidelines indicate the types of grazing methods and practices for achieving the Standards for multiple use, are developed for functional watersheds and implemented at the allotment level.

The Mojave-Southern Great Basin Resource Advisory Council recognizes that it will sometimes be a long-term process to restore rangelands to proper functioning condition. In some areas, it may take many years to achieve healthy rangelands.

The Resource Advisory Council may be requested by any party to assist reaching agreement in resolving disputes.

STANDARDS AND GUIDELINES

STANDARD 1. SOILS:

Watershed soils and stream banks should have adequate stability to resist accelerated erosion, maintain soil productivity, and sustain the hydrologic cycle.

Soil indicators:

- Ground cover (vegetation, litter, rock, bare ground);
- Surfaces (e.g., biological crusts, pavement); and
- Compaction/infiltration.

Riparian soil indicators:

- Stream bank stability.

All of the above indicators are appropriate to the potential of the ecological site.

GUIDELINES:

1.1 Upland management practices should maintain or promote adequate vegetative ground cover to achieve the standard.

1.2 Riparian-wetland management practices should maintain or promote sufficient residual vegetation to maintain, improve, or restore functions such as stream flow energy dissipation, sediment capture, groundwater recharge, and streambank stability.

1.3 When proper grazing practices alone are not likely to restore areas, land management practices may be designed and implemented where appropriate.

1.4 Rangeland management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

STANDARD 2. ECOSYSTEM COMPONENTS:

Watersheds should possess the necessary ecological components to achieve state water quality criteria, maintain ecological processes, and sustain appropriate uses.

Riparian and wetlands vegetation should have structural and species diversity characteristic of the stage of stream channel succession in order to provide forage and cover, capture sediment, and capture, retain, and safely release water (watershed function).

Upland indicators:

- Canopy and ground cover, including litter, live vegetation, biological crust, and rock appropriate to the potential of the ecological site.

- Ecological processes are adequate for the vegetative communities.

Riparian indicators:

- Stream side riparian areas are functioning properly when adequate vegetation; large woody debris, or rock is present to dissipate stream energy associated with high water flows.

- Elements indicating proper functioning condition such as avoiding accelerating erosion, capturing sediment, and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics:

  Width/Depth ratio;
  Channel roughness;
  Sinuosity of stream channel;
  Bank stability;
  Vegetative cover (amount, spacing, life form); and
  Other cover (large woody debris, rock).

- Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.

Water quality indicators:

- Chemical, physical and biological constituents do not exceed the state water quality standards.

The above indicators shall be applied to the potential of the ecological site.

GUIDELINES:

2.1 Management practices should maintain or promote appropriate stream channel morphology and structure consistent with the watershed.

2.2 Watershed management practices should maintain, restore or enhance water quality and flow rate to support desired ecological conditions.

2.3 Management practices should maintain or promote the physical and biological conditions necessary for achieving surface characteristics and desired natural plant community.

2.4 Grazing management practices will consider both the economic and physical environment, and will address all multiple uses including, but not limited to, (i) recreation, (ii) minerals, (iii) cultural resources and values, and (iv) designated wilderness and wilderness study areas.

2.5 New livestock facilities will be located away from riparian and wetland areas if they conflict with achieving or maintaining riparian and wetland functions. Existing facilities will be used in a way that does not conflict with achieving or maintaining riparian and wetland functions, or they will be relocated or modified when necessary to mitigate adverse impacts on riparian and wetland functions. The location,

relocation, design and use of livestock facilities will consider economic feasibility and benefits to be gained for management of lands outside the riparian area along with the effects on riparian functions.

2.6 Subject to all valid existing rights, the design of spring and seep developments shall include provisions to protect ecological functions and processes.

2.7 When proper grazing practices alone are not likely to restore areas of low infiltration or permeability, land management practices may be designed and implemented where appropriate. Grazing on designated ephemeral rangeland watersheds should be allowed only if (i) reliable estimates of production have been made, (ii) an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and (iii) adverse effects on perennial species and ecosystem processes are avoided.

2.8 Rangeland management practices should address improvement beyond these standards, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

STANDARD 3. HABITAT AND BIOTA:

Habitats and watersheds should sustain a level of biodiversity appropriate for the area and conducive to appropriate uses. Habitats of special status species should be able to sustain viable populations of those species.

Habitat indicators:

- Vegetation composition (relative abundance of species);
- Vegetation structure (life forms, cover, height, and age classes);
- Vegetation distribution (patchiness, corridors);
- Vegetation productivity; and
- Vegetation nutritional value.

Wildlife indicators:

- Escape terrain;
- Relative abundance;
- Composition;

- Distribution;

- Nutritional value; and

- Edge-patch snags.

The above indicators shall be applied to the potential of the ecological site.

GUIDELINES:

3.1 Mosaics of plant and animal communities that foster diverse and productive ecosystems should be maintained or achieved.

3.2 Management practices should emphasize native species except when others would serve better, for attaining desired communities.

3.3 Intensity, frequency, season of use and distribution of grazing use should provide for growth, reproduction, and, when environmental conditions permit, seedling establishment of those plant species needed to reach long-term land use plan objectives. Measurements of ecological condition, trend, and utilization will be in accordance with techniques identified in the Nevada Rangeland Handbook.

3.4 Grazing management practices should be planned and implemented to provide for integrated use by domestic livestock and wildlife, as well as wild horses and burros inside Herd Management Areas.

3.5 Management practices will promote the conservation, restoration and maintenance of habitat for special status species.

3.6 Livestock grazing practices will be designed to protect fragile ecosystems of limited distribution and size that support unique sensitive/endemic species or communities. Where these practices are not successful, grazing will be excluded from these areas.

3.7 Where grazing practices alone are not likely to achieve habitat objectives, land management practices may be designed and implemented as appropriate.

3.8 Vegetation manipulation treatments may be implemented to improve native plant communities, consistent with appropriate land use plans, in areas where identified Standards cannot be achieved through proper grazing management practices alone. Fire is the preferred vegetation manipulation practice on areas historically adapted to fire; treatment of native vegetation with herbicides or through mechanical means will be used only when other management techniques are not effective.

3.9 Rangeland management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

GLOSSARY

Definitions are taken from "A Glossary of Terms Used in Range Management" developed through the Society for Range Management or Bureau of Land Management Technical Reference or from the Dictionary of Ecology, Evolution and Systematics except where noted. Other definitions are from Grazing Administration Regulations Code of Federal Regulations, Chapter 43 Sec. 4100.0-5 . Definitions also include meanings that were developed by the Mojave Southern Resource Advisory Council to understand their intent in the Standards and Guidelines.

-A-

Annual Growth. The amount of production of new above ground plant biomass for a given site during a given year.

-B-

Biodiversity. The diversity of organisms in a region; made up of species diversity in individual community-types and the turnover of species across different community-types.

Biological (Cryptogamic) Crust. Community of non-vascular primary producers that occur as a "crust" on the surface of soils; made up of a mixture of algae, lichens, mosses, and cyanobacteria (bluegreen algae).

Biotic. Refers to living components of an ecosystem, e.g., plants and animals and microorganisms.

-C-

Canopy. (1) The vertical projection downward of the aerial portion of vegetation, usually expressed as a percent of the ground so occupied. (2) The aerial portion of the overstory vegetation.

Canopy Cover. The percentage of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage of plants. Small openings within the canopy are included. (BLM Technical Reference 4400-7)

Climate. The average or prevailing weather conditions of a place over a period of years. (BLM Technical Reference 4400-7)

Conservation. The planned management of natural resources; the retention of natural balance, diversity and evolutionary change in the environment.

The use and management of natural resources according to principles that assure their sustained economic and/or social benefits without impairment of environmental quality.

Cover. A. (1) The plants or plant parts, living or dead, on the surface of the ground. Vegetative cover or herbage cover is composed of living plants and litter cover of dead parts of plants. (2) The area of ground cover by plants or one or more species.

B. (1) the combined aerial parts of plants and mulch, and (2) shelter and protection for animals and birds. (BLM Manual 4400)

C. (1) plant material, living (vegetative Cover) and dead (litter cover) on the soil surface; (2) the area of ground covered by the canopy projections of a particular plant species, expressed as a scale or as a percentage of total ground surface area.

Cultural Resources. A broad, general term meaning any cultural property and any traditional lifeway value. (BLM Manual 8100)

Cultural property. A definite location of past human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. (Manual 8100)

-D-

Desert Pavement. A cemented, hydrophobic layer of rocks or small pebbles that occurs over time on desert soil surfaces; prevents water infiltration into soils and wind/water erosion of the soil; often covered with a chemical varnish layer.

Desired Natural Plant Community. The type of plant community which is desired for a particular ecological site. This could include native and non-native species depending on the desired land use, but as a natural plant community it must have native species adapted to the climate and soil type as dominants or co-dominants in the community.

Desired Plant Community. Of the several plant communities that may occupy a site, the one that has been identified through a management plan to best meet the plan's objectives for the site. It must protect the site as a minimum.

Diversity. (1) the absolute number of species in a community; species richness; (2) A measure of the number of species and their relative abundance in a community; low diversity refers to few species or unequal abundances, high diversity to many species or equal abundances.

-E-

Ecological Processes. Natural functions including the hydrologic cycle, the nutrient cycle, and energy flow. (see also 43 CFR 4180.1(b))

Ecological Site. The kind of land with a specific potential natural community and specific physical site characteristics, differing from other kinds of land in its ability to produce vegetation and to respond to management. (BLM Manual 4400)

Edaphic. Refers to the soil.

Endemic Species. Native to, and restricted to, a particular geographical region, community type, or specific habitat.

Ephemeral Rangelands. Rangelands characterized by low, highly seasonal and often episodic rainfall, resulting in annual plants comprising a significant proportion of annual primary production.

Erosion. (v.) Detachment and movement of soil or rock fragments by the action of water, wind, ice or gravity. (n.) The land surface worn away by running water, wind, ice, or other geologic agents, including such processes as gravitational creep.

Exotic. An organism or species which is not native to the region in which it is found. Synonym *non-native*: Not native; alien; a species that has been introduced into an area.

-F-

Forage. The plant material actually consumed by (or available to) grazing animals.

Fragile Ecosystems. Uncommon ecosystems of limited distribution and size that support unique sensitive/endemic species or communities; ecosystems that have low resilience to environmental stress or to disturbance.

Frequency. The ratio between the number of sample units that contain a species and the total number of sample units.

A quantitative expression of the presence of absence of individuals of a species in a population. It is defined as the percentage of occurrence of a species in a series of samples of uniform size. (BLM Technical Reference 4400-4)

-G-

Grazing Distribution. Dispersion of livestock grazing within a management unit or area.

Ground Cover. The percentage of material, other than bare ground, covering the land surface. It may include live and standing dead vegetation, litter, cobble, gravel, stones and bedrock. Ground cover plus bare ground would total 100 percent. (BLM Technical Reference 4400-4)

Ground Water. Subsurface water that is in the zone of saturation. The top surface of the ground water is the "water table." Source of water for wells, seepage, springs.

-H-

Habitat. The natural abode of a plant or animal, including all biotic, climatic, and edaphic factors affecting life.

Hydrologic Balance. The balance between hydrological inputs (infiltration of incident precipitation, run-on) and hydrological outputs (run-off, deep drainage) for an ecological site.

-I-

Infiltration. The flow of a fluid into a substance through pores or small openings. It connotes flow into a substance in contradistinction to the word *percolation.*

The process by which water seeps into a soil, as influenced by soil texture, aspect and vegetation cover.

Infiltration Rate. Maximum rate at which soil under specified conditions can absorb rain or shallow impounded water, expressed in quantity of water absorbed by the soil per unit of time, e.g., inches/hour.

Integrated Use. To merge the use of each type of public land use through a series of land management practices.

-L-

Land Use Plan. Land use plan means a resource management plan, developed under the provisions of 43 CFR part 1600, or management framework plan. These plans are developed through public participation in accordance with the provisions of the Federal Land Policy and Management Act of 1976 and establish management direction for resource uses of public lands. (43 CFR 4100)

Litter. The uppermost layer of organic debris on the soil surface; essentially the freshly fallen or slightly decomposed vegetal material. (BLM Technical Reference 4400-4)

-M-

Management Objective. The objectives for which rangeland and rangeland resources are managed which includes specified users accompanied by a description of the desired vegetation and the expected products and/or values.

Management Plan. A program of action designed to reach a given set of objectives.

Marsh. Flat, wet, treeless areas usually covered by standing water and supporting a native growth of grasses and grasslike plants.

Monitoring. The orderly collection, analysis, and interpretation of resource data to evaluate progress toward meeting management objectives. (BLM Technical Reference 4400-7)

Monitoring. Monitoring means the periodic observation and orderly collection of data to evaluate: (1) Effects of management actions; and (2) Effectiveness of actions in meeting management objectives. (43 CFR 4100.0.5)

Morphology. The form and structure of an organism, with special emphasis on external features.

Multiple Use. The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return of the greatest unit output. (Federal Land Policy and Management Act)

-N-

Native Species. A species which is a part of the original fauna or flora of the area in question. Indigenous; living naturally within a given area and was part of the areas flora or fauna prior to human settlement of the region.

Naturalized Species. An exotic or introduced species that has become established and exhibits successful reproduction in an ecosystem.

-P-

Percolation. The flow of a liquid through a porous substance.

Productivity. The potential rate of incorporation or generation of energy or organic matter (biomass) by an organism, population or trophic unit per unit time per unit area; plant productivity is termed primary production, and animal productivity is termed secondary production.

Proper Functioning Condition. Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filer sediment, capture bedload, and aid floodplain development; improve flood-water retention and ground-water recharge; develop root masses that stabilized streambank against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. (BLM Technical Reference 1737-9)

-R-

Range Improvement. Range improvement means an authorized physical modification or treatment which is designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; restore, protect and improve the condition of rangeland ecosystems to benefit livestock, wild horses and burros, and fish and wildlife. The term includes but is not limited to, structures, treatment projects, and use of mechanical devices or modifications achieved through mechanical means.

Residual Vegetation. Amount, cover, and species composition of the vegetation on a site after it has been grazed for a period of time.

Resource. Any component of the environment that can be utilized by an organism.

Riparian. Pertaining to, living or situated on, the banks of rivers and streams. 'Xeroriparian' refers to being situated on dry washes (ephemeral streams).

-S-

Seep. Wet areas, normally not flowing, arising from an underground water source.

Soil. (1) The unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants. (2) The unconsolidated mineral matter on the surface of the earth that has been subjected to and influenced by genetic and environmental factors of parent material, climate (including moisture and temperature effects), macro- and micro-organisms, and topography, all acting over a period of time and producing a product -soil- that differs from the material it was derived in many physical, chemical, biological, and morphological properties and characteristics.

Soil Productivity. The organic fertility or capacity of a given area or habitat.

Species. A taxon of the rank species; which is the basic unit, and lowest principal category, of biological classification; in the hierarchy of biological classification, the category below genus; a group of organisms formally recognized as distinct from other groups..

Species Composition. The proportions of various plant species in relation to the total on a given area. It may be expressed in terms of cover, density, weight, etc. Synonym *Vegetative composition.*

Surface Characteristics. The amount of bare ground, litter, rock and basal cover of live vegetation, which may include cryptograms. (Nevada Rangeland Monitoring Handbook)

Sustained yield. The achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use. (FLPMA)

-T-

Traditional lifeway values. The quality of being useful in or important to the maintenance of a specified social and/or cultural group's traditional systems of (a) religious belief, (b) cultural practice or (c) social interaction, not closely identified with definite locations. Another group's shared values are abstract, nonmaterial, ascribed ideas that one cannot know about without being told. (BLM Manual 8100)

Trend. The direction of change in ecological status or resource value rating observed over time. Trend in ecological status should be described as *toward*, or *away from* the potential natural community, or as not apparent. (BLM Technical Reference 4400-4)

-U-

Upland. Terrestrial ecosystems located away from riparian zones, wetlands, springs, seeps and dry washes; ecosystems made up of vegetation not in contact with groundwater or other permanent water sources.

-V-

Vegetative Life Form. The characteristic structural features and method of perennation of a plant species, e.g., annuals, perennial forbs, shrubs, trees and succulents.

-W-

Watershed. (1) A total area of land above a given point on a waterway that contributes runoff water to the flow at that point. (2) A major subdivision of a drainage basin.

Wetlands. Areas characterized by soils that are usually saturated or ponded, i.e., hydric soils, that support mostly water-loving plants (hydrophytic plants).

In areas of arid low lying land that is submerged or inundated periodically by water, and is characterized by hydric soils that support mostly water-loving (hydrophytic) plants.

APPENDIX M

STANDARD OPERATING PROCEDURES

The following standard operating procedures will be applied to this plan.

Environmental Review and Management

In compliance with the National Environmental Policy Act and Council of Environmental Quality regulations, BLM will prepare site-specific environmental reviews for all actions proposed in this Resource Management Plan and Environmental Impact Statement excluding official designations which are in affect upon approval of the Plan. For example designation of Areas of Critical Environmental Concern. Site-specific environmental reviews assess the impacts from implementing these actions. As appropriate, these reviews are documented in Categorical Exclusion Reviews, Administrative Determinations, Environmental Assessments/Finding of No Significant Impact and Decision Records, or Environmental Impact Statements and Records of Decision. In addition, the environmental review identifies mitigating measures necessary to reduce adverse impacts of implementing a project or proposed action.

Future authorizations will be in conformance with the Resource Management Plan.

Air Resources

Air quality is protected by the establishment of mitigation measures designed to prevent deterioration of air quality prior to authorizing actions. This ensures meeting State goals for air quality and limits allowable emissions from existing and new point or nonpoint sources. Common mitigation measures include watering roads and disturbed areas, the use of scrubbers/sprays, covered storage areas, and other measures to reduce emissions and pollutant concentrations to meet or exceed the standards of the Nevada Division of Environmental Protection.

When applicable, activities with potential to affect air quality the BLM would determine and document "conformity" with local, state, tribal and Federal air quality laws, regulations, and standards (per 40 CFR 93.100 et seq). Conformity determinations would be included in site-specific activity plans and/or National Environmental Policy Act documentation.

Soil and Water Resources

Prior to authorizing land-use actions, and also during the allotment monitoring and evaluation process, oil and water resources will be protected by the establishment of mitigation measures designed to maintain or improve soil productivity, and to prevent or minimize soil erosion and floodplain sediment damage. To meet administrative needs the BLM will acquire appropriative water rights by applying for available water rights according to Nevada water law, or by assertion of a public water reserve.

Best Management Practices and appropriate mitigation will be identified during project-level environmental review and applied during project implementation for any ground-disturbing activity that may reduce soil productivity or cause surface erosion.

Riparian Management

After Proper Functioning Condition is achieved, riparian areas would be managed to achieve a Desired Plant Community that is appropriate based on management objectives. Unless management objectives dictate otherwise, the Desired Plant Community will be the Potential Natural Community.

Vegetation

Where possible and practical manage to maintain or improve the vegetative communities at potential natural community or the desired plant community.

Visual Resource Management

Visual Resource Management classes are delineated in the Resource Management Plan based on an inventory conducted in accordance with BLM visual management procedures (Manual 8400). The individual Visual Resource Management classes provide management objectives to be implemented as a part of all activities authorized in the *Las Vegas District Resource Management Plan*. The overall goal is to protect or enhance the visual and natural aspect and attributes of the public lands while minimizing the impacts of authorized activities.

Visual resources will continue to be evaluated, using the Contrast Rating process, as a part of activity and project planning. These evaluations will consider the significance of the proposed project and the visual sensitivity of the affected area. Stipulations will be developed and attached to project authorizations to maintain designated Visual Resource Management classes. Stipulations may include requirements to locate activity sites behind topographic features to hide them from view, modify access routes, color buildings and equipment to blend in with their surroundings, develop projects in phases, etc. If Visual Resource Management class objectives cannot be met, the impacts to visual resources will be detailed in the project-level environmental analysis and used by the Authorized Officer as a factor in the decision to authorize or deny a proposed action.

To comply with BLM policy for Wilderness Study Areas (WSAs), as stated in BLM Manual H-8550-1, *Interim Management Policy for Public Lands Under Wilderness Review* (1995), Wilderness Study Areas will be managed as interim Visual Resource Management Class II areas until Congress makes final wilderness decisions for Nevada BLM Wilderness Study Areas. This will comply with the policy to manage Wilderness Study Areas to avoid impairment of existing wilderness values. As of March 30, 1989, limitations were placed on the authorization of activities which cause surface disturbance that require reclamation to restore an area to a preproject condition. Following Congress' final wilderness decision, designated wilderness areas will be managed as Visual Resource Management Class I areas. Lands not designated as wilderness will be managed according to the Visual Resource Management classes designated in the Resource Management Plan/ROD decisions.

Areas of Critical Environmental Concern

A plan of operations will be required for any proposed mechanized disturbance within an Area of Critical Environmental Concern during search for, or the exploitation of locatable minerals.

Fish and Wildlife and Special Status Species

Monitor and inventory key wildlife habitats on public land, including nongame bird species and their habitats, key nesting areas, migration routes, important prey base areas, and concentration areas for birds of prey, and desert tortoise habitat condition in Areas of Critical Environmental Concern.

Fish and wildlife habitat will continue to be evaluated on a case by case basis during project level planning. Such evaluation will consider the significance of the proposed project and the sensitivity of fish and wildlife habitat in the affected area. Stipulations will be attached as appropriate to assure compatibility of projects with management objectives for fish and wildlife habitat and the mitigation of impacts.

Habitat improvement projects will be implemented where necessary to stabilize or improve unsatisfactory or declining wildlife habitat condition or population trends.

Manage wildlife habitat to the potential natural community unless an interdisciplinary team determines that a particular desired plant community is more appropriate to meet the needs of a particular wildlife species.

Prevent adverse impacts to of bighorn sheep habitat due to mineral-related exploration and development. Where possible allow no new road construction or siting of ancillary facilities in lambing habitat. Require operators to mitigate impacts to bighorn sheep and their habitat. This may include revegetation of sites and closure of access roads.

In accordance with BLM guidelines for domestic sheep management in bighorn sheep habitat, no domestic sheep grazing will be authorized in bighorn sheep habitat.

Develop habitat management plans on an as needed basis. Incorporate non-game bird and raptor management objectives and actions in all activity plans which include significant or key habitats for these species.

Develop partnerships with other Federal, State, and local research and educational institutions to encourage research and to implement environmental education programs.

Restore habitats to a condition consistent with wildlife habitat objectives, emphasizing maintenance and enhancement of natural biodiversity.

Survey abandoned mines for the presence of bats before authorization of mine closures in accordance with IM 93-304. If use of the mine by bats is documented, consider installing bat gates to ensure that the habitat continues to be suitable for bats, while promoting public safety. Total closure of abandoned mines known to support bats should be considered only as a last resort, with full consideration of other wildlife values.

To the extent possible under BLM policy and Federal laws, implement recovery actions for federally listed species, including but not limited to actions recommended in the *Peregrine Falcon Recovery Plan, West Coast Region* (USDI, USFWS 1982); *Moapa Dace Recovery Plan* (USDI, USFWS 1983); *Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada* (USDI, USFWS 1990), *Recovery Plan for Woundfin, (Plagopterus argentissimus) and Virgin River Chub (Gila robusta seminumda)* (USDI, USFWS 1993); *Desert Tortoise (Mojave Population) Recovery Plan* (USDI, USFWS 1993); and other plans as they are developed.

The Endangered Species Act of 1973 as amended, declares it the policy of Congress that all Federal Agencies will conserve endangered and threatened species and utilize their authorities in the furtherance of the purposes of the Act. In accordance with Section 7 of the Act, consultation with the U.S. Fish and Wildlife Service will be conducted on all federal actions which may affect a threatened or endangered species.

It is BLM policy to manage special status species, consistent with multiple use, for conservation of special status species and their habitats and to ensure that actions authorized or funded do not contribute to the need to list those species as threatened or endangered. BLM may enter into Conservation agreements or species management plans with the U.S. Fish and Wildlife Service and the State of Nevada to protect habitats of special status species.

Cooperate and collaborate with Clark County in the development and implementation of a county-wide multiple species conservation plan.

Require reclamation of activities which result in loss or degradation of special status species habitat. Reclamation may include salvage and transplant of cactus and yucca, recontouring the area, scarification of compacted soil, soil amendments, seeding, and transplant of seedling shrubs. Monitoring will be conducted to determine the success of the reclamation. If necessary a second seeding or transplanting effort may be required, should monitoring indicate that the original effort was not successful.

An off-site mitigation fee will be collected on surface disturbing activities in desert tortoise habitat. Off-site mitigation fees in critical habitat shall be based upon the report entitled Compensation for the Desert Tortoise, approved by the Desert Tortoise Management Oversight Group (November 1991). Base land values in critical habitat and proposed Desert Wildlife Management Areas shall be $550 per acre and adjusted annually for inflation. The base land value shall be multiplied by the compensation rate for the project.

Inventory and monitor mesquite habitat at Amargosa Valley Area, Stump Springs, Pahrump Valley, Hiko Wash, Piute Wash, Meadow Valley Wash and other areas determined to be potentially important resting and/or nesting habitat for resident and neo-tropical avian species.

Inventory special status species and take appropriate management actions to protect the habitat of these species. Management actions may include (but will not be limited to) fencing, segregation of habitat from land and mineral laws, closure to off-road vehicle use and reduction of wild horse and burro numbers in a given area.

Survey abandoned mines for the presence of bats before authorization of mine closures. If use of the mine by bats is documented, consider installing bat gates to ensure that the habitat continues to be suitable for bats, while promoting public safety. Total closure of abandoned mines known to support bats should be considered only as a last resort.

Forestry and Vegetative Products

Pinyon nut gathering will be authorized on an individual basis, including within Wilderness Study Areas released by Congress for multiple-use purposes. Personal consumption of up to 25 pounds per year is allowed without permit.

Provide for collection of other vegetative resources, as stated in BLM Manual 5500 *Nonsale Disposal under Recreation Use*. Vegetative resources include such things as seeds and flowers.

A Woodlands Management Plan would be completed for any wood cutting area within the district.

Livestock Grazing Management

Resource improvement planning will be in accordance with the procedures outlined in BLM Handbook H-1741-1, *Renewable Resource Improvement and Treatment Guidelines and Procedures*, or other appropriate BLM guidelines.

The grazing management program assigns priorities to management efforts using a selective management approach. Under this approach grazing allotments are categorized into "I," "M," and "C" management categories. The objectives for these categories are to: 1) *maintain* (M) the current satisfactory conditions; 2) *improve* (I) the current unsatisfactory conditions; or 3) manage *custodial* (C) while protecting existing resource values. Management priority will be given first to "I" allotments, second to "M" allotments, and third to "C" allotments.

Monitoring studies designed to measure the results of livestock management are essential to measure the progress toward meeting management objectives and making necessary changes over time. They are also essential to assure compliance with the Mojave-Great Basin Standards and Guidelines. The studies that will be used will monitor directly or indirectly the soils, ecosystem components and habitat and biota standards and associated indicators identified in the Standards and Guidelines. The minimum methods and procedures for monitoring studies will be those identified in the Nevada Rangeland Monitoring Handbook (Nevada Range Studies Task Group 1984).

Use pattern mapping will be used to assess livestock distribution, identify any utilization problems, and determine the future long term stocking rate. Utilization studies will be conducted at each key area. Actual use will be submitted by the permittee and compared to utilization levels.

Key area studies with frequency and canopy cover will be used to determine vegetative trends in ecological sites, determine soil stability, and assess the vegetative trend objectives. Ecological condition data will be collected again on key areas when frequency and cover data indicate a change in trend has occurred.

Climatic data, seasonal and annual precipitation and temperature, will be analyzed and correlated to the trend, condition, utilization and actual use data to evaluate the overall management and attainment of objectives.

Range improvement projects will be addressed in environmental documents and will be constructed in accordance with BLM Manual 9113 or other appropriate BLM guidance. Existing access or temporary roads will be used as much as possible. Temporary roads will be rehabilitated after use is completed.

Developed spring sources may be fenced and water provided for livestock and/or wild horses/burros away from the source. Water will be left at the spring source for wildlife use as required by Nevada Revised Statute 533.367, which states in part that "Before a person may

obtain a right to the use of water from a spring or water which has seeped to the surface of the ground, he must ensure that wildlife which customarily uses the water will have access to it".

Application of herbicides on proposed treatment areas to reduce tamarisk and other plant species will be in accordance with procedures established in BLM Manual 9222 or other appropriate BLM guidelines, to prevent impairment of nontarget species.

Vegetative manipulation that will alter the potential natural plant composition will not be allowed in riparian areas. This includes the introduction of nonnative species.

Maintenance of livestock management structures will be accomplished by the livestock operator through cooperative agreements and range improvement permits as specified in the BLM's 1982 *Rangeland Improvement Policy* (USDI, BLM, Oct. 1982).

The clearing of vegetation from project sites will be restricted to the minimum amount necessary to properly and safely complete the project.

Disturbed areas will be rehabilitated, where such action is necessary and practical, based on the ecological sites potential to respond to rehabilitation, and the objective is to replace ground cover and prevent erosion. Fences used to control cattle movement in areas inhabited by resident and migratory populations of deer, horses and burros will be 42 inches in height. Fences in these areas will consist of three barbed wires and a smooth bottom wire. The spacing of the wires starting from the ground will be 16 inches, 22 inches, 30 inches and 42 inches. Line posts shall be spaced at a distance of 16.5 feet between each post. Fences in bighorn sheep habitat will be a three-strand fence with spacing 20, 35, and 39 inches from the ground with a smooth bottom wire. Special design standards will be in accordance with the *BLM Handbook H-1741-1*, or other appropriate BLM guidelines. All fences will be designed to assure a minimum of impacts to wildlife, wild horses/burros, recreation, and visual resources.

The Rangeland Program Summary will be revised based on the objectives and management direction identified in the plan. It will discuss the monitoring and range improvement projects needed to meet specific allotment objectives. Updates of the Rangeland Program Summary will explain and update monitoring efforts and results. The Rangeland Program Summary will be issued subsequent to the Record of Decision.

All Field going employees will be given a course in noxious/invasive plant identification. Environmental Assessments will address noxious/invasive plants.

Lands acquired via land exchange will include a noxious/invasive plant inventory completed with a plan for control if needed before acquisition.

Due to the limited number of allotments open to grazing, completion of Allotment Management Plans would be on an as needed basis.

Wild Horse And Burro Management

It is the intent of the BLM to manage wild horses and/or burros and their habitat within areas occupied in 1971. Management is to be accomplished in a manner designed to achieve a thriving natural ecological balance and multiple-use relationship with other resource users. The suitability of some areas to support wild horses and/or burros will be reassessed as appropriate in light of new information from monitoring and emergency gathers.

Management of the wild horses and/or burros will also be guided by Herd Management Area Plans or their functional equivalent, when appropriate. The plans will be developed through consultation and coordination with interested parties and will be coordinated with livestock, wildlife, and other resource plans. The management plans may include, but not be limited to, discussions of seral stages, range trends, habitat requirements, dietary needs, water requirements, and wild horse and/or burro reproductive capabilities.

Animal number adjustments will be made when the demand or use on the most restrictive environmental resource factor exceeds the supply and/or the Herd Management Areas management objectives are not being met. This may be based on exceeding the allowable utilization levels on key forage species, the water availability, riparian damage, resource impacts to the herds primary use area within the Herd Management Area, or other factors as identified in the specific Herd Management Plan. Reductions in numbers will be proportioned between livestock, wild horses, and burros where all three share common use areas. In areas where no livestock grazing is authorized, the Appropriate Management Levels of wild horses and burros will be adjusted.

The Appropriate Management Level will be expressed as an upper and lower number of animals. The herd will be reduced to the lower number and allowed to increase over a three year period to the upper number. At the end of this 3 year cycle a gather would be imitated to reduce the herd to the lower appropriate management level.

Prepare Herd Area Management Plans as identified in the approved Resource Management Plan, Implementation Plan.

Cultural Resources

The National Historic Preservation Act of 1966, as amended; the Archaeological Resources Protection Act of 1979; the American Indian Religious Freedom Act of 1978; the Native American Graves Protection and Repatriation Act of 1990; FLPMA; and Executive Order 11593 provide for the protection and management of cultural resources. These laws are implemented through the following Federal Regulations: 36 CFR 60, 36 CFR 800, 43 CFR 7, and 43 CFR 8365.1-5, (a)(1), and presidential memorandum dated 4/29/1994 and Executive Order 13007, "Indian Sacred Sites," dated May 24, 1996..

The BLM is required to identify, evaluate, and protect cultural resources on public lands under its administration and to ensure consideration of cultural resources prior to initiation of proposed BLM- authorized activities. If an area will be in any way affected by those activities, a cultural resources inventory will be conducted. In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, eligibility determinations for nomination to the National Register of Historic Places are made in consultation with the Nevada State Historic Preservation Office. A determination of effects to eligible properties is also made in consultation with the Nevada State Historic Preservation Office.

Avoidance of cultural properties is the preferred mitigation. However, avoidance is inappropriate if 1) the project will create ongoing activity in the area, or 2) the project will greatly increase access to the area. Either of these conditions could lead to increased vandalism and/or accidental damage. Significant cultural properties to be protected through avoidance will be marked in the field and monitored on a periodic basis.

If eligible properties cannot be avoided, appropriate mitigating measures will be developed in consultation with the Nevada State Historic Preservation Office and the President's Advisory Council on Historic Preservation. No action will be authorized until these agencies are consulted and a mutually agreeable treatment plan is prepared.

Federal agencies are required to consider the views of Native Americans when a proposed undertaking may be in conflict with traditional lifeways or religious values. The American Indian Religious Freedom Act requires consultation with Native American religious and secular leaders to identify geographic areas which may be associated with traditional lifeways, traditional cultural properties and religious practices.

Lands

Except for color-of-title and mineral entry patents, land tenure adjustments are discretionary and would be evaluated on a case-by-case basis. Site-specific decisions would be made as to whether the land is still suitable and there is a continued need for federal ownership, or whether disposal of the land would better serve public objectives.

All disposal actions would require site-specific environmental analyses in which the following criteria are evaluated as well as coordination with other federal, state, city and county agencies including the Public Lands Commission:

1. Consistency with the management direction contained in the Las Vegas District Resource Management Plan

2. Consistency with the plans and policies of other agency/governmental entities involved

3. Existing land uses or encumbrances

4. Existing hazardous substances or situations

5. Public resource values (i.e., T&E species, wilderness, wildlife, recreation, riparian, cultural/historical sites, visual resources, mineral potential, and other designations authorized by law)

6. Feasibility of continued management by the federal government

7. Accessibility of the land for public use

8. Suitability for development by private interests or nonfederal governmental entities

9. Social and economic impacts created by the disposal action

Federal land within the Las Vegas District is available for right-of-way purposes except within designated right-of-way exclusion areas.

Right-of-way actions would require a site-specific analysis of the same criteria listed above for disposal actions, with the exception of No. 6, 8, and 9.

Designated right-of-way corridors within the Las Vegas District vary from 1400 feet to 3000 feet. All facilities placed within corridors must be authorized under a right-of-way grant. Designation of corridors does not restrict all future rights-of-way to corridors, nor does it commit the BLM to approve all corridor right-of-way applications. However, right-of-way corridors will be used to the extent possible.

Federal land patents and right-of-way grants would be authorized subject to valid prior existing rights.

Acquisition

The BLM would work toward acquiring lands necessary to protect sensitive resources throughout the district. Each parcel would be evaluated to determine if acquisition is appropriate and fits within existing federal land tenure. This would include working cooperatively with County, State, Local and other government agencies to restore riparian areas or in developing wetland parks where public and private lands are managed together.

Recreation

A broad range of outdoor recreation opportunities will continue to be provided on all segments of the public land, subject to the demand for such opportunities and the need to protect other resources. Special Recreation Management Areas, areas of concentrated use, and existing facilities will receive first priority for operation and maintenance funds. Investment of public funds for new recreation developments will be permitted only on land identified to remain in public ownership.

Recreation resources will continue to be evaluated on an individual basis as part of activity and project-level planning. Such evaluations will consider the sensitivity of, and the impacts on, recreation resources in the affected area. Stipulations will be attached as appropriate to assure the compatibility of projects with recreation management objectives.

Permittees and rights-of-way holders will be notified of proposed recreation events in advance. If conflicting uses occur BLM staff, the permittee(s)/ROW holder(s) and the event applicant will meet to resolve differences.

Decisions regarding the designation of areas open, limited (restricted), and closed to motorized vehicle access have been made in the Resource Management Plan. An exception to designations in the Resource Management Plan is emergency actions which may be necessary due to:

1. The need to minimize damage to soil, watershed, vegetation or other resource values.

2. The need to minimize harassment of wildlife or the degradation of wildlife habitat, especially habitat for threatened, endangered, or Nevada BLM sensitive species.

3. The need to promote user safety and protect the visiting public from hazardous situations.

Public land within areas closed to motorized vehicle use will be closed year-long to all forms of motorized vehicle use except for emergency or authorized vehicles.

Vehicle use in Wilderness Study Areas is currently managed as limited to existing (1980 inventory) roads, trails and ways. This is a temporary designation which overrides the decisions in the Resource Management Plan, pending final decisions by Congress with regard to Wilderness Study Areas. Following final Congressional action, those areas designated as wilderness will be closed to motorized vehicle use, subject to valid existing rights and authorized nonconforming uses. Motorized vehicle use on lands which are not designated as wilderness will be managed according to the decisions in this Resource Management Plan and Record of Decision.

The BLM, Nevada State Office has published a camping stay limit (effective November 5, 1993) for the public lands it manages: "A person or persons may not occupy undeveloped public lands or designated sites or areas for more than fourteen days within a twenty-eight consecutive day interval. Following the fourteen days, the persons and personal property must relocate to a site outside of at least a twenty-five mile radius from the occupied site or non-BLM administered land for a period of fourteen days". A supplemental camping closure has been published for the immediate Las Vegas Valley area (3/98) and is continued in the Resource Management Plan.

In order to protect resources, or for administrative purposes, an Authorized Officer may, by posting notification, close a given site to occupancy, even if the same person or persons have not occupied the site for fourteen consecutive days."

Under BLM regulations, primitive camping is allowed in Areas of Critical Environmental Concern unless otherwise posted. Campers are limited to a two week stay and motorized access is limited to designated roads and trails.

All BLM lands that are not limited in the Resource Management Plan are open to all individual, commercial, and competitive outdoor recreation uses. Opportunities for exploring the back-country by vehicle, hunting, camping, sightseeing, and hiking are encouraged. There are no nationally significant river segments, as defined in the National Wild and Scenic Rivers Act of 1964, in the Las Vegas District.

The BLM in coordination with the U.S. Fish and Wildlife Service and with input from the Off-Highway Vehicle and Environmental Groups, will develop a monitoring plan to be used to evaluate the impacts, if any, of organized, non-speed events within desert tortoise Areas of Critical Environmental Concern. This data will be used to determine what changes may be made in regards to the permitting of organized, non-speed events within desert tortoise Areas of Critical Environmental Concern. Modifications to the permitting of organized, non-speed events will be presented to the Clark County Habitat Conservation Plan Implementation and Monitoring Committee for review and input prior to implementation by BLM.

Prepare Recreation Area Management Plans for each Special Recreation Management Area as identified in the Implementation Plan for the approved Resource Management Plan.

Authorization of Off-Highway Vehicle events will be consistent with surrounding Districts Land Use Plans, where events cross jurisdictional boundaries.

Wilderness

BLM policy requires that all Wilderness Study Areas be managed in accordance with the provisions of Section 603 (c) of the Federal Land Policy and Management Act and the BLM *Interim Management Policy for Lands Under Wilderness Review* (IMP) so as not to impair their suitability for preservation as wilderness. The Interim Management Policy provides management policies for Wilderness Study Areas between the time of Wilderness Study Area designation (11/15/80) and final decisions by Congress regarding these areas. The Interim Management Policy contains specific management direction for activities in Wilderness Study Areas which may occur or be authorized.

The specific management determinations identified in the Resource Management Plan are those that may take place if the Wilderness Study Areas are released from wilderness consideration by Congress. Some of the determinations are compatible with the Interim Management Policy and can be implemented at any time, whereas others must await Congress' final determinations. Also some Resource Management Plan determinations may not comply with the Interim Management Policy's nonimpairment requirements. These decisions may not be implemented until after Congress' final decision releasing the nonwilderness lands from the requirements and restrictions included in the Interim Management Policy.

Should Congress designate wilderness areas, the Resource Management Plan will be maintained to include these new designations, and to modify determinations which conflict with wilderness management objectives. Management of areas designated as wilderness will be guided by the requirements of the Wilderness Act of 1964, specific enabling legislation, and the BLM's wilderness management procedures. While site-specific management objectives for wilderness areas will be included in future wilderness management plans, certain actions are nondiscretionary, including closure to motorized vehicle use (except for valid existing rights and approved nonconforming uses by permit) and segregation from mineral entry and fluid-mineral leasing.

Fluid Minerals

Oil and gas leases and geothermal leases grant the right to the operator to explore for, and to produce oil and gas, and geothermal energy. Leases are subject to certain terms and conditions which provide for protection of fragile resources, compliance with applicable laws, ordinances, and regulations pertaining to fire, sanitation, conservation, water pollution, fish and wildlife, safety, protection of property, and reclamation.

In addition to the terms and conditions of the leases, no surface occupancy stipulations may be applied to site-specific applications to provide for stringent environmental protection of conflicting resources. Additional project specific stipulations would be developed by a multidisciplinary team as part of the environmental analysis process.

Geophysical exploration for oil and gas, and for geothermal resources may take place before or after the leasing of the lands. These actions will be reviewed by a multidisciplinary team in the Las Vegas District to identify and mitigate resource-related conflicts.

BLM encourages and facilitates the private development of public land mineral resources in a manner that satisfies national and local needs, does not conflict with urban development or with sensitive natural resources, and provides for economically and environmentally sound exploration, extraction, and reclamation practices.

Consultation with the U.S. Fish and Wildlife Service is required per section 7 of the Endangered Species Act prior to approval of an Application for Permit to Drill (APD) or other lease operations, if a proposed listed or listed threatened or endangered species, or its critical habitat, is likely to be affected by project activities. If there is deemed to be any adverse impact the proposal would be modified or the request denied.

Actions which would adversely impact a Nevada BLM sensitive plant or animal species will be modified in order to prevent possible future listing of these species as threatened or endangered.

Locatable Minerals

BLM provides for mineral entry, exploration, location, and operations pursuant to the mining laws in a manner that 1) will not unduly hinder the mineral activities, and 2) assures that these activities are conducted in a manner which will prevent undue or unnecessary degradation of the public land.

Notification to the Authorized Officer is required on all operations in project areas in which surface disturbance will be five acres or less.

A Plan of Operations and a Reclamation Plan are required in situations in which there will be more than five acres of cumulative unreclaimed surface disturbance in a project area. These two plans are also required for any mining activity on special category lands, such as Areas of Critical Environmental Concern and areas closed to off-highway vehicles. Appropriate off-site mitigation may be negotiated during a plan of operations review for locatable mineral actions when an irretrievable loss of important habitat is unavoidable, or a significant long-term adverse impact will occur. The preferred alternatives to off-site mitigation are avoidance of critical and crucial habitat and reclamation of disturbed habitat to approximate pre-disturbance productivity.

The Authorized Officer may require modifications of Plans of Operations to meet the requirements of the regulations and to prevent undue or unnecessary degradation of public land.

Plans of Operations cannot be approved until Section 106 of the National Historic Preservation Act, and Section 7 of the Endangered Species Act, and the National Environmental Policy Act have been complied with.

Reclamation of disturbed areas to meet BLM standards is required for all levels of activity: Casual Use, Notice, or Plan of Operations.

Additional regulatory requirements will be enforced in Wilderness Study Areas through regulations (43 CFR 3802) and through the Interim Management Policy for Wilderness Study Areas.

All operations shall comply with Federal and State laws, including those relating to air quality, water quality, solid wastes, fisheries, wildlife and plant habitat, and archaeological and paleontological resources.

The BLM will conduct validity examinations, reviewing the validity of mining claims to determine if a discovery has been made, under the following conditions:

1) Where a mineral patent application has been filed and a field examination is required to verify the validity of the claim(s).

2) Where there is a conflict with a disposal application, and it is deemed in the public interest to conduct a validity examination; or where the statute authorizing the disposal requires the removal of mining claims that are not valid. If the validity examination made in the latter case were to show that the mining claim was valid, the disposal action could not be completed.

3) Where the land is needed for a Federal program.

4) When a mining claim is occupied under the guise of the mining law and flagrant or questionable misuse of the land is observed, the BLM will undertake a review of the occupancy based on current regulations. If it is found, in fact, that such use is not necessary for, and reasonably incident to, mineral development, BLM will act to terminate the use and seek compensation for damages.

Withdrawals from mineral entry will be undertaken in cases in which there are significant resource values that cannot be adequately protected under the regulations concerning surface management. Such withdrawn acreage would iclude areas designated by Congress as wilderness, sensitive species or threatened species habitat, riparian areas, areas possessing important historical and cultural resources, and areas set aside for recreational development.

Bonding will be required for all plans of operations and financial guarantees will be required for operations conducted under a notice to ensure that satisfactory reclamation takes place. All operations using cyanide will follow the requirements in BLM's Nevada Cyanide Management Plan.

The BLM will coordinate each mine plan and mine closure in conjunction and consultation with the Bureau of Reclamation and Regulation of the Nevada Division of Environmental Protection. This coordination ensures that the State of Nevada reclamation laws are implemented on Federal and private lands, and that all necessary State permits will be issued and followed.

Saleabe Minerals (Mineral Materials)

All mineral material disposals are discretionary. Appropriate terms and conditions are applied to ensure that the permittee will comply with all applicable laws and environmental safeguards.

Disposal to State, county, and municipal governments will generally be processed through the issuance of free-use permits (FUPs), or Material Site Rights-of-way, where appropriate.

Disposal of such common-variety mineral materials as sand and gravel may not be made from mining claims, unless the date of the mineral materials contract or permit precedes the date of the location of the claim. This policy applies to all types of mining claims including placer, lode, millsite, and tunnel site claims. Mining claimants may not sell mineral materials which are on their unpatented mining claims.

The following are standard constraints for mineral material disposal.

1. All activities will be subject to the constraints listed below as well as any other special stipulations which the Authorized Officer deems appropriate.

2. "Authorized Officer" means the Las Vegas District Manager or his duly appointed representative.

3. "Holder" means any person, corporation, partnership, association, agency (Federal, State, County, and/or Local), municipality, or other entity which holds a mineral materials contract, free use permit, material site right-of-way, or letter of authorization to sample and test mineral materials within the Las Vegas District. All applicants may obtain Authorizations under any name they choose, however, related business ventures will be viewed as the same Holder for the purpose of enforcing all terms and conditions.

4. "Operator" means the holder, its contractors, subcontractors, and/or the employees of any of them.

5. "Material Site" means the site of any Authorization for a mineral material disposal located on Federal mineral estate within the Las Vegas District, whether or not the surface estate is Federally owned, as well as all authorized routes of ingress to the site and egress from it.

6. "Authorization" means any mineral materials contract, free use permit, material site right-of-way, or letter of authorization to sample and test mineral materials issued within the Stateline Resource Area for the purpose of exploring or removing portions of the Federal mineral estate, whether of not the surface estate is Federally owned, as well as all authorized routes of ingress and egress to and from the Material Site.

7. All applicants for saleable mineral (mineral materials) authorizations, or new material site rights-of-way authorizations, must prepare and submit an exploration/mining plan, and reclamation plan for all proposed activities, to the Authorized Officer for approval prior to environmental review or issuance of any authorization.

8. Prior to the issuance of any material contract, free use permit, material site right-of-way, or letter of authorization to conduct sampling and testing, all applicants must pay a fee as determined by the Authorized Officer for the cost of reclamation unless they have written authorization from the Authorized Officer to perform interim and/or final reclamation in lieu of paying reclamation charges.

9. All applicants who perform interim and/or final reclamation in lieu of paying reclamation charges must post a bond for the purpose of insuring reclamation. The bond amount will be determined by the Authorized Officer. No bond is required of those applicants who pay a fee for the cost of reclamation.

10. All activities must comply with the Endangered Species Act and the National Historic Preservation Act.

11. Prior to the issuance of any material contract, free use permit, material site right-of-way, or letter of authorization to conduct sampling and testing in Desert Tortoise habitat areas, all applicants must pay a fee for the on-site mitigation of both desert tortoise habitat and cultural resources. The fee amount will be determined by the Authorized Officer.

12. Mineral appraisal of the fair market value of the mineral material to be offered for sale or free use must be prepared by a qualified mineral materials appraiser and then be approved by a technical reviewer and acknowledged by management.

13. The Operator of a Material Site must conform to all Federal, State, County, and Local laws, ordinances, and regulations. Copies of all permits, variances, easements, etc. issued to the Operator must be submitted to the Authorized Officer within ten (10) days of their issuance.

14. The Operator shall notify the Authorized Officer within one (1) working day of the start of the following activities:
    a. Movement of equipment into the Material Site;
    b. Commencement of operations;
    c. Termination of operations;
    d. Removal of equipment from the Material Site.

15. If the Operator violates any term or condition of a material sales contract/authorization, the Authorized Officer may, through written notice, suspend any further operations of the Holder pursuant to any Authorization, except such operations as may be necessary to remedy any violations. If the Holder fails to remedy all violations within fifteen (15) days after receipt of the suspension notice, the Authorized Officer may, by written notice, cancel the Authorization and take appropriate action to recover all damages suffered by the United States by reason of such violations, including application of any advance payments and any performance and/or reclamation bonds toward payment of such damages.

16. If the Operator extracts or removes any mineral materials during any period of suspension of its Authorization, or if it extracts or removes any such materials after the expiration of its Authorization, or after the cancellation of its Authorization, or in excess of the amount of its Authorization, such extraction or removal shall be deemed both a willful trespass and a criminal trespass. The willful trespass will render the Holder liable for the actual value of the materials at the time of conversion (sale or final use by the Operator). The criminal trespass will render the Holder liable to criminal sanctions under the laws of the United States to include fines and/or imprisonment.

17. If the Operator violates any term or condition of a material sales contract/authorization, the Authorized Officer may, through written notice as previously described, refuse to issue any additional Authorization to the Holder after the final resolution of the subject violation.

18. The Holder of a material sales contract/authorization shall be liable for any damages suffered, costs, and/or expenses incurred by the United States arising out of any operations under any Authorization whenever such damages, costs, and/or expenses result from any breach of contract or wrongful or negligent act of the Operator. The Holder shall pay the United States for such damages, costs, and/or expenses within thirty (30) days after a written demand therefor by the Authorized Officer. Failure to make payment within this period will result in the denial of any application for an additional Authorization to the Holder until payment is received.

19. If not in default, the Operator shall have the right, within thirty (30) after expiration of the Authorization, to remove its equipment, improvements, and/or other personal property from the Material Site. However, any improvements such as road surfacing, culverts, and bridges which have become a permanent part of a public road shall not be removed. Any equipment, improvements, and/or other personal property remaining in the Material Site or on adjacent public lands at the end of the thirty (30) day removal period shall become the property of the United States unless additional time for their removal has been granted in writing by the Authorized Officer.

20. Contracts and free use permits may not be assigned without the approval of the Authorized Officer. Material site rights-of-way may not be assigned as only the Nevada Department of Transportation is authorized to hold them, and then only for use on federally aided highway projects.

21. The Operator shall have the right to extract and remove mineral materials until the termination of the Authorization, notwithstanding any subsequent appropriation or disposition of all or part of the lands under the general land laws, including the mining and leasing laws.

22. Upon termination of the Authorization, the Operator must remove and dispose of all waste in an authorized disposal site. The term "waste", as used herein, includes, but is not limited to, garbage, trash, solid waste, human waste, petroleum products, back haul debris, and equipment. No waste or any other material will be buried in the Material Site.

23. The hauling or backhauling of any kind of waste, materials, and/or debris into the Material Site or onto adjacent public lands is prohibited. The Operator is required to keep the Material Site clear of all waste, materials, and debris and to dispose of it in a properly authorized disposal site. The hauling/backhauling of any waste, materials, or debris into the Material Site or onto adjacent public lands by the Operator will be cause for the Authorized Officer to immediately order the suspension and/or cancellation of the Authorization to the Holder and issue a notice of trespass. The Holder will be liable for all costs to remove any waste, materials, and/or debris.

24. Except for stockpiles of crushed or screened materials, the Operator must keep the Material Site reasonably level and uniform during the term of the Authorization. Stockpiles must be removed on or before the termination of the Authorization. Upon termination of the Authorization, all stockpiles and all other unsevered and/or unremoved mineral materials become the property of the United States unless additional time for their removal has been granted in writing by the Authorized Officer.

25. Except within designated community pits and common use areas, overburden which was removed and reject material which resulted from materials processing operations will not be left in piles upon the termination of the Authorization. Upon cessation of operations, these materials must be returned to the Material Site and utilized in its reclamation.

26. Night watchmen, mobile homes, recreational vehicles, house trailers, non-operational vehicles, storage areas, repair areas, salvage areas, asphalt hot plants, concrete batch plants, materials recycling plants, wash plants, and water wells are not allowed within any Material Site unless approval is granted in writing by the Authorized Officer. Persons, animals, materials, manufactories, or equipment not directly related to either the reclamation of the Material Site or the exploration, development, extraction, processing, or transportation of mineral materials are not allowed within any Material Site unless approval is granted in writing by the Authorized Officer.

27. The Operator will not supply water from a Material Site to livestock unless a Section 4 permit under the Taylor Grazing Act is approved by the Authorized Officer.

28. The Operator will avoid the disturbance or removal of section corners, bench marks, monuments, or other types of survey markers. Where excavation or road building may require removal or relocation, the Operator will contact the Authorized Officer for written instructions prior to such removal or relocation.

29. The Operator will grade all vertical cuts of three (3) feet or greater to a slope ratio (horizontal to vertical) of three to one (3 to 1) upon termination of the Authorization or upon cessation of operations for more than five (5) days.

30. Not later than the 10th of each month, or the first business day thereafter if the 10th falls on a weekend or holiday, the Holder will submit to the Authorized Officer an itemized report for the

previous month of all mineral materials removed pursuant to the Authorization. Unless modified in writing by the Authorized Officer, the report will include the following:

a. Names, addresses, and telephone numbers of the Holder, its contractors, and subcontractors;
b. Volumes and/or weights of all types of mineral materials removed from the Material Site by the Operator to include detailed volumes and/or weights for the Holder and each of its contractors and subcontractors;
c. Volumes and/or weights of all types of mineral materials sold by the Operator to include detailed volumes and/or weights for the Holder and each of its contractors and subcontractors;
d. Names, addresses, telephone numbers, dates of purchases, types of materials purchased, and volumes and/or weights purchased for all mineral materials purchased from the Operator;
e. Volumes and/or weights of all types of mineral materials not sold by the Operator;
f. Final disposition of all types of mineral materials not sold by the Operator to include the following:
    1) Transfer or utilization of mineral materials:
        a) If the material was transferred, list each party to whom a transfer was made including their name, address, and telephone number.
        b) If the material was utilized, list the legal description of each parcel of land where the material was utilized. This description must include township, range, meridian, section, and legal subdivision.
    2) Description of each type of material transferred and/or utilized;
    3) Volume and/or weight of each type of material transferred and/or utilized;
    4) Description of how each material was transferred and/or utilized;
    5) Explanation as to why each material was transferred and/or utilized;
    6) Citation of the legal authority under which each transfer and/or utilization was made;
    7) Name of the party who made each transfer and/or utilization;
    8) Date upon which each transfer and/or utilization occurred.

31. When antiquities or other cultural objects of historic or scientific interest, including, but not limited to, historic or prehistoric ruins, artifacts, and vertebrate or invertebrate fossils are discovered, the Operator will immediately cease all operations. The cultural items will be left intact and the Operator will immediately notify the Authorized Officer in order that the cultural resources can be inspected, documented, and/or salvaged.

32. Prior to starting operations each day on any Material Site which has not been totally enclosed by tortoise proof fencing and cattle guards, the Operator will make an inspection to determine if any desert tortoises are present. The inspection will be conducted as follows:

a. Around and under all equipment;
b. In and around all disturbed areas to include stockpiles and reject materials areas;
c. In and around all routes of ingress and egress;
d. In and around all other areas where the operation might expand to during that day.

If a tortoise is discovered during this inspection or later in the day, the Operator must immediately cease all operations and must immediately notify the Authorized Officer. The tortoise must be left unharmed and must not be touched. Operations must remain stopped until approval to proceed is granted by the Authorized Officer.

33. Prior to the environmental review of any application which is not a BLM motion, all applicants must submit both an exploration/mining plan and a reclamation plan to the Authorized Officer.

A cultural resources inventory must be submitted for all portions of the Material Site that have not been previously inventoried. A biological assessment must be submitted if the Material Site is within any known or suspected desert tortoise habitat. The exploration/mining plan and reclamation plan may be combined into one document. Prior to the issuance of any Authorization, both the exploration/mining plan and the reclamation plan must be approved by the Authorized Officer, the cultural resources inventory must be approved by the Nevada State Historic Preservation Office, and the biological assessment must be approved by the U. S. Fish and Wildlife Service. The exploration/mining and reclamation plans shall include, but not be limited to, the following:

a. Appropriate maps, or aerial photographs, and cross sections, with a scale no smaller than 1:24,000 (1 inch = 2,000 feet), showing the following:
   1) Area encompassed by the Material Site application;
   2) Area to be physically disturbed;
   3) Existing or proposed roads, trails, and ways;
   4) Locations of existing bodies of surface water;
   5) Locations of existing topographic, cultural, and drainage features;
   6) Locations of existing and abandoned mines;
   7) Locations of shafts, tunnels, pits, waste dumps, and surface facilities;
   8) Locations of proposed exploration trenches and drill holes;
   9) Typical structural cross sections;
   10) Typical mining sequence with appropriate time frames.

b. Descriptions of the following:
   1) Location of the Material Site and volume of material proposed to be removed from it;
   2) All public lands (surface and/or mineral estates) which are expected to be affected by the Material Site;
   3) Existing land uses within and adjacent to the Material Site;
   4) Geology, physiography, hydrology, vegetation, and other relevant physical factors;
   5) Distribution, abundance, and habitat of fish and wildlife, especially threatened or endangered species;
   6) Proposed methods of exploration and types of equipment which are expected to be used;
   7) Quantity of water which is expected to be used;
   8) Quantity and types of hazardous and/or toxic materials (e.g. explosives, chemicals, petroleum, etc.) which are expected to be used;
   9) Quantity and types of pollutants which are expected to enter into any receiving waters;
   10) All expected uses of water, hazardous materials, and toxic materials.
   11) All drainages into and/or away from the Material Site;
   12) All proposed measures for the isolation, removal, and/or control of toxic materials;
   13) All proposed measures for the prevention and/or control of the following:
      a) Fire;
      b) Air pollution;
      c) Soil erosion;
      d) Subsidence;
      e) Landslides;
      f) Flooding;
      g) Water runoff;
      h) Pollution of surface and/or ground water;
      i) Damage to fish, wildlife, and/or their habitat;

j) On-site and off-site damage to other natural resources and/or public lands (surface and/or mineral estates);

k) Hazards to public health and/or safety, including specific actions necessary to meet all applicable laws and regulations.

14) All proposed measures for the preservation and protection of other resources, including the following:

a) Cultural features;

b) Ecological values;

c) Natural features;

d) Recreational values;

e) Scenic values.

c. Statement of proposed operating methods, including the following:

1) Description of all proposed roads and vehicular trails;

2) Description of equipment, mining methods, mining sequence, production rate, estimated recovery factors, and stripping ratios;

3) Locations and acreages of all lands to be affected;

4) Sizes and locations of all structures and other facilities which are expected to be constructed;

5) Design for the necessary impoundment, treatment, and/or control of all runoff water and/or drainage from all workings, in order to prevent the pollution of receiving waters;

6) Proposed method of abandonment in order to protect any unmined recoverable reserves;

7) Proposed method to fill in, fence, protect, or close all surface openings, excavations, workings, and wells which the Authorized Officer deems to be a potential hazard to humans or animals;

8) Estimated timetable for each phase of the work and for final completion of all activities.

d. Statement of the proposed manner and the schedule for completion of the reclamation of the areas which are planned to be disturbed by the Material Site, including the following:

1) Appropriate maps or aerial photographs, with a scale no smaller than 1:24,000 (1 inch = 2,000 feet), showing the topography of the Material Site upon completion of all mining or related activities;

2) Unless modified in writing by the Authorized Officer, the narrative will contain the estimated time schedule and proposed reclamation methods for the grading, backfilling, soil replacement, and revegetation of areas to be affected by the Material Site, including the following:

a) Measures for backfilling exploration trenches and plugging drill holes;

b) Measures for soil preparation, fertilizer application, mulching, and managing topsoil;

c) Measures for controlling sediment and overland water flow;

d) Measures for shaping, grading, backfilling, soil stabilization, compacting, and contouring the surface;

e) Measures for selecting vegetative species and mixtures of shrubs, trees, tree seedlings, grasses, forbs, and/or legumes to be planted;

f) Measures for seeding and/or planting grasses, forbs, legumes, trees, and/or shrubs;

g) Measures for watering all newly planted grasses, forbs, legumes, trees, and/or shrubs.

h) Vegetative species and methods for planting, including the following:

(1) Amounts and species of grasses, forbs, and/or legumes per acre;

(2) Numbers, species, and spacing of trees, tree seedlings, and/or shrubs;

(3) Desirable combinations of grasses, forbs, legumes, trees, and/or shrubs.

34. Holder shall prepare maps which show mineral production from the lands under Authorization as follows:

a. All maps shall be appropriately marked with reference to Government land marks or lines and elevations with reference to sea level. Vertical projections and cross sections shall accompany plane views. Maps shall be based on accurate surveys and certified by a professional engineer, professional land surveyor, or other professionally qualified person. All excavations in each separate bed or deposit shall be shown in such a manner that the production of minerals for any reporting period can be accurately ascertained.

b. Maps showing the existing operation and all production, drawn to a scale acceptable to the Authorized Officer, shall be submitted by the Holder prior to the receipt of any Authorization, at the end of each reporting period during any Authorization, upon the termination of any Authorization, and at all other times as required by the Authorized Officer. Production maps shall show surface boundaries, Authorization boundaries, and topography.

c. In the event of the failure by the Holder to furnish any required maps, the Authorized Officer shall cause the Material Site to be surveyed and maps to be prepared. The costs of making the survey and preparing the maps shall be charged to and promptly paid by the Holder.

d. If the Authorized Officer believes any map submitted by a Holder to be incorrect, he/she will cause a survey to be made. If the survey shows the map submitted by the Holder to be substantially incorrect, in whole or in part, the cost of making the survey and preparing the map shall be charged to and promptly paid by the Holder.

Community Pit and Common Use Area Disposals

1. Authorized Officer will designate an area to be a community pit or a common use area.

2. No contract within a community pit or common use area will be issued for less than a purchase price (value of the mineral materials) of $50. All fees to mitigate the destruction of tortoise habitat and, unless waived, fees for the cost of reclamation are expenses in addition to the purchase price. These fees plus the purchase price comprise the total purchase price.

Noncompetitive Mineral Material Contracts

1. Authorized Officer must receive a written request for a mineral materials sale.

2. No sale outside of a community pit or common use area will be made for less than a purchase price (value of the mineral materials) of $2,000. All fees to mitigate the destruction of tortoise habitat are expenses in addition to the purchase price. These fees plus the purchase price comprise the total purchase price.

3. At the time of sale, the Authorized Officer must receive a deposit from the applicant of not less than ten (10) percent of the total purchase price. The deposit will serve as the first installment, equal to ten (10) percent of the total purchase price of the contract. This installment will be retained by the Authorized Officer as additional security. It shall be applied to the payment of the last installment required, in order to make the total payment by the applicant equal to the total purchase price of the contract.

4. Authorized Officer must receive a performance bond valued at not less than $500 or twenty (20) percent of the total purchase price, whichever is greater, for the purpose of insuring performance of the contract.

5. Authorized Officer must receive the second installment, equal to ten (10) percent of the total purchase price of the contract, prior to commencement of any removal operations thereunder. If this payment is not received within sixty (60) days after the date the contract was issued, the contract will be terminated and the purchaser will forfeit the ten (10) percent bid deposit as liquidated damages.

6. Authorized Officer must receive each subsequent installment, equal to ten (10) percent of the total purchase price of the contract, prior to the removal of the mineral material.

7. Authorized Officer must receive the total purchase price not later than 60 days before the expiration of the contract.

Competitive Mineral Material Contracts

1. Authorized Officer must receive a written request for a mineral material sale.

2. Competitive sale must be advertised in a local newspaper on the same day each week for not less than two consecutive weeks.

3. No sale outside of a community pit or common use area will be made for less than a purchase price (value of the mineral materials) of $2,000. All fees to mitigate the destruction of tortoise habitat are expenses in addition to the purchase price. These fees plus the purchase price comprise the total purchase price.

4. Prior to the sale, the Authorized Officer must receive sealed bids which must include deposits of not less than ten (10) percent of the total purchase price. The deposit of the successful bidder will serve as the first installment, equal to ten (10) percent of the total purchase price of the contract. This installment will be retained by the Authorized Officer as additional security. It shall be applied to the payment of the last installment required, in order to make the total payment by the successful bidder equal to the total purchase price of the contract.

5. No sooner than one week after the last newspaper advertisement inviting bids for the mineral material, the Authorized Officer will conduct a sale by written sealed bids.

6. Authorized Officer must receive a performance bond valued at not less than $500 or twenty (20) percent of the total purchase price, whichever is greater, for the purpose of insuring performance of the contract.

7. Authorized Officer must receive the second installment, equal to ten (10) percent of the total purchase price of the contract, prior to commencement of any removal operations thereunder. If

this payment is not received within ninety (90) days after the date the applicant was declared the successful bidder, the contract will be terminated and the purchaser will forfeit the ten (10) percent bid deposit as liquidated damages.

8. Authorized Officer must receive each subsequent installment, equal to ten (10) percent of the total purchase price of the contract, prior to the removal of the mineral material.

9. Authorized Officer must receive the total purchase price not later than 60 days before the expiration of the contract.

Free Use Permits

1. Authorized Officer must receive a written request for a free use permit.

2. Authorized Officer may waive the bond requirement for governmental entities. However, no bond waiver will be issued to any governmental entity found to be in default regarding the reclamation of any previously permitted free use permit area.

Material Site Rights-of-Way

1. Authorized Officer must receive a written notice of a proposed appropriation of a Material Site as filed by the Department of Transportation under 23 U.S.C. 317. Refer to 43 CFR 23.5(f).

2. Authorized Officer shall cause a technical examination to be made assessing the prospective effects of the proposed exploration and/or surface mining operations upon the environment. Refer to 43 CFR 23.5(a)(1).

3. Reclamation bonds will not be required of Federal, State, or other governmental agencies. Where the exploration or mining is actually performed for those agencies by a contractor who would have to post a bond if he were the applicant, those agencies shall require the contractor to furnish a bond payable to the United States. The bond amount will be determined by the Authorized Officer. Refer to 43 CFR 23.9(d).

Material Sampling and Testing

1. Authorized Officer must receive a written request for a letter of Authorization.

2. A letter of Authorization to sample and test mineral material does not give a Holder any preference right to a sales contract or a free use permit.

3. Letters of Authorization will expire not later than one (1) year after their date of issuance.

4. Not later than sixty (60) days after the expiration of its letter of Authorization, the operator must furnish the Authorized Officer with a signed copy of its records for all drill holes and trenches made within the material site. The records shall be in a form which will allow the positions, directions, and depths of the holes and trenches to be located on a map. The records shall include copies of the analyses of all samples and a log of all strata penetrated and conditions encountered.

Solid Leasable Minerals

An environmental analysis will be conducted on the exploration phase of each prospecting permit and on any production activities associated with a lease. The environmental analyses are prepared by a multidisciplinary team and are used to determine any special stipulations necessary for the protection of surface resources.

The following are standard constraints for mineral material disposal.

1. All applicants for leasable mineral actions must submit plans for all proposed activities, to include site rehabilitation, to the Authorized Officer for approval prior to environmental reivew and issuance of any authorization.

2. All applicants must post a bond for the purposes of insuring rents and royalty and compliance with environmental terms and conditions, including reclamation. The bond amount will be determined by the Authorized Officer.

3. All activities must comply with the Endangered Species Act and the National Historic Preservation Act.

Fire Management

The fire management program is guided by the approved Las Vegas District Fire Management Activity Plan and this Resource Management Plan.

Every wildfire within the Las Vegas District will have an appropriate action taken. The action will be planned and executed in such a way as to minimize the loss of resources and the costs of suppression. Such actions must also be consistent with resource management objectives.

There will be no use of fire retardant in riparian areas, Wilderness Study Areas, sensitive visual resource management areas, and structure archaeology sites, unless such use is authorized by the Authorized Officer.

All wildfires, after they are declared out, will be evaluated by a rehabilitation team to determine the actual needs related to the rehabilitation. Corrective measures will be taken to prevent erosion and future resource degradation when it is feasible to rehabilitate areas damaged by actual suppression action. The rehabilitation team will also determine if any fire rehabilitation, including protection from grazing, is needed to revegetate the burned area, and to protect the site from erosion and invasion by undesirable plant species. Emergency fire rehabilitation will follow procedures outlined in *BLM Handbook H-1742-1* and the Las Vegas District approved Normal Fire Rehabilitation Plan.

When identified as the least costly and/or most effective method, prescribed fire techniques will be used as a resource tool to meet vegetative objectives as stated in this Resource Management Plan. Prescribed fire can be used to improve wildlife habitat, watershed improvement and other types of vegetative manipulation to meet vegetative objectives. In addition it can be used solely, or in combination with other fuel/vegetative manipulation techniques. When fire is used as a management tool, an approved prescribed burn plan and wildfire prescription must be prepared in advance of planned or unplanned ignition in accordance with *BLM Manual 9214*.

Integrated Pest Management

It is the policy of the BLM that all alternatives available through integrated pest management will be explored before any pest-control program decision is implemented. This includes all pest-control programs done under BLM proposals, cooperative projects, or on lands under permit or lease. Integrated pest-control methods include, but are not limited to, biological, cultural, and chemical methods. In choosing methods, due consideration will be given to economics, efficacy, and the environment. All integrated pest-management activities will follow policies established in (a) BLM Manual 9011, Chemical Pest Control Sections .06B through .12D; (b) BLM Manual 9015, Integrated Weed Management Sections .2 through .4, .8 through .83, and Appendix 1; (c) BLM Handbook H-9011-1, Chemical Pest Control Sections I-B 1-3; and (d) other sources as appropriate.

Hazardous Materials

The BLM will not authorize the disposal of hazardous materials on public lands. When hazardous materials are located on public lands, the following sequence of actions will occur: reporting, necessary site security, coordination of procedural cleanup, and monitoring results of cleanup. Actions taken by the BLM can also include prosecution of those responsible for illegal dumping.

The BLM ensures that the initiators of actions which use hazardous materials on public land have the necessary permits from the applicable local, State or Federal Authority, which are designed to protect the environment. These permits become conditions of approval by the BLM for proposed actions on Federal lands.

APPENDIX N

GUIDELINES FOR DETERMINING DESIRED PLANT COMMUNITIES IN DESERT TORTOISE HABITAT

Objectives for Managing Desert Tortoise Habitat in Areas of Critical Environmental Concern:

1. Manage the native ephemerals and perennials to ensure that plant species reach their full growth potential between spring and early fall, based on phenological stage. Provide the tortoise with those plant portions that provide the best source of nutrition and provide optimum plant reproduction.

2. Manage for a perennial native grass composition (by dry weight) of at least 15 percent, with no individual species exceeding 40 percent of the total perennial grass component, and including 5 percent total dry weight of bush muhly, or as limited by potential natural community of the range site.

3. Manage for at least 5 percent ground cover of perennial native grass species with warm season grass species no greater than 60 percent of total, or as limited by potential natural community.

4. Maintain a canopy cover of at least 20 percent or as limited by potential natural community.

5. Reserve a minimum of 150 pounds of air dry spring ephemeral forage per acre, to ensure maximum availability of desirable native ephemeral forage.

Objectives for Managing Desert Tortoise Habitat outside Areas of Critical Environmental Concern:

1. Manage for a perennial native grass composition by dry weight of at least 3 to 5 percent or as limited by potential natural community (manage for at least 5 percent ground cover of perennial native grass species).

2. Maintain a canopy cover of at least 15 percent, or as limited by potential natural community.

3. Manage habitat to ensure tortoise recruitment is sufficient to maintain a stable population.

Key Species

Key species include: galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

APPENDIX O

Public Comments and Agency Responses

Air Resource Management

Why does The Draft Plan, without substantiation, claim that Off-Road Vehicle recreation affects air quality via airborne particulates in a "...temporary but significant..." manner when events are held upwind of Las Vegas (Page S-42)? This assertion is contradicted by Table 3-3, which shows total suspended particulate materials from off-road vehicle use to be less than a tenth of that occurring from activity on paved roads. It is assumed Table 3-1, Emissions By Source Categories, not Table 3-3, Known Springs Within Las Vegas BLM District, in The Draft Plan was referenced. Table 3-1 presents figures for casual use within the Las Vegas Valley and not competitive events. The Draft Plan states, "...temporary but significant...,' referring to competitive off-road vehicle events and not casual use. Given proper meteorological conditions, it is reasonable to expect some generated dust to appear within Las Vegas Valley from those events. The Las Vegas Valley is in non-attainment for particulates (PM10) and any increase must be in conformance with the State Implementation Plan.

Why was dust produced by sand and gravel operations extrapolated to the entire mineral industry? This is unwarranted. The concern over the perceived extrapolation of sand and gravel operations estimates of dust production is justified. The estimates presented are for sand and gravel operations. The intent was not to extrapolate the numbers to all mineral activities but to state that some dust production can be reasonably expected to occur from all mineral exploration and development. Dust production is of particular concern in the Las Vegas Valley Non-attainment Area where any production of particulates (PM10) must be in conformance the State Implementation Plan.

The Air Resources Management from Mineral Management section in Chapter 4 of The Draft Plan was changed in The Plan to emphasize that the estimate of dust production, based on information gathered from sand and gravel operations in the Las Vegas Valley, is for sand and gravel operations only and that some production, although not specifically known, can be expected from other mineral activities.

Under Air Resource Management, add the following objective: Reduce particulate matter originating from BLM-administered lands in conformance with the air quality implementation plans for non-attainment areas. The Draft Plan was revised for The Supplement to reflect this, and carried forward into The Plan. The objective is to ensure that Federal, State, and local air quality standards are not violated by actions occurring on BLM-administered lands. Management also ensures BLM actions are consistent with Federal, state, and local air quality standards and regulations by requiring all appropriate air quality permits are acquired before approval.

The following Management Direction should be included under Air Resource Management in The Plan. Within the Las Vegas Valley, limit casual off-road vehicle use to designated roads and trails. Provide paved aprons from paved roads to designated off-road vehicle roads and trails for ingress and egress. Encourage organized off-road vehicle events to be located in areas outside the Las Vegas Valley. BLM should provide for air quality monitoring of competitive off-road vehicle events in the Ivanpah Valley, Eldorado Valley and Dry Lake Valley to determine ambient transport into the Las Vegas Valley non-attainment area. Casual off-road vehicle use in the Las Vegas Valley is limited to existing roads and trails. To attempt enforcement for uses on designated roads would be unrealistic and beyond the capabilities of existing limited staff.

The Management Direction was revised from The Draft Plan to The Plan, under Recreation Management, to eliminate competitive off-road vehicle events within the Non-Attainment Area except for Nellis Dunes, which is downwind. Because the dates of proposed off-road vehicle events are known, application of the Clark County Health District's existing air quality monitoring network within Las Vegas Valley should be adequate to detect event-associated increases in particulates.

The Draft Plan should identify the root causes for air pollution in the Las Vegas Valley and between types of operations. Table 3-1 of The Draft Plan shows emissions by source categories. This table reflects information available from the Clark County

Health District. The Plan is updated and reflects PM10.

Page 4-3 of The Draft Plan, under "From Lands Management,' the analysis should clearly establish that carbon monoxide pollution is a function of the large number of automobiles in the Las Vegas Area, the majority being domestic. Increased development activity because of the disposal of lands will have a very small marginal effect. The referenced statement was general in nature and intended to convey the fact that as vehicle numbers increase, regardless of the type, carbon monoxide levels can be expected to increase. Construction-related and domestic vehicles are expected to increase in numbers.

How could minerals exploration "...produce long-term significant impacts on the air resource.." (see page 4-3 of The Draft Plan)? Explain and quantify. The statement that "Mineral exploration and development could produce long-term significant impacts on the air resource..." was revised for The Plan to reflect that mineral exploration could produce short-term impacts, and mineral development without proper mitigation measures and reclamation could produce long-term impacts on the air resource.

BLM program guidance for resource management planning calls for assessment of impacts of existing and proposed public land uses and/or management practices on air quality. The guidance also calls for analysis of the impact of potential changes in air quality on other resource values and land use. The Draft Plan provides no such analysis, either general or specific, which would be necessary to meet the standards for an Environmental Impact Statement. It is assumed the referenced guidance is BLM Manual 1621- Supplemental Program Guidance for Environmental Resources, Section .12 C and D (Factors of Analysis). Impacts to the air resource from various land uses and actions are addressed in Chapter 4 of The Draft Plan and carried forward into The Plan. Also, impacts expected within the Las Vegas Valley Non-attainment Area as a result of approval of land disposals is analyzed in the Cumulative Impacts section. Analysis of each potential impact to the air resource is beyond the scope of the plan. Only those activities considered as potential significant impacts are included.

Table 3-1 is outdated. Levels of pollutants are no doubt greater than in 1980, hence the non-attainment area may also have increased. What is the potential for increased air-borne heavy metals and increases in various aldehydes? The data for The Draft Plan was the best available. The table is revised to reflect the latest data in The Plan. The boundary of the Las Vegas Valley Non-attainment Area has not changed from The Draft Plan. According to the Clark County Health District, a monitoring effort was recently initiated to determine heavy metal and aldehyde levels in the Las Vegas Valley. A recent Clark County Health District report shows clearly that the air quality has improved significantly since the 1980s.

How will management of successive prescribed burns fit into short-term air quality compliance with Federal, state and Clark County Health District laws? Federal, state and local laws and regulations must be followed to conduct prescribed burns. Page 4-4 of The Supplement states that smoke from prescribed burns as a vegetative manipulation tool could result in increased airborne particulate matter. Although these emissions could be significant, they would be short-term and also mitigation could be achieved through compliance with the Clark County Health District permitting process. This was carried forward into The Plan .

The Environmental Impact Statement should address the impacts of degraded air quality as a result of urbanization and the effects not only to humans occupying southern Nevada, but also to the plant and wildlife resources in the habitats BLM manages. Chapter 4 of The Supplement, was carried forward into The Plan , including a complete analysis of impacts on the air resource from land disposal and development, with projections of expected pollutant level increases. Chapter 3 was expanded in The Plan to include a discussion on air quality effects to humans, plants and wildlife.

The Supplement states that "disposal would add incrementally to the air pollution level in the Las Vegas Valley Non-attainment Area, but not to a significant level." Given that Las Vegas Valley area air is currently not considered clean enough, any additional increase must be viewed as significant. The statement on page 4-44 of The Supplement, that "Disposal would add incrementally to the air pollution level..., but not to a significant level," was in error. Page 4-3 states that

"...increases in pollutant levels could be projected to be significant within the Las Vegas Valley Non-attainment Area, already in violation of Air Quality Standards for particulates and carbon monoxide." Any increase in pollutant levels within the Non-Attainment Area must be in conformance with the State Implementation Plan. The text was revised in The Plan.

How can BLM reconcile the significant action of land disposal with the objective on page 2-1, which states that the BLM "Ensure that Federal, state and local air quality standards are not violated by actions occurring on BLM administered lands."? This applies only to lands administered by BLM, not those conveyed into private ownership. One of the Management Directions on page 2-1 of The Supplement states that to meet this objective the agency would be "...requiring that all appropriate air quality permits are acquired before BLM approval of an action." BLM is only making the lands available for disposal. The lands may or may not be purchased or developed. The action to dispose of land does not result in an impact to the air or any other resource, rather land development does. Land development is subject to all local regulations, ordinances and zoning requirements.

The Supplement mentions short-term, construction-related impacts to air quality resulting from particulates (PM10) emissions in the proposed disposal areas within the Las Vegas BLM District. However, the Environmental Impact Statement does not address the long-term PM10 emissions that would result from development of and population growth within the proposed disposal areas. The Final Environmental Impact Statement should discuss these impacts, particularly within the Las Vegas Valley PM10 non-attainment area. While The Draft Plan addressed long-term and short-term air quality impacts, including total suspended particulates (TSP), in Chapter 4, it did not analyze PM10. Calculation of estimated increases in pollutants is based on all sources, not just construction activities. The Plan includes an expanded discussion that better separates the short-term and long-term PM10 emissions resulting from land disposals within the Las Vegas Valley Non-Attainment Area.

The Resource Management Plan should address the potential impacts on visibility to downwind receptors. A discussion of the situation concerning visibility impairing air pollution and its impact on downwind receptors was added to Chapters 3 and 4 in The Plan.

Soils Resource Management

Does Map 3-3 of The Draft Plan (Erosion Susceptibility) take into account the eroding water diversion at Stump Springs? Erosion susceptibility was determined using data obtained from a soil survey conducted by the Natural Resource Conservation Service. The erosion condition rating used information obtained from a BLM Watershed Inventory, a part of the Watershed Conservation and Development Program. Both the erosion susceptibility and erosion condition ratings identified are representative of the general conditions of the area and are subject to localized deviations. Site-specific erosional problems are not addressed in this plan, but would be addressed on a case-by-case basis.

The following Management Direction statements should be included under Soil Management in The Plan. "Coordinate with local flood control agencies when considering land disposal or other actions that might affect floodplain management. Soils would be managed to maintain or improve rangeland productivity, as well as minimize present and potential wind and water erosion. Maintain areas with slopes of 15 percent or greater in public ownership wherever feasible and restrict uses or activities as necessary to protect soils, natural drainage and native vegetation." There are numerous requirements for review of actions that occur on public lands. Coordination with local agencies when considering such actions is one requirement. The discussion under Soil Management in The Draft Plan, although with slightly different wording, proposes that soils would be managed to maintain or improve rangeland productivity as well as minimizing present and potential wind and water erosion. This objective was carried forward into The Plan .

How was the amount of soil loss from the various land uses determined, particularly that attributable to livestock grazing? What level of grazing was used in the calculations? What formula was used? What other variables were considered? Will The Plan fully document the source and calculation of soil loss values? The soil loss estimates were derived using the Revised Universal Soil Loss Equation (RUBLE), which evaluates grazing under

differing range conditions (as well as other soil-disturbing activities such as minerals, off-road vehicle uses, and wild horses and burros). It considers grazing practice and the amount of surface cover, and takes into consideration the number of cattle based on total number of Animal Unit Months (amount of forage a cow and calf consume in one month) within each allotment. The figures are intended to provide a comparison between alternatives and that actual soil losses and acreage disturbed will vary. During recalculation of soil loss, it was discovered that one of the values used in the RUBLE was in error. The new figures are documented in The Plan, along with the methodology used to derive estimates of natural soil loss and that resulting from soil-disturbing activities.

In its technical sense, there is no soil present in the majority of the Las Vegas BLM District. There is primarily desert pavement covering various types of dirt. The glossary definition of soil in The Draft Plan states that soil is "(a) The unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for the growth of land plants. (b) The unconsolidated mineral matter of the surface of the earth that is influenced by genetic and environmental factors including parent material, climate, chemical, biological, and morphological properties and characteristics." The definition of desert pavement added to the Glossary in The Plan, states, "A natural, residual concentration of wind-polished, closely packed pebbles, boulders, and other rock fragments, mantling a desert surface where wind action and sheetwash have removed all smaller particles. It usually protects the underlying, finer-grained material from further deflation. The coarse fragments commonly are cemented by mineral matter." Information obtained during soil survey activities indicates that desert pavement comprises a very low percentage of the planning area.

Increased soil erosion from runoff is not a direct impact associated with the disposal of public lands; loss of the "soil" as a resource is the direct impact. Soil erosion is indeed an impact associated with an increase in runoff due to the creation of a larger area impermeable to precipitation infiltration. It is this erosion of the soil resource that results in its movement and loss.

Why does The Supplement fail to address impacts to the soil and water resources on Page 4-27 of the Cumulative Impacts section? Page 4-27 is part of the cumulative impacts section that discusses past, present, and reasonably foreseeable future actions. There is a discussion of the impacts to the water resource under the Cumulative Impacts Section on page 4-43 of The Draft Plan. A discussion of the cumulative impacts to the soil resource and impacts to the water resource is in The Plan .

Water Resource Management

The plan fails to address flash flooding as an erosion problem. A discussion of flooding was added to Chapters 3 and 4 of The Plan .

Why is there a lack of recognition of the importance of watershed protection? BLM has the responsibility for considering the entire watershed, not simply the watershed on lands under its control. The Plan has a discussion of this issue. A watershed consists of several components including soil, water, and vegetation, all analyzed in the plan. Each resource has management objectives and direction intended to ensure a healthy resource and resultant healthy watershed as a whole.

Why does the plan suggest that efforts will be made to control erosion if the BLM recommendations for wilderness areas are approved by Congress? To be effective, erosion must be controlled on a drainage system basis, not whether or not the land is in a wilderness area. It is assumed that the reference is to the Wilderness Study Area discussion on page 4-6 of The Draft Plan, Water Resource Management from Wilderness Management. The discussion does not state that measures to control erosion would only be made in the Wilderness Study Areas, but notes that if the Wilderness Study Areas become Wilderness Areas, soil and the watershed would benefit through continued restriction of impacting uses in these areas.

The Resource Management Plan should be amended to mention the Lower Virgin River as a future water supply. Chapter 3 of The Plan discusses the fact that the Virgin River and other sources are under study as possible water supplies for the Las Vegas Valley.

The hydrographic basin in which the Eldorado Mining District and the town of Nelson is located, and where land disposal is planned, is already overdrawn and is now a "Designated Basin".

Because of insufficient potable water and flooding potential, the area is unsuited for residential development. It is assumed the reference is to the potential development of the area available for land disposal. Map 2-3 of The Plan identifies acreage in the Eldorado Mining District and around the town of Nelson, T.26S., R.64E., Sections 11 and 12 as land disposal area.

This area is within Hydrographic Basin 213, a Designated Basin by Order #790, July 8, 1982. Nevada Revised Statute 534.120 states, "Within an area that has been designated by the state engineer... where, in his judgement, the ground water basin is being depleted, the state engineer... is... empowered to make such rules, regulations and orders as are deemed essential for the welfare of the area involved. In the interest of public welfare, the state engineer is authorized and directed to designate preferred uses of the water within the respective areas so designated by him...." Order #790 closed the basin to the appropriation of water for irrigation purposes.

The Nelson area and most of southern Nevada is prone to isolated high-intensity storm events and resultant isolated flooding. Areas presenting a significant unavoidable hazard would undoubtedly not be developed in a manner that would threaten life or property. While the additional land around Nelson is available for disposal, this does not mean it will be acquired from the BLM. These lands were placed in a disposal area for infrastructure purposes if the population in this area increases in size.

How does BLM justify the water policy by the City of Las Vegas, "Well, we might as well use it or lose it?" A water policy of a city or other government entity is not the responsibility of this agency.

Why does the Draft Plan make an unsubstantiated assertion on page 4-7 that Off-Road Vehicle use "...could affect surface water...?" The statement, "...Off-road vehicle use could also affect surface water," refers to impacts from increased soil erosion. The impact, primarily from sedimentation, will vary depending on the water source location in relation to the disturbed area.

Does BLM have authority to require that all water developments be made available to wild horses and burros? Does this include private water developments or water developments using private water rights? None of the alternatives propose a requirement that all water developments be made available to wild horses and burros. The statement is made that the agency would develop and maintain dependable water sources for the wild horses and burros, where needed, on BLM lands. Under state law, this agency cannot infringe on one's legal water rights, and it is also required, like all citizens, to obtain water rights from the state on waters not Federally reserved before developing a water source.

The Plan should identify the designated beneficial uses and water quality standards for the streams in the planning area. It should also discuss the potential impacts of land disposals on water quality and beneficial uses, particularly in the Muddy and Virgin Rivers and Meadow Valley Wash. The discussion should address what effects such water quality impacts would, in turn, have on sensitive fish species in these streams. A discussion of designated beneficial uses and water quality standards for the streams in the planning area was added to Chapter 3 in The Plan. Valuative data was added to the discussion in The Draft Plan concerning impacts resulting from land disposals in the Las Vegas Valley, and a discussion on expected impacts to the Muddy and Virgin Rivers and Meadow Valley Wash was added in Chapter 4 of The Plan .

BLM should require more effective mitigation measures in mining Plans of Operation in order to reduce water quality impacts to insignificant levels. A discussion of the use of proper mitigation to reduce impacts resulting from mineral development was added to Chapter 4 of The Plan under impacts on Water Resource Management from Minerals Management.

Salinity contributions resulting from mineral development and grazing of livestock appears to be significant in all alternatives and, therefore, further measures should be taken to reduce the impact. What percent of the Colorado River's salinity problem will occur regardless of whether there is mineral development or grazing of livestock? Without this data, how does BLM decide whether it is significant? A recent U.S.Geologic Service document (Water-Resources Investigations Report 94-4210) titled, *Dissolved-Solids Contribution to the Colorado River from Public Lands in Southeastern Nevada, Through September 1993*, estimates a total contribution of 38,000 tons per year of dissolved-

solids to the Colorado River from almost 6 million acres of public lands in Nevada. This is not considered significant considering that the Colorado River carries approximately 6.6 million tons of dissolved-solids annually. This report also states, "Land management practices probably would not substantially reduce this contribution." Text was revised to reflect this data in The Plan.

Why doesn't The Draft Plan provide the basic information called for by the agency's guidance for management planning? How can The Draft Plan determine the impacts of the proposed land disposal when it does not consider the availability of water for the urban and/or agricultural use of those lands? Information on the presence and availability of water was addressed in Chapters 3 and 4 of The Draft Plan and carried forward to The Plan.

Why are the data for Tables 3-4 and 3-5 taken from sources published in 1971, well over 20 years ago? Tables 3-4 and 3-5 of The Draft Plan identified data used by the Nevada State Engineer and reflected the best information at the time of the study. Investigations to update the hydrological data were subsequently initiated, and is reflected in The Plan.

Objectives and management direction should be provided for deep carbonate aquifers. Chapter 3 of The Plan presents a discussion of the deep carbonate aquifers. There are studies in process by Federal agencies and the Las Vegas Valley Water District, but the data is not yet available. Objectives and management directives already identified for the water resource apply to the carbonate aquifer as well. The objectives and directives identified under the various resources dependent on groundwater (such as Riparian, Vegetation, and Fish and Wildlife Habitat Management) require consideration of impacts to the water source that could result in adverse impacts to the dependent resource.

Where did the ground water storage figure for the Pahrump area come from? It appears to be incorrect and should be 60,000,000 gallons in storage and not 23,000. It is assumed the reference was made to the storage figure in Table 3-5 of The Draft Plan. The storage figures in this table were obtained from the Nevada Division of Water Resources and reflected the best information at the time. Investigations to update the hydrological data were subsequently initiated. The referenced 23,000 figure is acre-feet of storage per foot thickness of the saturated zone. One acre-foot is equivalent to 325,829 gallons and 23,000 acre-feet is equal to 7,494,067,000 gallons of water in storage per foot of thickness of the saturated zone.

Because of the low contribution of salinity from the Las Vegas Wash, your emphasis on salinity is misplaced. A greater problem is assuring that the quality of treated wastewater and stormwater entering Lake Mead meets State and The Environmental Protection Agency standards. Erosional damage leads to loss of wetlands which clean water, slow down flood waters, and minimize sedimentation transport. The statement is correct that there is a low salinity contribution from the Las Vegas Wash. In fact a recent U.S.Geologic Service publication titled, *Dissolved-Solids Contribution to the Colorado River from Public Lands in Southern Nevada, Through September 1993*, reports that only 38,000 tons of dissolved solids are contributed annually from almost 6 million acres of public land.

The quality of treated wastewater entering Las Vegas Wash is not the responsibility of this agency. It is correct that erosional damage can lead to loss of wetlands that act to clean water, slow floodwaters, and minimize sedimentation transport. The flood control facilities constructed by Clark County Regional Flood Control District are intended to moderate peak flows by metering runoff water exiting their facilities, thereby helping to minimize erosion in Las Vegas Wash resulting from storm events. The management objectives and direction in The Plan are intended to ensure a healthy resource and resultant healthy watershed, and minimize erosion.

The Supplement only addresses potential cumulative impacts to water resources in the Las Vegas Valley but not in the planning area as a whole. In addition, cumulative impacts to soil resources, flood control, and sediment and salt loading to streams in the planning area are not addressed in The Draft Plan. Text was included in The Plan to address cumulative impacts to water and soil resources, as well as flood control and sediment and salt loading to streams throughout the planning area.

The Plan should identify possible mitigation measures that BLM could require as terms or conditions of any land disposal contract to eliminate adverse impacts to water resources from development or reduce them to a level of

insignificance. The Final Environmental Impact Statement should also include any criteria that would need to be met prior to BLM consideration of land disposal or exchange actions. Specific mitigation associated with land disposals would be identified on a case-by-case basis during preparation of National Environmental Policy Act documents. Identification of the actions is beyond the scope of the plan.

The increase of population growth due to the disposal of acreage does not adversely impact the water as a resource because water is a recyclable resource with use for domestic purposes being insignificant when compared to agricultural use. When ground water withdrawals exceed recharge, as is the case in Las Vegas Valley, there is indeed an adverse impact on the water resource. Domestic uses, primarily landscape watering, is by far the largest water consumer in Las Vegas Valley. According to the Southern Nevada Water Authority, 64 percent of the water supplied by water purveyors is used for residential purposes (such as domestic, landscape watering), and only 8 percent for irrigation.

Why are you discussing water quantity, which is strictly a state concern since water is a resource "owned" and controlled by the state, not the Federal government? It is correct that the State of Nevada has control of the allocation of water within its boundaries, but Federal agencies are required under the National Environmental Policy Act to ascertain impacts to all resources, including those associated with water, resulting from actions on public lands.

In order to ensure that the flood control needs of the community are actively considered in all management decisions made over the lifetime of the Resource Management Plan, all of the alternatives should include management guidance similar to that provided under the No Action Alternative. The need for flood control improvements and floodplain management, particularly within the rapidly growing Las Vegas Valley is recognized through the implementation of the National Environmental Policy Act analysis. This includes coordination with local agencies. Flood control was recognized through the inclusion of objectives and direction carried froward to The Plan from the No Action Alternative.

Why aren't subsidence, recharge, and the additional threat of loss of life from flooding addressed in this document? If we do not improve drainage control in the Valley and do not stop exporting our flood waters, which replenish groundwater basins, we will suffer increased subsidence in the western part of the Valley and rising groundwater in the east. The result of the historical overdrafting of the Las Vegas Valley groundwater system is significant subsidence in certain areas of the Valley. A discussion of subsidence is in Chapters 3 and 4 of The Plan. Information on the ground water recharge in the Las Vegas Valley (Hydrographic Basin #212) was listed in Table 3-5 and discussed in Chapter 4 of The Draft Plan, including the Cumulative Impacts section, and carried forward into The Plan. The discussion in The Draft Plan of increased runoff, the potential for flooding and its consequences was expanded for The Plan.

Impacts resulting from the proposed Las Vegas Valley Water District/Southern Nevada Water Authority water right applications and water importation project should be addressed. The Las Vegas Valley Water District's water rights applications and the Yucca Mountain Project were identified as concerns by members of the public. Both of these topics are beyond the scope of the planning analysis for the Las Vegas BLM District Resource Management Plan and Environmental Impact Statement.

The Resource Management Plan is intended to outline resource condition objectives and provide general guidance on processing individual actions such as the Las Vegas Valley Water District project. After a proposal is submitted by the Las Vegas Valley Water District, a site-specific environmental analysis will be completed to comply with the National Environmental Policy Act . The Yucca Mountain project is located outside the planning area. This separate action, managed by DOE, is currently being studied under an Environmental Impact Statement and by Congress.

Is wildlife watering a beneficial use under Nevada Law? Yes, Nevada Law (NRS 533.030, Annotations) states that "Watering of wildlife is encompassed in definition of recreation as beneficial use of water."

The BLM should examine whether the closure of Meadow Valley Wash and Virgin River to livestock grazing will effect a taking of private water rights.

It is the position of BLM that the closure of Meadow Valley Wash and Virgin River to livestock grazing does not constitute a taking of private water rights.

Any multiple-use activity allowed by BLM under the selected management plan shall be subject to Nevada Revised Statutes, Chapters 533, 534, and 535 for water resource appropriation and/or dam construction. The BLM would "File for appropriative water rights on public and acquired lands in accordance with the State of Nevada water laws..." stated on page 2-40 of The Draft Plan for all alternatives. This was carried forward into The Plan.

Under the Management Direction for Fish and Wildlife Habitat Management, on page 2-43, it states, "Limit competition between bighorn, livestock, wild horses and burros around spring sources by providing separate water sources for wildlife." This is a misstatement of the intended action. Wildlife could be relegated to second-class status with any misdirection. The wildlife of Nevada should have a primary use to any spring or water that has seeped to the surface of the ground (NRS 533.367). The referenced Management Direction was intended to ensure adequate water is available at spring sources that were previously developed for other uses prior to the date of passage of Nevada Revised Statute 533.367. The Plan was revised to reflect this intent.

Does BLM have any Nevada-legal water rights on any of the springs to be monitored? Yes, BLM has water rights, both Federally reserved and appropriated from the State of Nevada, on many water sources located on public lands.

It makes no sense that the BLM would not allow a desert land entry because of a lack of water; close the allotments and make them available as land disposals; then turn around and attempt to acquire all of the water rights appurtenant to these lands. There are no intentions to acquire all water rights associated with the referenced allotments. One objective of the Water Resource Management program states on page 2-2 of The Draft Plan that BLM would "Ensure the availability of adequate water to meet multiple use objectives..." There is no intention to apply for water rights on a spring source if the action would not meet objectives. Applications would be submitted only for those springs necessary to meet multiple use objectives. The referenced Management Direction was deleted for The Plan because it is included under the second Management Direction under Water Resource Management.

BLM must justify why it must acquire water rights and should evaluate the effects of water right acquisitions on other water right holders. BLM should outline the legal authority to obtain water rights under Nevada law. The discussion on page 2-40 of The Draft Plan, carried forward into The Plan, states that BLM would determine water needs to meet management objectives and file for appropriative water rights on public and acquired lands for water sources not Federally reserved. This agency would apply for only the amount needed to meet management objectives. Nevada Law (NRS 533.010, Annotation) states, "Applications by United States to appropriate water for application to beneficial uses must be treated on equal basis with applications by private landowners." There is no intention to interfere with other water right holders through appropriation of Federal rights. BLM would continue to adhere to Nevada Law.

There is no adequate analysis of the impacts to the water and air resources resulting from land disposals in southern Nevada. The impact of land disposal on the water and air resources was analyzed in The Draft Plan, Chapter 4, including the Cumulative Impacts section. Impacts to the air resource within the Las Vegas Valley Non-attainment Area were analyzed including projections of pollutant level increases that can be expected. Pollutant levels in the remainder of the planning area are less or equal to established standards on a continuous basis.

Reasonably foreseeable future actions, and past and present actions, are not expected to result in unacceptable air quality in any areas outside the Non-attainment Area. The impact of land disposal and increased demand on the water resources within the Las Vegas Valley was emphasized through its inclusion as a significant impact. A discussion of the current overdraft situation and estimated figures on current water usage and future water demand was presented in The Draft Plan and carried forward, with updates, to The Plan. A discussion of increased water demand on the quality of ground water was added.

Prior to land disposal, professional determinations should be made that development will not negatively impact the soil, water and air resources, drainage systems, or locally formulated land use plans. A moratorium on land disposal should be implemented until erosion of the Las Vegas Wash is stabilized and the future of the wetlands is assured. Prior to approval of every land disposal action under the National Environmental Policy Act, impacts to the various resources would be evaluated. BLM only makes the lands available for disposal, and much of the acreage may not be purchased or developed. The action of disposal does not result in impacts to resources; rather, it is how the land is used after acquisition that causes impacts. Land development is subject to local regulations, ordinances, and zoning requirements.

Riparian Resource Management

The following Management Direction should be included under Riparian Management in The Plan. Retain riparian areas in public ownership unless disposal would be in the public interest. Give special attention to monitoring and evaluating management activities in riparian areas and revise management practices where site-specific objectives are not being met. Cooperate with and encourage the involvement of interested Federal, State and local governments and private parties to share information, implement management, coordinate activities and provide education on the value, productivity and management of riparian areas. Avoid surface occupancy on riparian zones. Livestock grazing on all ephemeral allotments will only be allowed if on-the-ground evaluations determine that forage is available and that it can be grazed without detriment to riparian vegetation. Retain all riparian habitat adjacent to the Virgin River in public ownership. Except for the last one, all these management directives were added to Riparian Management in Chapter 2 of The Plan. The Virgin River is not within a disposal area, and the directives stating, "Retain riparian areas in public ownership unless disposal would be in the public interest," was included to allow greater flexibility in managing riparian areas.

Under the Preferred Alternative, grazing would result in significant degradation of riparian areas associated with 80 springs. We strongly object to continued or further degradation of springs and associated riparian areas and urge BLM to take measures to improve water quality in all springs. The Final Environmental Impact Statement should indicate the number of springs that have good recovery potential. The Plan reflects this concern with continued spring and associated riparian area degradation. The Plan proposes closure of most of the grazing allotments, leaving 19 springs within four of the 11 allotments open to cattle grazing. This represents a considerable decrease from the numbers proposed in the other alternatives of The Draft Plan.

Appropriate measures would be taken to protect the springs and their associated riparian areas. An inventory was initiated in 1995 to determine proper functioning condition. The study should provide a basis to identify the recovery potential of each spring-associated riparian area. There is no intent to ignore those spring-associated riparian areas lacking good recovery potential, rather it is an attempt to effectively prioritize and direct efforts and funding toward the greatest environmental needs. Additional Management Direction in The Plan should provide better prioritization efforts and establish a work schedule following inventory.

BLM should consider tamarisk eradication on the Virgin River and other riparian areas throughout the Las Vegas BLM District. The problems associated with tamarisk invasion should be addressed. The Plan addresses the concern with tamarisk invasion of riparian areas in Chapter 3, and discusses direction in Chapter 2 under Riparian Management and Fish and Wildlife Management. Tamarisk control would be considered to ensure proper functioning of riparian areas. The Virgin River Tamarisk Work Group was recently formed to pool resources towards control and eradication of tamarisk. The BLM is actively pursuing eradication efforts on springs and small riparian areas as funds become available.

We oppose disposals in riparian areas in the public interest. The Management Direction under the No Action Alternative of The Draft Plan states, "Retain riparian areas in public ownership unless disposal would be in the public interest." Because it is necessary to ensure flexibility in managing riparian areas, this direction was carried forward into The Plan.

The Draft Plan violates national riparian management mandates. It is unclear what mandates being violated were referred to in this

letter. We do not feel that we are in violation of national riparian management mandates and believe that the Objectives and Management Direction to maintain and/or improve riparian areas are appropriate.

Are any springs currently fenced and protected? How many spring-associated riparian projects are being done annually now? Yes, several spring-associated riparian areas were fenced for protection over the past five years. Spring fencing protection actions are initiated, depending on available funding. A discussion of efforts to maintain and enhance riparian areas was added to Riparian Management in Chapter 3 of The Plan.

Include in The Plan what methods of riparian monitoring and the monitoring schedule for each allotment in which BLM permits livestock grazing. Monitoring methods and schedules for each open allotment would be identified in individual Activity Plans, that would be available for review, upon completion, at the BLM Las Vegas Field Office.

The BLM should have, in The Draft Plan, defined "poor" riparian condition, showed that livestock grazing is the cause of the "poor" condition, examined alternatives such as rotational grazing systems, and showed that exclusion of grazing is the only management technique that will improve the condition of the riparian areas surrounding the Meadow Valley Wash and Virgin River. The definitions of the condition categories of riparian areas were included under Riparian Resources in Chapter 3 of The Plan.

The Draft Plan did not state that effects from livestock grazing is the sole cause of the poor condition of many of the riparian areas, but rather indicates that grazing, along with wild horses and burros, invasion of exotic species, alteration of hydrologic processes, and other uses are contributing factors. The establishment of Areas of Critical Environmental Concern to enhance the recovery of the threatened desert tortoise has resulted in the closure of the Bunkerville, Glendale, and Rox Allotments to livestock grazing. Meadow Valley Wash and the Virgin River are within these allotments.

Page 2-41 of The Draft Plan, under Management Direction for Riparian Management, states, "Use protective fencing, as needed, and provide alternative water sources...in the recovery of spring associated riparian areas." There may be situations where protective fencing may not be the best or only solution to protect such riparian areas. It is suggested that the directive be rewritten to allow consideration of other protective measures when appropriate. The Management Direction for Riparian Management, on Page 2-41 of The Draft Plan, that identifies the use of protective fencing was modified for The Plan to reflect the use of measures appropriate to protect the spring-associated riparian area.

The first objective under Riparian Management states: "Ensure that 75 percent of riparian areas are in proper functioning condition by 1997...". We recommend that riparian areas be prioritized and a schedule be developed and incorporated into the final plan to facilitate implementing this objective. It is the Bureau's intention to prioritize and develop a schedule for riparian areas after the functioning condition inventory is completed. The inventory was initiated in 1995. Management direction is included in The Plan to prioritize and establish a schedule to complete the inventory.

The third objective under Riparian Management states that the condition of riparian zones of those springs that exhibit good recovery potential will be improved. This implies that those springs in fair and poor condition that do not exhibit good recovery potential will be permitted to remain in fair or poor condition. The overall objective should be to improve the condition of all springs in poor or fair condition. It is not the intention of the BLM to ignore those spring associated or other riparian areas lacking good recovery potential. The objective was modified in The Plan to reflect the need to prioritize and direct efforts and funding toward those areas with the greater chance of recovery.

Because a variety of definitions are used by other Federal agencies, what is the definition of the word "riparian" as interpreted by BLM? Under Riparian Management, are the impacts not adequately described because the document does not consider the Mojave Desert Wash Scrub plant community? The following definition was added to Chapter 3 of The Plan. A riparian area is "...an area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or

washes that do not exhibit the presence of vegetation dependent upon free water in the soil." Desert washes do not meet the definition of a riparian area.

Are the mitigation as applied to vegetative management/riparian management on page S-45 discussed in this or any other document? With all the springs to be significantly degraded, how could it be stated on page S-45 that vegetative management from livestock grazing management will only be slightly adversely impacted? The statement that impacts from livestock grazing would be slight refers to vegetation other than riparian. Page S-47 of The Draft Plan states that impacts from livestock grazing would be significant. The Plan reduced the number of springs within grazing allotments to 19, and directs appropriate measures be taken to protect these springs and their associated riparian areas. Specific mitigation measures to be taken would be identified for separate actions in the National Environmental Policy Act evaluation process.

Is the statement that 75 percent of riparian areas will be in proper functioning condition by 1997 meaningful, considering that you have identified only five spring associated riparian projects a year? What specific actions will be taken to achieve this level in three years? The objective of achieving proper functioning condition on 75 percent of riparian areas in the planning area by 1997 is undoubtedly an unrealistic target. This date was a goal of the "Riparian-Wetland Initiative for the 90's" and is dependent on funding limitations. The objective was modified in The Plan to reflect accomplishment within the life of this plan. Efforts would be made to closely follow the "Initiative." The objective of five spring-associated riparian projects completed per year is an estimated minimum based on reasonable projections of available funding, support and cooperation. A proper functioning condition riparian inventory was initiated in 1995. The condition of each of the riparian areas, including the number in need of improvement would be identified. Riparian enhancement should be expedited through the closure of many allotments to livestock grazing. Also, other measures such as fencing would be used to prevent further degradation and aid in the recovery of riparian areas.

Concerning the water utilization at springs discussed on page 2-4, how does BLM propose to monitor (and then manage) uses of water by wildlife, livestock, and wild horses and burros? Water should be provided for livestock and wild horses and burros away from natural springs and riparian areas to maintain the health of the ecosystem. Water uses for wildlife, wild horses and burros and livestock are controlled through management that prescribes fencing, shutting off wells and pipelines, and other appropriate measures. The criteria for water utilization of springs and associated riparian areas is only intended as a tool to help determine Appropriate Management Levels for livestock and wild horses and burros at a level that minimizes the impact to the riparian area and wildlife. The Management Direction was modified in The Plan to better define the purpose for the criteria. The use of alternate water sources away from springs for the protection of associated riparian areas was identified in The Draft Plan and was carried forward to The Plan.

The plan acknowledges the benefits of improved riparian management but fails to recognize that Las Vegas Wash is a critical riparian area. Las Vegas Wash was identified as a significant riparian/wetland within the Las Vegas Valley. Page 3-24 of The Draft Plan states, "Only four perennial streams (greater than 1/2 mile in length) are found within the planning area. These include the Muddy and Virgin Rivers, Meadow Valley Wash and the Las Vegas Wash. Of these four streams, only the Virgin River has a significant riparian zone located on public lands." There is no BLM-managed land acreage associated with the perennial riparian area of Las Vegas Wash. There is a discussion of the potential increase of erosion within the Las Vegas Wash resulting from land disposals in The Supplement, Chapter 4, page 4-4. A discussion is also presented in The Plan.

The statement on page 4-12 of The Draft Plan that springs and associated riparian habitats would be preserved for wildlife use appears to be in conflict with statements elsewhere in the document regarding the use of natural springs and riparian areas for livestock, wild horses and burros. The statement on page 4-12 of The Draft Plan is not considered contradictory with other statements regarding use of riparian areas. It indicates that wildlife use would be ensured at spring-associated riparian areas through their preservation.

The criteria developed for water utilization of springs appears inadequate to fulfill the objective of

achieving 75 percent of riparian areas in proper functioning condition by 1997. A broadly applied utilization criteria is unsuited to address unique qualities and subtle differences among springs. There is no contention that the water utilization criteria is the primary means to arrive at the objective of 75 percent of springs in proper functioning condition. The methods used to achieve proper functioning condition would vary among riparian areas and would be addressed in site-specific National Environmental Policy Act evaluation documents.

Why is there no analysis of the impacts to the riparian resource from the disposal of public lands and designation of right-of-way corridors? Is the fact that these areas might or might not include riparian areas the reason for failing to analyze the impacts? Page 4-1 of Chapter 4 of The Supplement states, "If a resource or resource use is not addressed, it was determined that impacts would not occur or would be insignificant." Only a small section of the Muddy River is within a disposal area. The No Action Alternative in The Draft Plan and The Plan states that BLM will "Retain riparian areas in public ownership unless disposal would be in the public interest." There are 10 spring-associated riparian areas located within the identified right-of-way corridors. Through the use of proper mitigation efforts, these riparian areas would be protected from actions within the corridors.

Why are wild horses and burros not prevented from using Meadow Valley Wash and the Virgin River as livestock are? Wild horses and burros are not present in the Meadow Valley Wash and Virgin River areas within the Las Vegas BLM District, therefore, impacts from these animals are not expected.

Why does BLM permit the "significant" degradation of riparian areas of 38 springs from livestock grazing, according to page S-47, Alternative C, of The Draft Plan? When will the condition and improvement potential of all the springs be determined? Will grazing be permitted in the meantime? The statement referenced under Alternative C is a projection when no measures are taken to mitigate impacts attributable to livestock grazing. Page 2-41 of The Draft Plan states that one objective is to "Improve the condition of the riparian zones of those springs which exhibit good recovery potential from the current poor and fair ratings to a good or better rating," and "Use protective fencing, as needed, and provide alternate water sources and/or locations to prevent further degradation of and aid in the recovery of spring-associated riparian areas." This direction was carried to The Plan with a modification noting that appropriate measures, not just fencing, would be used to protect the riparian areas. The concern with continued degradation of springs and their associated riparian areas is addressed in The Plan.

Livestock grazing would continue on open allotments during efforts to identify the condition and improvement potential as well as the protection and improvement of spring-associated riparian areas located within these allotments. If existing proper forage utilization levels are exceeded, livestock would be removed.

Vegetation Resource Management

The statement - "Maintain or restore plant productivity on disturbed areas of the public lands, implies disturbed conditions may be maintained in some areas." Shouldn't BLM manage for optimum native species diversity? The third objective was written to address conditions in all types of disturbed areas. Some areas disturbed by past grazing have gone beyond their "threshold to improve." These areas are considered to lack the potential to improve naturally and the expense could not be justified to reseed thousands of acres. Reseeding in the desert rarely is successful. Those areas crossed by rights-of-way, such as pipelines, may be reseeded, but the ideal conditions for seed germination and seedling establishment are rare. Native species should be considered first for most rehabilitation projects, but options should be evaluated on a case-by-case basis. In some situations, introduced species would best be suited to prevent erosion. Rehabilitation projects are addressed in the Environmental Assessment process.

Does BLM know where sensitive plant species occur, such as California bear poppy, and how can these plants be protected? Avoidance would be preferred. Sensitive species inventories are in progress, including research near Moapa and the completion of a Habitat Management Plan for the Bear Poppy. The maps for both sensitive plant and animal species are updated in the Affected Environment section of The Plan. Management direction would be revised based on public

comment to reflect avoidance of sensitive species where possible. Specific mitigation measures would be developed during the Environmental Assessment and Environmental Impact Statement process. Avoidance of Threatened and Endangered species would be a primary objective, where possible. The U.S. Fish and Wildlife Service would issue biological opinions with various "take provisions," as appropriate.

Why are "state of the art" revegetation techniques ignored? Reclamation of desert sites are very successful - cases-in-point, Castle Mountain Venture and Bullfrog Mine. These mine project locations are at relatively higher altitudes and receive above eight inches of precipitation, with a greater likelihood of a successful reclamation effort. In contrast, agency documentation on most reclamation attempts in this district have failed. Ideal climatic conditions for successful reclamation generally occur two or three times in a ten-year period. Revegetation of hot desert types is rarely successful. The expense incurred for so little a return makes it difficult to justify. For example, one revegetation project cost one-half million dollars. The survival rate of 1 percent can not justify the expense of such an undertaking.

Why doesn't the Resource Management Plan analyze the effect on vegetation and desert tortoise by wild horses and burros? The impacts of Wild Horses and Burros Management are analyzed on pages 4-9 for Riparian Management and 4-12 for Wildlife Management of The Draft.

What is undesirable vegetation, and what are the specific means of control? Undesirable vegetation is a relative term that is determined during an activity plan analysis for a desired plant community. The specific means of control would be evaluated and determined in a site-specific Environmental Assessment, on a case-by-case basis.

Visual Resource Management

There appears to be no justification how Visual Resource Management Classes were determined. The classification system for Visual Resource Management is described in BLM Manual 8400. Designations originate through an overlay technique using maps of Scenic Quality, Sensitivity Levels and Distance Zones. There are five Management Classes, with special areas designated Class 1.

How can Visual Resource Management classifications be changed? The Visual Resource Management classifications in The Plan would be considered interim designations until a complete inventory and analysis is conducted. In order to change the Visual Resource Management classifications, a new inventory must be completed. The results of this inventory would form the basis for amending the Visual Resource Management component of the plan.

Areas of Critical Environmental Concern

Is the Devil's Throat Area of Critical Environmental Concern located within the Gold Butte Area of Critical Environmental Concern or Virgin Mountains Area of Critical Environmental Concern? Devil's Throat Area of Critical Environmental Concern is located within the boundaries of the Gold Butte Part A Area of Critical Environmental Concern. Boundaries of all Areas of Critical Environmental Concern are delineated on Map 2-7 of The Plan.

What Area of Critical Environmental Concern and Lands Disposal Area boundaries were changed? The boundaries of most of the disposal areas varied between alternatives and from the Draft to the Supplement. In The Plan, the boundaries of the Amargosa Mesquite, Crescent Mining Townsite, Arden Historic Sites and River Mountains Areas of Critical Environmental Concern were modified based upon public and internal comments.

How will fragile values be protected in Areas of Critical Environmental Concern? The lands and all "fragile values" they contain would be preserved and protected through actions described in Tables 2-2 through 2-6 of The Plan.

What is the history of the Sunrise Mountain Natural Area, and how will the Rainbow Gardens Area of Critical Environmental Concern that contains it be protected? The Natural Area designation was made prior to Federal Land Policy Management Act. The Sunrise Mountain Natural Area became an Instant Study Area and, therefore, a Wilderness Study Area, when Congress passed Federal Land Policy Management Act. The Rainbow Gardens Area of Critical Environmental Concern will be recommended to be withdrawn from operation of the general mining laws subject to valid existing

rights on the date of the withdrawal. It is be closed to solid leasables and salable minerals. Public lands within the Area of Critical Environmental Concern will be retained in public ownership. A powerline corridor is be designated through the area. Off-road vehicle use will be confined to designated roads and trails.

When considering Areas of Critical Environmental Concern, does the No Action Alternative apply if there currently are no Areas of Critical Environmental Concern? Yes, the No Action Alternative does apply because Federal Land Policy Management Act requires only that all areas be considered for suitability as Areas of Critical Environmental Concern. Federal Land Policy Management Act does not require that any areas must actually be designated as Areas of Critical Environmental Concern. The designation of Areas of Critical Environmental Concern is a discretionary action that BLM may or may not exercise.

What authorizes the designation of Areas of Critical Environmental Concern? The designation of Areas of Critical Environmental Concern is authorized by Federal Land Policy Management Act.

What values are contained within the Rainbow Gardens Area of Critical Environmental Concern and why must road access to this area be limited? The Rainbow Gardens Area of Critical Environmental Concern contains cultural, geological, scenic, zoological, botanical, and recreational values. In order to preserve these fragile values, access within this Area of Critical Environmental Concern must be limited to designated trails.

The Areas of Critical Environmental Concern are so large, how could they possibly meet the criteria for Area of Critical Environmental Concern designation? There is no size limit set on Areas of Critical Environmental Concern as long as they meet the relevance and importance criteria [43 CFR 1601.0 and 1610.7-2(a)].

Previous to BLM accepting and acting on Area of Critical Environmental Concern nominations, they should be described by legal subdivisions. It is impossible to comment on vague and undefined areas. BLM policy 1613.41 does not require that Area of Critical Environmental Concern nominations be submitted in a legal subdivision format. The Areas of Critical Environmental Concern that meet the relevance and importance criteria are shown on maps in The Draft Plan, The Supplement and The Plan. In addition, the areas were described and legal descriptions of each are found in Appendix D.

It seems that anyone with a cause submitted a proposed Area of Critical Environmental Concern. Why did BLM accept all nominations? Federal Land Policy Management Act provides for Area of Critical Environmental Concern designations and establishes national policy for the protection of public land areas of critical environmental concern. Section 202(c)(3) of Federal Land Policy Management Act mandates that the agency give priority to the designation and protection of Areas of Critical Environmental Concern in the development and revision of land use plans. Anyone may submit a proposal for an Area of Critical Environmental Concern, however, BLM manual 1613.11 and 43 CFR 1610.7-2 identify the relevance and importance criteria that a potential Area of Critical Environmental Concern must meet for consideration. Many of the nominations received did not meet the criteria and were not considered in The Draft Plan.

Why was there no reference in The Draft Plan concerning the report to congress on future Areas of Critical Environmental Concern in Nevada as required by the Apex Legislation, PL 101-67? Section 6(b)(3) of Public Law 101-67 requires that BLM invite public proposals for designation of Areas of Critical Environmental Concern, evaluate all proposals received and take such action as the Secretary considers appropriate. It does not require that BLM submit a report to Congress on Areas of Critical Environmental Concern.

What if the reason for the Area of Critical Environmental Concern designation is no longer significant? Will the Area of Critical Environmental Concern be discontinued? After designation, values that originally qualified the area for an Area of Critical Environmental Concern would be protected. A plan amendment would be required to drop a designated area.

What was the difference in acreage between the nominations and that actually proposed for designation? It is not possible to determine the difference in acreage of areas nominated and areas designated because many nominations did not include maps with specific boundaries. Also, many

nomination boundaries overlapped, and the same areas were nominated by different groups. In some cases, small, adjacent Areas of Critical Environmental Concern were combined into one large area.

How will Areas of Critical Environmental Concern be managed? Management prescriptions for these areas need to be developed. Management prescriptions are listed in The Plan in Tables 2-2 through 2-6. If needed, a management plan would be prepared to set more specific management prescriptions.

Nominated Areas of Critical Environmental Concern need additional critical review to reject those that are questionable. Many Areas of Critical Environmental Concern are so broad, it is difficult to understand their significance and benefit versus adverse impacts. Areas of Critical Environmental Concern in The Draft Plan were evaluated to ensure that they met the relevance and importance criteria. Benefits and adverse impacts of Area of Critical Environmental Concern designation are analyzed in Chapter 4 of The Plan.

It is not proper for the National Park Service to attempt to extend their management authority onto public lands at Bitter Ridge. The National Park Service buffer Area of Critical Environmental Concern is another attempt to extend their power and should not be allowed. Bitter Ridge is included in The Plan as part of a larger Area of Critical Environmental Concern. The area would continue to be managed by BLM. There is no evidence to suggest National Park Service is attempting to take over BLM-managed lands. While National Park Service submitted nominations for Area of Critical Environmental Concerns, not all met relevance criteria. Some of the areas nominated by National Park Service for The Draft Plan were subsequently incorporated into desert tortoise Areas of Critical Environmental Concern.

How can BLM prohibit permanent roads in Areas of Critical Environmental Concern? This would deny access to private property. The Plan shows the revision to clarify that access to private land, including issuance of right-of-way grants, would be provided in Areas of Critical Environmental Concern.

Why withdraw Areas of Critical Environmental Concern from public land laws? Designation of Areas of Critical Environmental Concern should be adequate protection. Withdrawal from public land laws was considered in The Draft Plan as necessary to protect resources from potential impacts as a result of Recreation and Public Purpose or Section 302 leases and mineral entries in the Areas of Critical Environmental Concern. The staff evaluation of internal and public comments resulted in a revision to The Plan. In The Plan, Areas of Critical Environmental Concern listed in Tables 2-2 to 2-6 are only withdrawn from certain provisions of the mining laws.

There is no relevance criteria listed under the River Mountain Area of Critical Environmental Concern. Why did BLM kept it in as an Area of Critical Environmental Concern? Page E-26 of The Draft Plan should have stated that the River Mountains support desert bighorn sheep under the relevance criteria. Under BLM Manual 1613.11.A. An area meets the relevance criteria if it contains one or more of the following: 1) A significant historic, cultural or scenic value, 2) a fish or wildlife resource, 3) a natural process or system or 4) a natural hazard. Under this definition, the River Mountains clearly support a wildlife resource and meets the relevance criteria.

Special Recreation Management Areas should not overlap with Areas of Critical Environmental Concern or crucial wildlife habitat as the management goals of the two designations differ significantly. Special Recreation Management Area boundaries were adjusted in The Plan to reduce the amount of overlap with Areas of Critical Environmental Concern and wildlife habitat. Muddy Mountains, Gold Butte, Christmas Tree Pass, Arrow Canyon, and Eldorado Special Recreation Management Areas were not carried forward into The Plan. Special Recreation Management Areas may be appropriate designations for areas with conflicts between recreational and other uses or natural resources. In these cases, an area would be designated as a Special Recreation Management Area to focus management attention to resolve the conflicts, not necessarily to increase recreational use. Rainbow Gardens Area of Critical Environmental Concern overlaps with Sunrise Mountain Special Recreation Management Area. Due to the close proximity of the area to Las Vegas and the intensive recreational uses occurring in the area, it is appropriate to designate the area as a special recreation management area.

Why isn't Area of Critical Environmental Concern status given to all riparian habitat? Because the riparian areas in the planning unit are spatially scattered, it would be impractical to designate them as Areas of Critical Environmental Concern. Many small riparian areas surrounding springs are included in larger Areas of Critical Environmental Concern designated for other purposes.

The creation of an Area of Critical Environmental Concern at Ash Meadows is unnecessary as the area is already protected as a wildlife refuge. Ash Meadows was nominated as an Area of Critical Environmental Concern in five separate nominations. The area meets both the relevance and importance criteria for an Area of Critical Environmental Concern (BLM Manual 1613.11). A large number of special status species are found in the area, including some outside the refuge boundary on BLM land. The Area of Critical Environmental Concern designation may help prevent future Federal listing of these species as threatened or endangered, or may assist in the downlisting of species that are already listed.

Why was the Red Rocks Area of Critical Environmental Concern not proposed for withdrawal from the general mining law, fluid mineral leasing and non-energy leasables in the preferred alternative? The Red Rock Canyon National Conservation Area was withdrawn from the mining laws when it was designated in 1990. Planning for Red Rock Canyon National Conservation Area will be developed in a separate General Management Plan.

The Draft Plan proposed acquiring private lands within Ash Meadows Area of Critical Environmental Concern. Acquisition of private land by the Federal government will negatively impact the tax base in Nye County. The U.S. Fish and Wildlife Service is currently acquiring private land within the refuge on a willing-seller basis. There are possibilities for direct sales and also exchanges with BLM lands in Pahrump or Amargosa for private lands in the Area of Critical Environmental Concern.

Why aren't the boundaries of the Virgin River Area of Critical Environmental Concern the same as critical habitat for the fishes of the Virgin River? The Virgin River Area of Critical Environmental Concern was designated to protect both aquatic and riparian habitat, and cultural resources. Therefore, it is larger than the proposed critical habitat designation for the Virgin River fishes. The proposed critical habitat designation includes the floodplain of the Virgin River (*Federal Register Notice*, Vol. 60, No. 65, Wednesday, April 5, 1995).

Would the Amargosa Mesquite area remain open for wood cutting if the area is designated as an Area of Critical Environmental Concern? The area is currently closed to wood cutting and would remain closed in The Plan, regardless of Area of Critical Environmental Concern designation.

Trails should be rerouted around or through Areas of Critical Environmental Concern to reduce conflicts while maintaining access. The designation does not prohibit use of existing or designated trails, nor construction of hiking trails, within Areas of Critical Environmental Concern.

Designation of Big Dune as limited to designated roads and trails is not feasible. The Plan designates part of Big Dune as "open" and part "closed" because it is not feasible to designate roads and trails in sand dunes.

Why doesn't BLM leave Big Dune open for public use? In The Plan, Big Dune would remain open for public use. Approximately 85 percent of the sand dunes would be open to off-highway-vehicle use. About 200 acres of the dunes would be closed to motorized vehicles, but open to non-motorized uses.

Why doesn't BLM close Big Dune to all off-highway-vehicle use as it is being damaged by uncontrolled off-highway vehicle use and needs additional protection? Big Dune would be retained in Federal ownership and is designated an Area of Critical Environmental Concern in The Plan. It would be closed to all types of mineral entry, and partially closed to off-highway vehicle use. Information on special status species indicates that the vegetated areas of the dunes are most important (Rust 1994; pers. Comm., Dr. Rust, University of Nevada, Reno). Off-highway vehicle use occurs mostly in the unvegetated parts of the dune. Habitat in Big Dune would be monitored through the use of aerial photographs.

The off-highway vehicle closed area at Big Dune should be designated specifically in the Resource Management Plan. The off-highway vehicle closed area at Big Dune is shown on Map 2-10. The area would be mapped in GIS at a 7.5 minute scale before posting the area as closed.

There is no conclusive evidence that the Big Dune beetle even occurs in the area or that off-highway-vehicle use is harmful to the habitat. The off-highway-vehicle community was under the impression that the closed area was to be opened because the fence was removed. The BLM shouldn't just assume there is "tons of habitat for the beetle" at Big Dune. Why does BLM insist on closing part of Big Dune to off-highway-vehicles? The fence surrounding the closed area at Big Dune was removed due to safety concerns. This agency has never indicated the closed area would revert to an open status. Closure was established in the Esmeralda-Southern Nye Resource Management Plan. Elimination of the closed area and change of the off-highway vehicle designations would require a land use plan amendment. Track On, an off-highway-vehicle volunteer group, posted carsonite signs around the Beetle Habitat Area.

There is conclusive evidence that Giuliani's dune scarab beetle, Big Dune aphodius scarab beetle, large aegialian scarab beetle and Rulien's miloderes weevil occur at Big Dune. They are all special status species. Giuliani's dune scarab beetle was originally collected from Big Dune, Nevada by D. Giuliani in 1972. The type specimen, or discovery of the species, was found at Big Dune. Giuliani's dune scarab beetle has since been collected from or observed at Big Dune on numerous occasions, including the following: 1973 by A.J. and M.E. Gilbert and R. McPeak; 1974 by A. Hardy; 1979, 1980, 1981, 1982, 1983, 1993 and 1994 by Dr. R. Rust; and 1994 by J. Cole. In 1985, Dr. Rust prepared a status report for U.S. Fish and Wildlife Service in response to a proposal to list the species as endangered and to designate Big Dune as critical habitat. The report recommended the species not be listed as threatened or endangered. With the exception of nearby Lava Dune, Giuliani's dune scarab beetle has not been collected or observed at any other sand dunes. Three other Amargosa Desert dunes Skeleton Hills, Dumont Dunes and Ibex Dunes, were surveyed, but the species was not found.

The large aegialian dune scarab beetle found at Big Dune was described in 1977 by R. Gordon and O. Cartwright. The type specimen of the species was collected from Big Dune in 1974. The species has been collected on Big Dune on several occasions by F.G. Andrews, A.R. Hardy, D. Giuliani and N. Rulien. Museum specimens were collected in 1972, 1973, 1974 and 1975. In addition, Dr. Rust collected or observed the species in 1982, 1983, 1993 and 1994.

Rulien's miloderes weevil was collected from Big Dune in 1982 by R.L. Bechtel and J. Knight. D. Giuliani reported the species as endemic to Big Dune in 1976. It was also collected by Dr. Rust in 1995. Big Dune aphodius scarab beetle was collected or observed on both Lava Dune and Big Dune in 1993 and 1994 by Dr. Rust.

Although no studies on the effects of off-highway-vehicle activity have been conducted at Big Dune, research has been completed at other sand dunes. R. Luchenbach and R.B. Bury conducted a study on off-highway-vehicle effects to the biota of the Algodones Dunes in California (1983). Their study demonstrated that the biota of the dunes was significantly reduced in areas used by off-highway-vehicles compared to acreage not used by off-highway-vehicles. There were marked declines in herbaceous and perennial plants, arthropods, lizards, and mammals in off-highway-vehicle use areas compared to unused areas. There was a negative effect even in areas only lightly used by off-highway-vehicles. Areas with heavy off-highway-vehicle use showed a distinct absence of native plants and animals.

The off-highway-vehicle closed area at Big Dune was originally recommended to be at least 50 acres in size. Despite a lack of biological data to support the change, it was later reduced to five acres. The original 50-acre exclosure only considered habitat for Giuliani's dune scarab beetle. There are three additional species to consider. Many of the invertebrates at Big Dune feed on plant material. Larvae of Giuliani's dune scarab beetle have only been collected from plant roots. The adult Giuliani's beetles appear to use creosote bushes for mating sites. Both adults and larvae of the aegialian dune scarab beetle live in the sand beneath dune plants and feed on detritus (organic material) that gathers on the dunes. The material is buried in the sand, and over time, is packed in layers in the dune. Excessive or inappropriate off-highway-vehicle use can destroy native vegetation and compact the sand, crushing the detritus layers needed by the beetles.

There is insufficient biological evidence to indicate whether the beetles need specific plant species for survival. For example, in heavily used camping areas near Big Dune, much of the native vegetation

has been replaced by tumbleweeds. It is not known if tumbleweeds provide necessary components for beetle life cycles as compared to sandpaper plant or creosote bush. Also, beetles walking on the surface of the sand may be crushed by off-highway vehicles.

If a reasonable portion of the beetles' habitat is not protected, one or more of the species may be listed as threatened or endangered under the Endangered Species Act. It is likely that the entire dune would then be closed to off-highway-vehicle use.

There is no assumption there are "tons of habitat for the beetle," instead that beetle habitat is very limited, (i.e., less than 2,000 acres at Big Dune and Lava Dune in the entire world). It is especially important to protect the habitat due to its limited size.

Why wasn't all of Big Dune designated as an Area of Critical Environmental Concern? The Plan designates 1,920 acres of Area of Critical Environmental Concern at Big Dune. This includes most of the sand dunes and surrounding vegetation. Boundaries for the Area of Critical Environmental Concern were established using 7.5 minute U.S. Geologic Service topographic maps. This township is unsurveyed so it is possible that some portion of the dune area is outside the Area of Critical Environmental Concern.

Designation of Amargosa Mesquite Area of Critical Environmental Concern would jeopardize IMV Floridin's clay mining operation, resulting in the loss of jobs and income to the local area. In the Proposed Resource Management Plan/ Final Environmental Impact Statement, the boundaries of the Amargosa Mesquite Area of Critical Environmental Concern were reconfigured from The Draft Plan to better correspond to the actual location of the Mesquite woodland. Most, if not all, patented mining claims were excluded from the Area of Critical Environmental Concern. The Resource Management Plan does not preclude IMV from either using or reconstructing the existing haul road.

The boundary of the River Mountains Area of Critical Environmental Concern in The Supplement conflicts with Bureau of Reclamation withdrawn land. Would a habitat management plan be developed for the Area of Critical Environmental Concern? If so, would it be a cooperative effort among agencies? The boundaries of the River Mountains Area of Critical Environmental Concern were modified in The Plan, in consultation with the Bureau of Reclamation. If a habitat management plan is needed for the River Mountains, it would be written in cooperation with other affected agencies.

Rights-of-way should be allowed across Areas of Critical Environmental Concern. Area of Critical Environmental Concern management direction does not prohibit rights-of-ways, but recommends avoidance in Areas of Critical Environmental Concern where feasible alternatives exist.

The section on areas of critical environmental concerns should be changed to require a restoration plan for all temporary roads. Reviews of individual Federal actions under the National Environmental Policy Act process could result in requirement of a restoration plan for temporary roads.

The designation of the Virgin River Area of Critical Environmental Concern should be delayed until Las Vegas Valley Water District completes plans for the Virgin River Supply Project. Designation of the Virgin River Area of Critical Environmental Concern would not necessarily prohibit Las Vegas Valley Water District from implementing the Virgin River Water supply project.

The Ivanpah Area of Critical Environmental Concern should include portions of Blue Diamond Hill. In The Plan, the Ivanpah Valley Area of Critical Environmental Concern was dropped from consideration. The majority of Blue Diamond Cholla habitat is within Red Rock Canyon National Conservation Area. An exchange proposal is under evaluation in which the vast majority of Blue Diamond Cholla habitat would be obtained for management within Red Rock Canyon National Conservation Area.

Why was the area northwest of Logandale designated an Area of Critical Environmental Concern? The desert tortoise Area of Critical Environmental Concern located northwest of Logandale is one of the few areas in Nevada where there is sufficient quality and quantity of desert tortoise habitat to meet the criteria of the Recovery Plan for desert tortoise.

Why was the Red Rock Spring Area of Critical Environmental Concern only considered for Area of

Critical Environmental Concern status in Alternative B and not in the other alternatives? Will it be included in the final Resource Management Plan? Red Rock Spring was considered for Area of Critical Environmental Concern designation in all alternatives of The Draft Plan. In certain alternatives, it is within a larger Area of Critical Environmental Concern and not listed separately. In The Plan, Red Rock Spring Area of Critical Environmental Concern is within the Gold Butte Part A Area of Critical Environmental Concern, and would receive the same management treatment as if listed separately.

Why was Gold Butte Area of Critical Environmental Concern not considered for designation in The Draft Plan as it has many values that would meet the relevance and importance criteria? The entire Gold Butte Area of Critical Environmental Concern was considered in The Supplement but not The Draft Plan. The area was divided into three parts, (A, B, and C) because of the different reasons for designation of each part. One plan for the entire area will be completed, which will identify specific management for each valuable resource. It was carried forward into The Plan.

Will the Joshua tree forest along the Nipton Highway be included in an Area of Critical Environmental Concern? Yes, most of this area is within the Piute/Eldorado Area of Critical Environmental Concern.

What makes the Virgin Mountain area so special? If it is pinyon-juniper woodland and mixed conifer, these vegetation types are common throughout the west and should not qualify the area for Area of Critical Environmental Concern status. The Virgin Mountains contain a relict stand of ponderosa pine and white fir. This represents the northern most stand of Douglas fir and the only known occurrence of Arizona cypress in Nevada. These resources are unique in Nevada and deserve additional protection.

Fish and Wildlife Management

Desert Tortoise

Listing of the Desert Tortoise

When and why was the desert tortoise listed as an endangered species and how does this affect the management decisions in the Resource Management Plan? The U.S. Fish and Wildlife Service was petitioned to list the desert tortoise in Arizona, California and Nevada as endangered on September 14, 1984 (the desert tortoise had previously been listed as threatened in Utah). The Fish and Wildlife Service determined in September 1985 that the proposed listing of the desert tortoise within the three petitioned states was warranted but precluded by other listing actions of higher priority.

Annual findings of warranted but precluded were made each year. On May 31, 1989 the same three groups that petitioned the U.S. Fish and Wildlife Service in 1984 provided substantial new information and petitioned to list the desert tortoise as an endangered species throughout its range in the United States under the expedited emergency provisions of the Endangered Species Act. As a result of this and other information, the U.S. Fish and Wildlife Service determined the Mojave Population of the desert tortoise (tortoises living north and west of the Colorado River) as an endangered species under an emergency rule issued August 4, 1989.

On April 2, 1990, when the emergency rule expired, the Mojave population of the desert tortoise was listed as threatened pursuant to the Endangered Species Act. Reasons cited for the listing of the desert tortoise included vandalism, collection of tortoises for pets, raven predation, disease, loss of habitat to urban, energy, mineral and agricultural development, vehicle oriented recreation, livestock grazing, and military uses (*Federal Register*, Vol. 55, No. 63, Monday, April 2, 1990).

Under the Endangered Species Act, Federal agencies are required to use their authority to further the purposes of the law. Until the tortoise is removed from the list, or the Endangered Species Act is changed, the BLM must address management of desert tortoise on public lands.

The Resource Management Plan should give a better definition of threatened and endangered. How does management differ between threatened and endangered species? The glossary in The Plan was expanded to include the definition of threatened and endangered from the *Endangered Species Act.*

Desert Tortoise: Life History

It seems that the acreage proposed for desert tortoise habitat is excessive. How much space does a tortoise need? The size of the home range for a desert tortoise varies spatially and annually. Males generally have larger home ranges than females. Studies in Utah, Arizona, Nevada, and California have shown that tortoise home ranges vary from 10 to 198 acres. Based on these figures and assuming no overlap of home ranges between individuals, a population of 100,000 tortoises would need between 1,000,000 to 19,800,000 acres of habitat. Because tortoise home ranges do overlap the figure would be somewhat lower. The *Tortoise Recovery Plan* recommends that a minimum of 1,000 square miles (640,000 acres) be managed for tortoise recovery in each recovery unit. There are three recovery units in Nevada.

Because the tortoise feeds only on tender shoots that grow out of grazed plants, shouldn't livestock grazing be beneficial to the tortoise? Feeding observation data shows that tortoises also consume dry forage under certain conditions. Also, a large part of their diet consists of annual forbs. Production of annuals is dependent on precipitation. Annuals sprout in response to precipitation, quickly flower, set seed, and die. Grazing of annuals by livestock does not stimulate additional production of green shoots as it may in perennial plants. While production of new growth on perennial plants may be stimulated by grazing, it is also dependant on precipitation. Most desert plants become semi-dormant during dry periods and do not grow.

What food chain is the desert tortoise on? The desert tortoise is on the same food net as all other living plants and animals in the Mojave Desert. The tortoise eats plants that generate energy by photosynthesis. Other animals such as coyotes, kit foxes, raptors, and ravens eat desert tortoises, in particular the hatchlings and juvenile tortoises.

Page 3-34 of The Draft Plan states that 26 percent of the tortoise death rate is caused by mining, off road vehicles and livestock grazing. What does this mean? Page 3-34 of The Draft Plan states that the crude mortality rate of adult desert tortoise in Piute Valley was estimated to be 26 percent in 1983. In other words, 26 percent of the adult tortoises in the population died. The normal crude mortality rate for adult tortoises is two to four percent. This indicates a cause of excessive mortality, specifically rates of 6.5 to 13 times higher than expected. The Resource Management Plan does not attribute the higher mortality rate to off road vehicle use, mining, or livestock grazing, but notes these activities occur in Piute Valley and could be contributing factors to the excessive mortality.

Desert Tortoise: Habitat Categories

Why weren't all classes of tortoise habitat categories, including Category IIIB, described better in The Draft Plan? How were the categories developed? The definition of the Category IIIB habitat could have been better. Tortoise habitat was categorized in 1988 under *Desert Tortoise Habitat Management on the Public Lands; a Rangewide Plan.* Although this plan was an attempt to prevent listing the desert tortoise as threatened or endangered, the tortoise was listed in 1989. Since then, critical habitat was designated and the *Tortoise Recovery Plan* was developed. The plan identifies Recovery Units and proposes desert wildlife management areas within the Recovery Units. These and the critical habitat designations superseded BLM's habitat categorization. Tortoise habitat categories were not brought forward into The Plan.

Desert Tortoise: Areas of Critical Environmental Concern Boundaries

Why were certain areas of Category III tortoise habitat left out of the Areas of Critical Environmental Concern? These areas are not included in Areas of Critical Environmental Concern for various reasons. The areas may not have been designated as critical habitat or included in the *Tortoise Recovery Plan* as potential recovery areas. Some are legislative disposal areas or traditional off road vehicle use areas. Some are simply poor quality tortoise habitat due to elevation, vegetation, or soils.

Why do the tortoise Areas of Critical Environmental Concern need to be so large? The large number of acres proposed as Areas of Critical Environmental Concern for desert tortoise is to ensure that an adequate amount of habitat is preserved to ensure the continuation of the species for the next five hundred years. Based on population modeling, the *Tortoise Recovery Plan* estimates that 1,000 square miles of habitat are needed in each Recovery Unit for a 50 percent probability that the species will survive for the next 500 years.

Why not just manage for desert tortoise on Lake Mead National Recreation Area as this area is already protected? This would eliminate the need for more restrictions on BLM land. In general, tortoise habitat on Lake Mead National Recreation Area supports a lower number of desert tortoises than BLM land. Soils and vegetation on the Recreation Area are generally not as well suited to desert tortoise as are areas on BLM land. Before the tortoise can be downlisted from a threatened species so that it is no longer protected under the Endangered Species Act, certain criteria must be met. These criteria could not be met by managing for desert tortoise only on Recreation Area lands.

Areas identified as critical tortoise habitat and Areas of Critical Environmental Concern are based on inadequate data and may not be sufficient to protect desert tortoise. BLM should collect more data and revise boundaries as needed to ensure the recovery of the desert tortoise. Given this scenario, how were the boundaries of critical habitat and Areas of Critical Environmental Concern developed? The U.S. Fish and Wildlife Service is responsible for the designation of critical habitat, and comments in regard to this designation should be addressed to the U.S. Fish and Wildlife Service, Nevada State Office, Reno, Nevada.

The areas identified as Desert Tortoise Areas of Critical Environmental Concern in The Plan represent the best habitat areas for desert tortoise in Nevada, based on evaluation of the best available data. Areas of Critical Environmental Concern for desert tortoise were selected based on the designation of critical habitat, recommendations in the *Tortoise Recovery Plan*, tortoise population densities, manageability and existing conflicts of each area, the *Clark County Short-term Habitat Conservation Plan*, principals of reserve design, the *Rangewide Plan* for the management of desert tortoise, and consultation with the U.S. Fish and Wildlife Service.

Areas of Critical Environmental Concern include lands designated as critical habitat by the Fish and Wildlife Service and areas identified by the Tortoise Recovery Team as proposed Desert Wildlife Management Areas. If future data indicates that the Areas of Critical Environmental Concern as designated are insufficient in either size, location or management prescription, the Resource Management Plan can be amended to address the problem. Monitoring of tortoise habitat and populations is ongoing.

Why are all the areas identified as tortoise management areas in Clark County's Short-Term Habitat Conservation Plan not included in the Resource Management Plan as Areas of Critical Environmental Concern? Clark County's Short-term Habitat Conservation Plan included potential tortoise management areas. The final decision on where the tortoise management areas (or Areas of Critical Environmental Concern) would be located is determined by the land management agency.

When *Short-term Habitat Conservation Plan* was developed, it was not known what areas would be designated as critical habitat or which areas would be included in the *Tortoise Recovery Plan* as recovery units. Therefore, the *Short-term Habitat Conservation Plan* identified all possible options. Since development of The Draft Plan, critical habitat for desert tortoise was designated and a recovery plan for desert tortoise was developed. The Desert Tortoise Areas of Critical Environmental Concern in The Plan are consistent with recovery areas identified in the *Tortoise Recovery Plan.*

Page 4-133 of The Draft Plan states "Under this alternative, up to 400,000 acres would become tortoise management areas... Livestock grazing would be eliminated in these management areas." Isn't this statement inconsistent with the prescriptions outlined in the preferred alternative, which proposes to dispose of tortoise habitat in the Piute/Eldorado Tortoise Management Area and to keep the area open to livestock grazing? No. The statement on page 4-133 is the cumulative impact analysis for the No Action Alternative. This alternative actually leaves the referenced allotments open to livestock grazing under Prescription 1, the same as the preferred alternative (The Draft Plan: Chapter 2).

However, during development of The Draft Plan, Clark County was actively working to purchase grazing privileges on a willing seller basis. One assumption for analysis under the No Action Alternative was that allotments in Piute Valley would be purchased and managed under voluntary non-use for conservation purposes as required by the Section 10(a)(b) Permit issued to Clark County. This is consistent with the Implementation Agreement for the *Short-term Habitat Conservation Plan* that allows for purchase and non-use of grazing privileges and in fact, the allotments in

Piute Valley were purchased and put into conservation use between 1992 and 1994.

The preferred alternative in The Draft Plan leaves the Piute/Eldorado Area of Critical Environmental Concern open to grazing. It does not allow for disposal in the Area of Critical Environmental Concern. It does allow for disposal within some of the potential tortoise management areas identified in the *Short-term Habitat Conservation Plan.* However, at the time The Draft Plan was published, there was actually no established tortoise management area in Piute Valley because the required land use controls were not implemented by BLM until December 1992, several months later.

In The Plan, those allotments that overlap with Areas of Critical Environmental Concern are proposed for closure to livestock grazing and excluded from disposal areas because they are within critical tortoise habitat and tortoise recovery areas identified in the *Tortoise Recovery Plan.*

Desert Tortoise: General Questions

All mitigation fees collected through Section 7 consultation should be spent to enhance the tortoise management area established through the Clark County Short-term Habitat Conservation Plan. Off-site mitigation fees collected in Clark County would be used to improve tortoise habitat in the Areas of Critical Environmental Concern and for other recovery actions. However, the expenditure of such funds must be approved by the U.S. Fish and Wildlife Service.

Annual population census of the tortoise must be done in all areas where population studies were used originally to determine the threatened status of the desert tortoise. Nevada Division of Wildlife assumes responsibility for population census monitoring.

Why is there such a wide range in the estimated tortoise population figures in The Draft Plan? How is this tied to carrying capacity of the habitat? How can tortoise population trends be determined when baseline data has such large confidence intervals? It is difficult to estimate population levels with most wildlife species. It is even more difficult with the desert tortoise due to their long life span, late age of sexual maturity, the fact that tortoises spend a large percentage of their life underground and the difficulty of finding hatchling and juvenile tortoises. However, more important than actual numbers is the population trend.

New methods are under study to monitor tortoise population trends. Two new methods, tested in 1994 by Nevada Division of Wildlife and U.S. Geological Survey, Biological Resources Division have potential to yield a more accurate population trend development. Estimating tortoise densities is relative. Wide ranges in estimates reflect the margin of error in calculating population density. Carrying capacity has not been determined for tortoise habitat at this time. Depending on the area, low tortoise numbers may be attributed either to poor quality habitat or to human actions.

The BLM should cooperate with other agencies and municipalities to answer questions, improve habitat, and implement the BLM's multiple use mandate. This agency takes efforts to cooperate with Nevada Division of Wildlife, U.S. Fish and Wildlife Service, National Park Service and Clark County offices to properly manage tortoise habitat. A cooperative effort has been ongoing in Nevada for the past six years through Clark County's habitat conservation planning effort. In addition, BLM has worked closely with other BLM and U.S. Fish and Wildlife Service offices in Nevada, Arizona and Utah to determine the appropriate boundaries and management prescriptions for Desert Tortoise Areas of Critical Environmental Concern in the Northeastern Mojave Recovery Unit.

Protective measures for the desert tortoise are being driven by development in the Las Vegas Valley. However, it seems that it is the ranchers and miners who are paying the price by having their activities restricted. Why doesn't BLM restrict development in the Las Vegas Valley and leave the ranchers and miners alone? Urban expansion was not the sole reason cited by the U.S. Fish and Wildlife Service for listing the desert tortoise as a threatened species. Contributing factors cited for the decline of the desert tortoise include vandalism, collection of tortoises for pets, raven predation, disease, loss of habitat to urban, energy, mineral and agricultural development, vehicle oriented recreation, livestock grazing, and military uses (*Federal Register*, Vol. 55, No. 63, Monday, April 2, 1990). BLM does not restrict growth in the Las Vegas Valley. This is the prerogative of the city and county governments.

There are restrictions to protect the desert tortoise on other activities besides ranching and mining. For example, off road racing is no longer allowed in several areas that are managed for desert tortoise protection. Additional restrictions were placed on casual off road vehicle use as well. Wild horse and burro numbers would be limited to zero in the desert tortoise Areas of Critical Environmental Concern. Development on private land is also restricted due to tortoise protection. Private property owners whose property supports the desert tortoise cannot develop their land without obtaining a Section 10(a)(b) Permit from the Fish and Wildlife Service. The only way to obtain such a permit is to develop a habitat conservation plan, an expensive and time consuming proposition. Clark County developed *The Desert Conservation Plan* to cover private lands in Clark County. Under this plan, land owners must pay off-site mitigation fees that equal $550 per acre. Projects on public land such as rights-of-way for roads and utilities must comply with similar restrictions, including survey and removal of tortoises from project sites.

In June 1994, the *Tortoise Recovery Plan* was finalized. The plan outlines criteria that must be met before the desert tortoise can be delisted or downgraded from "threatened" to non-listed status. In order to meet these criteria, it is necessary that land management actions be taken to protect desert tortoise and their habitat. Recommended actions include the elimination of livestock grazing and restrictions on off road vehicle use. Therefore, restrictions on livestock grazing and off road vehicle use would be implemented, regardless of development in Las Vegas Valley.

There are two concurrent planning efforts in regard to desert tortoise protection. Clark County is developing one plan and BLM is developing another. Clark County is going along on the tortoise issue only because BLM is forcing them to by limiting growth in the Las Vegas Valley. There should only be one plan developed. Clark County developed the *Short-Term Habitat Conservation Plan* to obtain a Section 10 (a)(b) permit from the U.S. Fish and Wildlife Service. This permit allows for incidental take of desert tortoise on <u>*private land*</u>. The BLM did not require the County to develop the *Short-term Habitat Conservation Plan*. Rather, the development of habitat conservation plans and Section 10(a)(b) permits is the responsibility of the U.S. Fish and Wildlife Service.

Additionally, the BLM is not restricting growth in the Las Vegas Valley by requiring tortoise protective measures on urban development. Tortoise protective measures result from the listing of the desert tortoise as a threatened species by the Fish and Wildlife Service. The Plan was developed to meet BLM's regulatory requirements and to address tortoise management on public land. Therefore, it is necessary to have two separate plans. Coordination between Clark County and BLM on planning efforts is ongoing.

The Long-Term Habitat Conservation Plan should be incorporated as part of the final Resource Management Plan. Most of the proposed actions in the *Clark County Desert Conservation Plan* are independent of land use decisions by BLM. Those actions proposed in the Clark County Desert Conservation Plan that require actions on public land are incorporated into The Plan.

A goal of The Draft Plan was protection and recovery of the desert tortoise in accordance with the Clark County Habitat Conservation Plan, which was being developed at the time. If a guiding management document is still under preparation, how can The Draft Plan set management prescriptions in accordance with such a program? The *Clark County Short-term Habitat Conservation Plan* was implemented on July 1, 1991 before The Draft Plan was released for public comment. It would have been more accurate to state, ... *in coordination with the Clark County Habitat Conservation Plan....* The *Habitat Conservation Plan* was not a guiding plan, but a concurrent planning effort involving coordination with the Resource Management Plan, because several mitigation measures in the *Habitat Conservation Plan* applied to public land.

Why doesn't the Resource Management Plan provide protection for the desert tortoise from wild horses and burros and tortoise predators such as ravens? There are proposals in the Resource Management Plan to protect tortoise habitat from wild horses and burros. For example, all four alternatives of The Draft Plan proposed managing the Gold Butte Herd Management Area for an Appropriate Management Level of zero burros in that part of the herd management area that overlaps with the desert tortoise Area of Critical Environmental Concern.

The Supplement proposed removing all wild horses and burros from two Herd Management Areas that overlap with desert tortoise Areas of Critical Environmental Concern. The Plan removes all wild horses and burros from Desert Tortoise Areas of Critical Environmental Concern. Implementation of raven control measures, although not specifically noted in The Draft Plan, are not precluded. Annual plans for predator control are developed through a Memorandum of Understanding between BLM and the Animal and Plant Health Inspection Service, U.S. Department of Agriculture. The Plan addresses future predator control efforts.

Tortoise management requires more than guess work. Why does the BLM make management decisions without enough data to make good decisions? Decisions are based upon the best data available at the time. Data has been collected on the desert tortoise for over 18 years. Approximately 2,000 standard tortoise transects have been conducted in southern Nevada since 1979. Currently, ten permanent study plots are used to monitor desert tortoise populations in the Las Vegas and Ely Districts. Numerous such studies are also on-going in California, Arizona, and Utah. The tortoise is listed as a threatened species and the Endangered Species Act requires that Federal agencies use their authority to assist in the recovery of listed species. Until the tortoise is delisted or the Endangered Species Act is changed, BLM must address tortoise management on public land.

How can BLM allow a utility corridor through Rainbow Gardens when it is critical habitat for desert tortoise? Critical habitat is a specific designation by the U.S. Fish and Wildlife Service as defined by the Endangered Species Act. Critical habitat was designated for the desert tortoise population on February 8, 1994 (*Federal Register*, Vol., 59, No. 26). Rainbow Gardens was not designated as critical habitat.

Designations of Areas of Critical Environmental Concern for desert tortoise is all good and well, but don't expect it to solve all the tortoise problems. Also, tortoises outside of Areas of Critical Environmental Concern need to be protected as well. Does BLM propose to do so? Designations of Areas of Critical Environmental Concern are part of the solution. Management prescriptions within the Areas of Critical Environmental Concern implement the goals and objectives of the tortoise recovery plan and would aid in the goal to eventually delist the desert tortoise. Although management efforts would be concentrated in the Areas of Critical Environmental Concern, tortoises outside of these areas would continue to be protected under the Endangered Species Act. This agency would continue to consult with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act on all actions that may affect a threatened or endangered species, both in and out of Areas of Critical Environmental Concern. Impacts to threatened and endangered species and their habitat would be mitigated to the extent possible.

There are more tortoises in the Las Vegas area than in the Moapa area. Why is Moapa being surrounded by critical tortoise habitat? Critical habitat is located north of Moapa on Mormon Mesa due to its potential for long-term management of tortoise populations. Although the Las Vegas Valley once supported a healthy tortoise population, urban development in the valley has fragmented tortoise habitat to the point that it is no longer feasible to manage that area for preservation of a viable tortoise population.

The Resource Management Plan should be delayed until the tortoise recovery plan is completed, and this plan should be incorporated into the final Resource Management Plan. The *Tortoise Recovery Plan*, finalized in June 1994, is incorporated into The Plan.

Why is BLM's objective in the preferred alternative to maintain tortoise populations at current trend levels when current trend levels may not meet the recovery criteria for desert tortoise? This objective was not selected for The Plan. The objectives in The Plan are consistent with the *Tortoise Recovery Plan.*

Desert Tortoise: Areas of Critical Environmental Concern

Utility corridors should not be allowed to cross tortoise Areas of Critical Environmental Concern/Desert Wildlife Management Areas. Based on the location of Hoover Dam and existing utility lines, and demand from urban areas for additional electricity, it is not feasible to restrict all utility corridors from crossing tortoise habitat. Federal actions such as authorizing a power line right-of-way would be subject to Section 7 consultation

under Endangered Species Act.

In the Implementation Agreement for Clark County's Short-Term Habitat Conservation Plan, BLM agreed to prohibit (opportunities for) commercial and organized off road vehicle events in the Piute/Eldorado Area of Critical Environmental Concern/Desert Wildlife Management Area. Why wasn't this objective selected in The Draft Plan? The text in The Plan is consistent with the Implementation Agreement for the *Clark County Desert Conservation Plan,* which superseded the Implementation Agreement for the *Clark County Short-term Habitat Conservation Plan.* The implementation agreement states that "commercial and competitive events shall be prohibited in Piute/Eldorado Area of Critical Environmental Concern unless the BLM and the U.S. Fish and Wildlife Service agree there would be no adverse impacts to the desert tortoise from the event."

During the interim between the *Short-Term Habitat Conservation Plan* and the *Clark County Desert Conservation Plan,* no permits were issued for commercial or competitive off-road vehicle events within the Piute/Eldorado Tortoise Management Area. There was one exception in Potential Tortoise Management Area 12 where the Implementation Agreement for the *Clark County Short-term Habitat Conservation Plan* specifically allows for competitive off road vehicle events.

Currently, the BLM and the U.S. Fish and Wildlife Service are meeting with interested off road vehicle groups from Clark County to determine what types and levels of off-road vehicle activities are appropriate in the desert tortoise Areas of Critical Environmental Concern. This is consistent with the Implementation Agreement for the *Clark County Desert Conservation Plan.*

Given that the tortoise is threatened, how can the BLM not make alternative C the preferred alternative? Alternative C was developed before designation of critical habitat and development of the recovery plan for the desert tortoise. Alternative E was developed after release of the *Tortoise Recovery Plan* and the designation of critical habitat. The Plan combines parts of several alternatives to provide for recovery of the desert tortoise consistent with the *Tortoise Recovery Plan.*

The BLM should evaluate all existing facilities (such as landfills) that encourage tortoise predators and manage these facilities to deter tortoise predators. Existing facilities within Areas of Critical Environmental Concern presumed to attract predators to the determent of desert tortoise would be evaluated, management actions proposed to reduce predator attractions, and the action would be implemented. The studies and implementation of actions would be limited by funding constraints and are not dependant upon land use plan decisions.

If available, desert tortoise population figures for Nevada should be updated and an estimate made for the planning unit. Accurate population estimates for desert tortoises in Nevada and the planning unit are not available.

Why aren't the following management constraints being implemented in Areas of Critical Environmental Concern: prohibit camping, prohibit recreation concession leases, require fencing of highways, prohibit off road vehicle competitive events, prohibit mining, do not designate any experimental management areas, and prohibit livestock grazing? The Plan outlines management constraints in desert tortoise Areas of Critical Environmental Concern. While there are no designated campgrounds in these areas, camping is not prohibited. Dispersed camping use of the Areas of Critical Environmental Concern is not expected to conflict with the recovery of the desert tortoise. Recreation concession leases may be allowed on a case-by-case basis, consistent with the recovery of the desert tortoise. The *Tortoise Recovery Plan* states that surface disturbance that improves opportunities for non-motorized recreation, including the construction of visitors centers, is compatible with tortoise recovery and may be allowed in Areas of Critical Environmental Concern.

The *Tortoise Recovery Plan* also recommends establishment of associated visitors centers, interpretive sites, or amenities such as campgrounds. These would attract tourists and revenue to local communities, generating more local support for the desert tortoise Areas of Critical Environmental Concern. Non-speed, off-road vehicle events may be allowed in desert tortoise Areas of Critical Environmental Concern, after Section 7 consultation and development of appropriate mitigation measures, contingent on the BLM and the U.S. Fish and Wildlife Service agreeing that there would be no adverse impacts to the desert tortoise from the event.

Although the BLM takes efforts to cooperate with the county and Nevada Division of Transportation on highway fencing projects, BLM does not have primary responsibility. The construction of highway fences and culverts are reviewed within the environmental process to ensure that impacts to wildlife are evaluated and subjected to mitigation, if necessary. While this agency cannot add special stipulations to existing, approved right-of-way grants, appropriate actions can be required for right-of-way amendments or new right-of-way grants. The Plan proposes fencing of highways and major roads within Desert Tortoise Areas of Critical Environmental Concern.

Areas of Critical Environmental Concern are withdrawn from the operation of the mining laws and closed to most salable and solid leasable mineral entry. Fluid mineral development is limited by no surface occupancy stipulations. On valid existing rights, any proposed mining operation will require a Plan of Operation. A Section 7 consultation with the U.S. Fish and Wildlife Service will be completed on any proposed mineral development or exploration. If consultation does not result in a jeopardy opinion the mine could begin operation. Desert tortoise Areas of Critical Environmental Concern are open to material site rights-of-way within 0.50 mile of highways and free use permits within 0.50 mile of highways and some county roads. However, these authorizations are limited to governmental agencies and are not expected to be extensive.

Experimental livestock grazing management zones, as defined in the *Tortoise Recovery Plan* are not designated in The Plan, but BLM may authorize livestock grazing research in what is determined to be the most appropriate location. Livestock grazing is not authorized in Desert Tortoise Areas of Critical Environmental Concern.

Maintaining the Nelson Hills ORV area in the midst of an Area of Critical Environmental Concern is not consistent with reserve design. Why doesn't BLM close Nelson Hills to ORV use? Nelson Hills is not within the Area of Critical Environmental Concern. The Area of Critical Environmental Concern boundary is located adjacent to the south side of Nelson Hills. Off road vehicle use was addressed through the Clark County Habitat Conservation Planning effort and a decision was made to continue to allow competitive off road vehicle events in the Nelson Hills.

Because of the direct and indirect impacts that result from continued disposal of public land and increasing human population density, the least mitigation called for in the plan is the establishment of many large Areas of Critical Environmental Concern. These should include not only critical tortoise habitat, but also other wildlife and cultural resources that require protection. Several large areas are proposed for designation as Areas of Critical Environmental Concern in The Plan. These areas incorporate habitat for many species of wildlife and many cultural sites. Management prescriptions include protection measures for wildlife and cultural resources values.

How can Alternative E of The Supplement propose fewer acres of desert tortoise Area of Critical Environmental Concern than the other alternatives and still purport to emphasize the recovery of the desert tortoise? Alternative E was developed in conjunction with critical habitat for the desert tortoise and development of the *Tortoise Recovery Plan.* There was more information available during development of The Supplement than during development of the other alternatives. The Draft Plan, written before the draft recovery plan was released, provided alternatives to address a variety of scenarios that could develop in the *Tortoise Recovery Plan.*

Exactly where is the Pahrump Tortoise Area of Critical Environmental Concern located? The location of the Pahrump Valley Area of Critical Environmental Concern is shown on Map 2-20 of The Draft Plan. In general, the Area of Critical Environmental Concern is located east of Pahrump, Nevada. However, this Area of Critical Environmental Concern was not carried forward into The Plan.

Why wasn't a summary of the Draft Tortoise Recovery Plan included in The Supplement? A summary of the draft recovery plan was not included in The Supplement to conserve paper. The *Tortoise Recovery Plan* is a public document, available from U.S. Fish and Wildlife Service, Nevada State Office, Reno, Nevada.

What are the tortoise population densities for California Wash, Indian Springs, Pahrump Valley, and Ivanpah Valley Areas of Critical Environmental Concern? If these population densities are not tabulated, how was it determined that these areas are not critical habitat for desert tortoise? Why

were they not carried forward into the Proposed Resource Management Plan as Areas of Critical Environmental Concern? The U.S. Fish and Wildlife Service is responsible for designation of critical habitat. Questions concerning critical habitat designations should be directed to them.

Information on relative tortoise density in Indian Springs, Pahrump Valley, Ivanpah Valley, and California Wash is available, and several, including Ivanpah Valley and California Wash, were considered in the recovery plan. Available information on relative tortoise densities was considered by the Tortoise Recovery Team during the development of the recovery plan, and is discussed in the *Proposed Desert Wildlife Management Areas for Recovery of the Mojave Population of the Desert Tortoise* (U.S. Fish and Wildlife Service 1993).

Ivanpah, Pahrump, Indian Springs, Lower Mormon Mesa, and California Wash were dropped from consideration as Areas of Critical Environmental Concern because they were not designated as critical habitat by the Fish and Wildlife Service. Pahrump, Indian Springs and California Wash were also not included as recovery areas in the *Tortoise Recovery Plan.* In addition, the potential for long term management of some areas was questionable.

Will the Eldorado Sale area be managed until such time as the State of Nevada exercises its option to purchase? Part of the Eldorado Sale area (east of US 95 and south of the McCullough Substation) was managed as a tortoise management area under the *Clark County Short-Term Habitat Conservation Plan* until the sale was completed on July 9, 1995. At that time, Clark County purchased a conservation easement on 85,000 acres of the property. The conservation easement ensures that this area will continue to be managed for desert tortoise habitat.

Does the tortoise recovery plan specify critical and non-critical habitat? No. The *Tortoise Recovery Plan* does not specify critical versus non-critical habitat. It recommends the designation and management of at least one Desert Wildlife Management Area (BLM term is Area of Critical Environmental Concern) in each recovery unit. The *Tortoise Recovery Plan* identifies six recovery units based on evolutionary significant units. The units are defined as a population or group of populations that represent significant adaptive variations within a species. Nevada contains three recovery units: the Eastern Mojave Recovery Unit, the Northeastern Mojave Recovery Unit, and the Northern Colorado Recovery Unit.

The Plan proposes one Area of Critical Environmental Concern in the Eastern Mojave Recovery Unit in Piute Valley. The remainder of this Recovery Unit is in California. The Proposed Resource Management Plan proposes three Areas of Critical Environmental Concern in the Northeastern Mojave Recovery Unit: Gold Butte, Mormon Mesa, and Coyote Springs. Due to the very limited acreage of public land in the Northern Colorado Recovery Unit in Nevada, no desert tortoise Areas of Critical Environmental Concern are proposed.

What is BLM's responsibility concerning the central portion of Aerojet? Will the Aerojet leased lands be included in the Coyote Springs Area of Critical Environmental Concern? The central portion of the Aerojet lands is under a 99-year lease to Aerojet. The legislation specifies the lands should be managed by the Secretary of the Interior acting through the Director of U.S. Fish and Wildlife Service. The leased lands are not included in the Area of Critical Environmental Concern because they are under lease. The Plan proposes that if these lands return to BLM, they would be incorporated into the Coyote Springs Area of Critical Environmental Concern.

What was the rationale for dropping most BLM Category 2 tortoise habitat from Area of Critical Environmental Concern status? The Area of Critical Environmental Concern boundaries in The Plan were derived from recommendations in the *Tortoise Recovery Plan,* critical habitat, reserve design, quality of tortoise habitat, management conflicts, and informal consultation with U.S. Fish and Wildlife Service.

Why were the following areas dropped from Area of Critical Environmental Concern status in The Supplement?
Area 1, the Eldorado Sale Area: Critical habitat in the Eldorado Land Sale area is not included in the Piute/Eldorado Area of Critical Environmental Concern because it was legislatively designated as a disposal area. The City of Boulder City, through the State of Nevada, exercised an option on July 9, 1995 to purchase 107,412 acres in the Eldorado Sale Area.

Area 2, the Newberry Mountains, T.30 S.-T. 34 S., R. 65 E.: Most of this area is included in the Piute/Eldorado Area of Critical Environmental Concern. The area not included is identical to that excluded from critical tortoise habitat. Its exclusion is based on poor quality tortoise habitat due to slope, soils, and elevation.

Area 3, T. 27 S., R. 62 E., Ireteba Peaks WSA: This area is included in the Piute/Eldorado Area of Critical Environmental Concern.

Area 4, T. 27 S., R. 62 E., Piute Valley: Most of this area is included in the Piute/Eldorado Area of Critical Environmental Concern.

Area 5, T. 25 S., R. 61 E., McCullough Pass: This area was excluded from the Piute/Eldorado Area of Critical Environmental Concern because it is considered low density tortoise habitat due to steep slope, rough topography, and unsuitable soils, and because it is within a designated utility corridor.

Area 6 (T.26S., R.63E.) Keyhole Canyon and Area 7 (T. 25 S., R 64 E.) Eldorado WSA: These areas were excluded in the Piute/Eldorado Area of Critical Environmental Concern based on low density tortoise populations and marginal habitat due to unsuitable soils and steep slopes. They also are proposed for off road vehicle uses. The *Tortoise Recovery Plan* recommends that competitive off road vehicle use be prohibited in Areas of Critical Environmental Concern.

Area 8 (T.13 S., R. 63 E.) Aerojet Lease: This area is leased to Aerojet for 99 years and, therefore, not included in the Area of Critical Environmental Concern.

Area 9 (T. 14 S.-T. 15 S., R. 63 E.-R. 64 E.) Arrow Canyon: This area is included in the Mormon Mesa Area of Critical Environmental Concern.

Area 10 (T. 13 S.-T. 14 S., R. 65 E.-R. 67 E.) Moapa Valley: This area was not included in the Mormon Mesa Area of Critical Environmental Concern based on generally low density tortoise habitat. The Moapa, Overton, and Logandale town boards also requested this area be excluded to allow for future community expansion and casual recreational opportunities surrounding the towns. The critical habitat boundary, shown on Map 2-10 of The Supplement, is the proposed critical habitat boundary. In the final rule on critical habitat (*Federal Register*, Vol. 59, No. 26, February 8, 1994), the boundary was moved farther from Moapa and Glendale. Only about 7,680 acres of critical habitat are excluded from the Area of Critical Environmental Concern.

Mining and new utility rights-of-way should not be allowed in desert tortoise Areas of Critical Environmental Concern. The Desert Tortoise Areas of Critical Environmental Concern are proposed for withdrawal from the general mining law and closed to solid leasable minerals. Fluid mineral leasing is allowed subject to no surface occupancy stipulations. Salable mineral development under material site rights-of-way and free use permits to governmental entities is allowed but only within 0.50 mile of highways and county roads. Mining is allowed on valid, existing claims and impacts to tortoise would be addressed through Section 7 consultation. It is not be feasible to avoid all future utilities and rights-of-ways in these areas. Technical constraints on powerline construction, such as rugged terrain and urban development, limit locations for utility construction. In most cases, there are no feasible alternative routes that avoid tortoise habitat and other sensitive resources.

The Apex lands were designated as Category I tortoise habitat and are identified in the document as being the most valuable tortoise habitat in Southern Nevada. Why aren't these lands included in an Area of Critical Environmental Concern? This is incorrect. The writer of the question appears confused between Aerojet and Apex lands. The Apex lands were categorized as Category III habitat. The Aerojet lands, referred to in The Plan as high quality tortoise habitat, were not categorized because that land is not under public ownership. The Plan proposes that if the Aerojet lands return to BLM, they would be incorporated into the Coyote Springs Area of Critical Environmental Concern.

How can BLM propose protection for only two areas, separated by 150 miles, for desert tortoise recovery? Four Areas of Critical Environmental Concern are proposed in The Plan for desert tortoise (Piute/Eldorado, Mormon Mesa, Coyote Springs, and Gold Butte). The Piute/Eldorado Area of Critical Environmental Concern is within the Eastern Mojave Recovery Unit. The other three areas are in the Northeastern Mojave Recovery Unit. The Areas of Critical Environmental Concern are consistent with the intent of the *Tortoise Recovery Plan* for preservation of genetic

variability. Population viability analysis demonstrated that Las Vegas Valley no longer supports a viable desert tortoise population due to existing urban impacts. The 150 miles between Piute/Eldorado and northern areas of critical environmental concern includes Lake Mead, several mountain ranges, state and interstate highways, and a metropolitan area of more than one million people, and therefore is not considered an effective corridor for tortoise movement.

Tortoises in the Pahrump Valley, the Nevada Test Site, Desert National Wildlife Refuge, and Nellis Air Force are a distinct genetic strain, and the areas should be determined as Areas of Critical Environmental Concern for protection. Tortoises in the Pahrump Valley are genetically similar to those found in Northern Clark County where there are three proposed Areas of Critical Environmental Concern. The *Tortoise Recovery Plan* addressed genetic variability in tortoise populations when establishing recovery units and potential Areas of Critical Environmental Concern. The BLM does not manage the Desert National Wildlife Refuge, Nevada Test Site, or Nellis Air Force Range and, therefore, cannot address those areas in this plan.

Why isn't BLM coordinating the Resource Management Plan with other agencies, particularly in northern Clark County (for example, with the Desert National Wildlife Refuge)? Although the Desert National Wildlife Refuge is not included in The Plan, interagency coordination is ongoing. Management on the Desert Range is consistent with tortoise recovery objectives and proposed management on the adjacent Coyote Springs Area of Critical Environmental Concern.

How can you ensure protection for the Beaver Dam Slope tortoise population? The Beaver Dam Slope tortoise population occurs in Arizona, Nevada, and Utah. The acreage in Nevada is within the Ely District and is not addressed under this plan. BLM coordinates Area of Critical Environmental Concern boundaries and management prescriptions with other BLM offices in Arizona, Utah, and Nevada. The three States completed informal consultation with the U.S. Fish and Wildlife Service on proposed Areas of Critical Environmental Concern in 1996 (File no. 1-5-96-I-195). The purpose of the informal consultation was to provide the Fish and Wildlife Service with an overall picture of proposed management of desert tortoise habitat in the Northeastern Mojave Recovery Unit. The Fish and Wildlife Service concurred that the proposed Areas of Critical Environmental Concern met the objectives of the *Tortoise Recovery Plan.*

The Interim Desert Tortoise Habitat Distribution Map should be updated with more current information. The map was updated in 1996/1997 and input into Geographic Information Systems. While the map should be reviewed and revised as necessary, that task is not within the scope of this plan.

How can you ensure protection of the Coyote Springs/Arrow Canyon area? Protective measures for the Coyote Springs Area of Critical Environmental Concern are in The Plan. These measures include retiring the allotments from livestock grazing, limiting off-highway-vehicle use to designated routes, prohibiting speed, off-highway-vehicle events, withdrawing the area from locatable mineral entry and closing it to most salable and leasable mineral development.

Why doesn't BLM implement parts of the Tortoise Recovery Plan that will help tortoise and drop those parts that are politically motivated? This agency is obligated to manage for conservation. The Endangered Species Act, Section 2© Policy (1), states, "It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." The purposes of the Endangered Species Act are to provide a means for conservation of ecosystems on which endangered and threatened species depend, and to provide a program for the conservation of such species. BLM policy in Manual 6840.06 and 6840.24 requires management for recovery of listed species. Also, when a plan is prepared, and a previously approved recovery plan is involved, the objectives in the BLM plan should be consistent with those in the approved recovery plan.

The Tortoise Recovery Plan states that at least one Desert Wildlife Management Area (BLM term Area of Critical Environmental Concern) must be established as a strategy for recovery and delisting of the desert tortoise. It seems that BLM went far beyond the recommendations in the Tortoise Recovery Plan by proposing 23 Desert Wildlife Management Areas. This is incorrect. The Supplement proposed four Areas of Critical Environmental Concern for desert tortoise;

Piute/Eldorado, Gold Butte, Mormon Mesa, and Coyote Springs. The *Tortoise Recovery Plan* recommends at least one Desert Wildlife Management Area of 1,000 square miles per recovery unit. The Plan designates one Area of Critical Environmental Concern of 517 square miles in the Eastern Mojave Recovery Unit and 628 square miles in three in the Northeastern Mojave Recovery Unit. Rather than exceeding the *Tortoise Recovery Plan*, The Plan does not meet its minimal requirements. It is only by including tortoise habitat on lands managed by the BLM Ely District, the U.S. Fish and Wildlife Service and National Park Service, that the 1,000 square miles recommended in the *Tortoise Recovery Plan* can be achieved. The remaining Areas of Critical Environmental Concern proposed in the plan are for cultural resources, geologic resources, special status plants or other wildlife habitats such as wet meadows, sand dunes and bighorn sheep habitat.

Desert Tortoise and Livestock Grazing

What impacts does livestock grazing have on desert tortoise since the two species have coexisted for over 100 years? It is true that desert tortoise and livestock grazing have coexisted for more than a century. However, 100 years is only four to five tortoise generations. In a long-lived species with a low reproductive rate, it may take many generations before negative impacts are apparent. Livestock grazing has unquestionably altered the desert landscape. Introduced annuals such as red brome, filaree, Mediterranean grass and Russian thistle, have become naturalized.

It is unknown what native plant species may have become less abundant or extinct due to the introduction of these exotic species and grazing by livestock. Some native perennial grasses and shrubs have been reduced in abundance, others that are generally less palatable have increased. Ongoing nutritional research being conducted by the Smithsonian Institute indicates that perennial grasses such as bush muhly and Indian rice grass may be very important forage sources for desert tortoise. These species are extremely palatable to livestock and have generally decreased in abundance.

It is not known what effects these changes in the plant community have incurred on desert tortoise reproduction and survival rates. Exotic annual grasses have also altered the fire regime in desert tortoise habitat. An increased incidence of wildfire has further altered the vegetative community in some areas.

Why does BLM desire to replace livestock with wildlife? Livestock are being removed from Desert Tortoise Areas of Critical Environmental Concern due to meet the objectives of the *Tortoise Recovery Plan.*

Why doesn't the Resource Management Plan limit use of tortoise habitat by other wildlife such as bighorn sheep and mule deer? It seems that these animals would have as much impact on tortoise habitat as livestock. Habitat overlap between desert bighorn, mule deer, and desert tortoise is low. Generally mule deer use higher elevations than desert tortoise. Bighorn sheep concentrate in mountainous areas with adequate escape cover, whereas desert tortoise and livestock occur at the highest densities in the flats and valleys. In addition, these are native species that evolved in the Mojave Desert ecosystem along with the desert tortoise. Livestock are exotic, domestic species that evolved in the old world and were imported to North America by man. Cattle also consume much higher quantities of forage than either mule deer or bighorn sheep. One animal unit month (cow and calf) is considered to be equivalent to 4 bighorn sheep or 5 mule deer in the amount of forage consumed.

Why is livestock being singled out? Why are other uses not being limited also? The Plan would restrict a variety of uses that adversely affect desert tortoise. For example, in Areas of Critical Environmental Concern speed, off road vehicle events would be prohibited, casual off-highway-vehicle use would be limited to designated roads and trails, wild horses and burros would be removed and most mineral development would be prohibited. Lands within the Areas of Critical Environmental Concern would not be available for disposal through sale or exchange. Collection of off-site mitigation fees of $550 per acre would continue for uses of public lands that are determined to adversely affect the desert tortoise, such as rights-of-way, sales, and mineral development and exploration. Extensive habitat restoration would be required on surface disturbing actions within Areas of Critical Environmental Concern.

Why doesn't BLM refrain from implementing the Resource Management Plan until it reevaluates the

causes of the tortoise decline? The desert tortoise was listed by U.S. Fish and Wildlife Service as a threatened species. This agency's goal is the eventual delisting of the desert tortoise on BLM land. Waiting for decades for definitive data to show that livestock grazing or other uses are detrimental to the species would not aid in the delisting goal. Proactive management to protect desert tortoise habitat requires immediate implementation. If subsequent data indicates that livestock grazing or other uses are beneficial to desert tortoise, the land use plan could be amended to allow such uses.

Why doesn't the Resource Management Plan discuss the beneficial impacts of grazing on the desert, such as reduction of fire hazard? The primary risk of fire in creosote habitats, which is also tortoise habitat, is due to proliferation of annual grasses such as red brome, particularly in good precipitation years when there are large amounts of annual plant production. It is not possible to stock livestock at a high enough level to appreciably reduce the amount of annual grass in a good precipitation year and still ensure other forage species are not over-utilized. Grazing for the purpose of reducing fire hazard in creosote habitats is not considered a significant benefit.

Desert Tortoise and Areas of Critical Environmental Concern

Why didn't BLM designate all desert tortoise habitat as an area of critical environmental concern? The number of acres of tortoise habitat recommended for Area of Critical Environmental Concern protection is based on the *Tortoise Recovery Plan* and critical habitat designation.

BLM proposes to establish Areas of Critical Environmental Concern for desert tortoise. As a result, many traditional uses in the area such as livestock grazing will be eliminated. Doesn't this violate the multiple use mandate under Federal Land Policy Management Act? Why doesn't BLM manage for tortoise recovery on areas that are already withdrawn from multiple use? No, Federal Land Policy Management Act requires BLM consider the designation of Areas of Critical Environmental Concern, but does not require that all multiple uses occur on all public lands. Areas withdrawn and managed by other agencies such Department of Energy and Department of Defense were designated for specific uses that could preclude management for tortoise recovery. Also, tortoise habitat and populations with the best potential for long-term management are those areas proposed in The Draft Plan, and carried forward into The Plan, as Areas of Critical Environmental Concern, not those areas withdrawn by other agencies.

Are there differences in the tortoise Areas of Critical Environmental Concern between Alternatives A and B of The Draft Plan? They seem to be the same. Although the Areas of Critical Environmental Concern in Alternatives A and B cover the same general areas, there are differences in specific boundaries and acreage (The Draft Plan: Maps 2-21 and 2-26). Alternative B also proposed somewhat different management prescriptions than Alternative A.

Why was Ivanpah Valley proposed as an Area of Critical Environmental Concern in The Draft Plan? Why was it then dropped from consideration? Ivanpah Valley was proposed as an Area of Critical Environmental Concern because it was Category II tortoise habitat and identified as a potential tortoise management area in the *Clark County Short-term Habitat Conservation Plan.* The Ivanpah Valley Area of Critical Environmental Concern was dropped from consideration because it was not designated as critical tortoise habitat. Long-term management of the area to support a viable tortoise population is not justified due to the presence of existing conflicts in the area, such as use of Interstate Highway 15, powerline corridors to California, and existing and future development in Jean and Primm, Nevada.

Is BLM satisfied that enough areas were considered for desert tortoise Area of Critical Environmental Concern in the various alternatives of The Draft Plan? If so, how does BLM explain the fact that Alternative C has fewer acres of Area of Critical Environmental Concern than Alternative B, which is pro-development? Yes. When The Draft Plan was written the provisions of the *Tortoise Recovery Plan* were unknown.

One purpose of the draft was to provide a range of alternatives to address a variety of proposals in the *Tortoise Recovery Plan.* Alternative B had different boundaries than C, thus its acreage was greater, but the general areas designated in both alternatives are the same. Boundaries in Alternative B were

extended to roads or administrative borders in an attempt to facilitate their physical locations. The boundaries were adjusted in The Plan based on review of the *Tortoise Recovery Plan* and consultation with U.S. Fish and Wildlife Service.

Why was some Category I tortoise habitat in Piute Valley excluded from the a desert tortoise Area of Critical Environmental Concern in most alternatives of The Draft Plan? The Desert Tortoise Habitat Category boundary on Map 3-13 of the Draft Resource Management Plan is incorrect. The boundary of Category I habitat is that shown on Map 2-20 of the Draft. Therefore, the excluded area is not actually Category I habitat. The original habitat category map is available at the BLM's Las Vegas Field Office.

Why doesn't the Resource Management Plan preserve a corridor through the west side of Las Vegas Valley to provide for genetic exchange between tortoise populations? The recommendations in the *Tortoise Recovery Plan* were based on population modeling that predicts the response of a population to environmental factors over time. The model indicates that Las Vegas Valley is no longer a viable corridor for tortoise movements due to urban growth. Genetic variability in tortoise populations was also considered in the development of the *Tortoise Recovery Plan.*

Why does the Resource Management Plan not require that new roads only be allowed in Areas of Critical Environmental Concern as a last resort and then require that they be restored completely after use? New roads in Areas of Critical Environmental Concern would be permitted on a case-by-case basis subject to Section 7 consultation under Endangered Species Act and National Environmental Policy Act compliance. Permanent roads would be authorized, if needed, for access to private property.

Developed recreational facilities should not be allowed in Areas of Critical Environmental Concern if they create conflicts with threatened and endangered species. The *Tortoise Recovery Plan* allows the development of recreational facilities in Areas of Environmental Concern. A project that may affect a threatened or endangered species would be subject to Section 7 consultation under Endangered Species Act, and if potential adverse effects could not be mitigated, it would not be authorized.

Other Wildlife Species

If monitoring shows adverse effects from wild horses and burros or livestock grazing on wildlife species other than desert tortoise or bighorn sheep, what action will be taken? If monitoring shows that livestock or wild horses and burros are having unacceptable adverse impacts on other resource values including wildlife identified for a given area, then livestock and/or wild horse and burro numbers would be adjusted appropriately.

The objective to improve mule deer habitat to mid-late seral stage may conflict with objectives for other wildlife species. This objective was dropped from further consideration in The Plan.

Guidelines for Domestic Sheep Management (Instruction Memorandum 92-264) should be included in The Plan. The memorandum discussing the guidelines for domestic sheep management (Instruction Memorandum 92-264) is not included in The Plan, because no allotments are open to domestic sheep grazing.

Livestock waters should not be allowed in bighorn sheep habitat. BLM policy states that efforts should be taken to avoid creating new conflicts between livestock, wildlife and wild horses and burros through water development. Because only eleven allotments would be open to grazing in The Plan, little demand for new livestock waters in bighorn sheep habitat is anticipated. Water developments for livestock and wild horses and burros would be considered on a case-by-case basis, and impacts to bighorn sheep would be mitigated.

The words "domestic sheep" should be deleted from page 3-28 of The Draft Plan. The statement on page 3-28 of The Draft Plan is a summary of the existing environment and management situation. Under the no action alternative, domestic sheep can be licensed in one allotment adjacent to bighorn sheep habitat.

Fish and Wildlife 1, 2, and 3 Wilderness Study Areas should be withdrawn from mineral entry. Under The Plan, bighorn sheep habitat in the Elbow Range (west of U.S. Highway 95) and portions of the Arrow Canyon Range (east of U.S. Highway 95) are located within a tortoise Area of Critical Environmental Concern, and will be withdrawn from mineral entry under the 1872 *Mining Law.*

Why doesn't BLM leave game management to private organizations such as Ducks Unlimited or the Rocky Mountain Elk Foundation? The BLM has a responsibility, established through policy and regulation, to actively manage habitat for wildlife. Game management has been enhanced through the cooperative efforts of private organizations and individuals, and Federal and state agencies. Approval of The Plan would not affect this cooperative intent.

Why can't I go goose hunting on the Virgin River? Hunting on the Virgin River is regulated by Nevada Division of Wildlife. The Draft Plan did not state that hunting would be prohibited on the Virgin River, nor does The Plan.

Additional acres should be allowed for access for hunting in tortoise Areas of Critical Environmental Concern that overlap with bighorn sheep habitat, including allowing off-highway-vehicle use in washes. There is adequate access on designated roads and trails for bighorn sheep hunting in the Arrow Canyon, Meadow Valley, McCullough Range, and Eldorado Range without opening all washes to travel. Certain washes that are traditional travel routes are designated routes. Most acreage in these mountain ranges are Wilderness Study Areas, designations that further limit off-highway-vehicle activities.

Construction of guzzlers in WSAs should be prohibited. The Interim Management Policy for Lands Under Wilderness Review (July 1995) allows the construction of wildlife water developments in wilderness study areas if they meet the non-impairment criteria. Proposals for wildlife water developments in wilderness study areas will be considered on a site-specific basis.

Will roads to wildlife guzzlers be closed? Road closures will be determined through a public forum. In general, most roads to wildlife guzzlers would remain open. However, in locations where more than one road accesses the same guzzler, one or more roads might be closed.

How will quail habitat be improved? Quail habitat will be improved by limiting the percent of utilized forage to a level that will allow for a static-to-upward trend in the vegetative community. Forage utilization levels on open allotments will be controlled by manipulating livestock numbers or distribution on the allotment. Fences could be erected to create cover plots around springs. All but 11 of the allotments in the planning area are closed to grazing, facilitating improvement of quail habitat in additional areas.

The Resource Management Plan uses the term reasonable numbers. Nevada Division of Wildlife does not subscribe to the concept of reasonable numbers due to the advent of the monitoring process to determine capacity and causal agent in the case of overuse of the vegetative resource. Table 2-4 of The Draft Plan lists potential population estimates for bighorn sheep. These estimates are not the best information available and should be adjusted if numbers are to be used. However, once again Nevada Division of Wildlife questions the need to use numbers. The Plan does not use the term "reasonable numbers" except in the no action alternative, a summary of the current land use plan. Rather, it proposes establishing wildlife populations within the habitat's carrying capacity. Potential population levels are shown for bighorn sheep, but they are not meant to be limiting and would be adjusted based on monitoring data. The objective states "...allow desert bighorn sheep populations to reach levels consistent with the carrying capacity of their habitat..." Potential population estimates identified in Table 2-4 of The Draft Plan would be adjusted based on monitoring data. Table 2-4, Potential Population Estimates, was revised using survey information and approved habitat management plans.

Why wasn't habitat included when addressing mitigation impacts to bighorn sheep from mineral development? Impacts to bighorn sheep and their habitat are addressed in The Plan. Impacts to lambing habitat would be addressed for individual projects, when proposed. Because BLM is required to coordinate with Nevada Division of Wildlife, both direct impacts to bighorn and indirect impacts to their habitat would be considered.

The issue of wildlife reintroduction and augmentation releases was not addressed in The Draft Plan. Wildlife reintroduction and augmentation releases are addressed in The Plan. An objective to return native fauna to historic ranges and introduce bighorn sheep into suitable habitat was carried forward as valid existing management from the no action alternative.

BLM should prohibit the collection of herptofauna except in areas to be cleared for development.

Nevada Division of Wildlife has the authority to issue permits for the collection of herptofauna. The BLM has the authority to prohibit commercial collection of herptofauna on public land. The Proposed Resource Management Plan closes the Desert Tortoise Areas of Critical Environmental Concern to commercial collection of flora and only allows collection of fauna upon completion of a scientifically credible study that demonstrates commercial collection does not adversely impact affected species or their habitat..

Why is BLM designating a corridor through the River Mountains when it would have negative impacts to bighorn sheep? Corridor A-B, which crosses the edge of the River Mountains, was selected for The Plan. Corridor D, drafted to bisect the River Mountains, is not in the selected alternative.

Where will the funds for development of water sources originate? The cost to develop water sources would be funded by the benefitting program or discipline, such as range, wildlife, wild horse and burro, and riparian management, or a combination. Matching funding from private sources may be available.

Why doesn't the Resource Management Plan include statements that BLM will cooperate with Nevada Division of Wildlife in managing wildlife habitat and increasing hunting opportunities? Coordination with Nevada Division of Wildlife is standard operating procedure. It is the responsibility of Nevada Division of Wildlife to manage wildlife for the people of Nevada. BLM's habitat management efforts are coordinated with Nevada Division of Wildlife under a Master Memorandum of Understanding.

The River Mountain Area of Critical Environmental Concern should be closed to hunting, and bighorn sheep that encroach on City and private property should be removed. Nevada Division of Wildlife has responsibility for setting hunting seasons and hunt management areas, and managing wildlife populations. It is their responsibility to determine when it is necessary to remove bighorn sheep from a population. Encroachment of bighorn sheep on private and city property is an issue to be resolved by Nevada Division of Wildlife, city and county governments, and the private landowner.

Several areas of land disposal proposed in Alternative D appear to interfere with movement of bighorn sheep between mountain ranges. What are the impacts of land disposal on bighorn sheep? The land disposal areas in The Plan were largely minimized from Alternative D. Potential impacts to bighorn sheep habitat and migration routes would be reduced. Residual impacts to bighorn sheep from land disposal are expected to be insignificant. Currently, areas within disposal boundaries are compromised as bighorn movement corridors due to existing development such as interstate highways. Areas available for land disposal have generally been located outside bighorn sheep habitat as most bighorn sheep habitat is too steep to allow for construction. Movement of bighorn sheep between the River Mountains and McCullough Mountains will likely be eliminated over the long term due to development of both public and private land in this area.

The Resource Management Plan should include specific guidance that trails, campsites and other human activities avoid wildlife waters by one mile. The current policy is to avoid wildlife guzzlers and springs by 1/4 mile during off-highway-vehicle events. Nevada law (Nevada Revised Statues 503.660) prohibits camping within 100 yards of water. In most cases, one mile is excessive, particularly in bighorn sheep habitat where there is topographic relief that allows visual screening.

Access should be permitted to all existing and future water developments via existing roads, trails, and washes. It is not always desirable to allow motorized access to wildlife water developments as it increases the probability of vandalism and poaching. Bighorn sheep projects are often intentionally located in areas inaccessible by motorized vehicle. Vehicle access will likely be maintained to all upland game guzzlers.
Areas within two miles of wildlife waters should be right-of-way avoidance areas. Given the location of Hoover Dam, existing utility lines, locations of mountain ranges, and urban areas in need of additional electricity, it is not feasible to avoid all utility corridors in wildlife habitat. Future Federal actions, such as authorizing a power line right-of-way, would be subject to National Environmental Policy Act compliance, and mitigation for impacts to wildlife would then be addressed.

Does the provision to manage quail habitat within one-half miles of water to reach late seral stage

include only natural water sources? This decision was not carried forewarn into The Plan. Since numerous other decision call for managing the vegetative resource to reach potential natural community or desired plant community, this decision appeared to be redundant.

The BLM should consult with the National Park Service before implementing any predator control actions on predators that may also use Park Service land. Animal Damage Control is responsible for predator control, and the issue is addressed under a memorandum of understanding between BLM and Animal and Plant Health Inspection Service, U.S. Department of Agriculture. The Memorandum of Understanding requires that BLM coordinate with other Federal agencies.

The *BLM should identify mesquite areas in Southern Nevada for preservation as habitat for wildlife, particularly birds.* Several mesquite areas are identified as potential non-game habitat for inventory, monitoring and special management emphasis. BLM policy seeks to prevent the future Federal listing of species as threatened or endangered.

The second objective under wildlife should be reworded to emphasize natural diversity of native species. Wildlife habitat objectives were revised to emphasize natural diversity of native species.

Upland game guzzlers should not be authorized if there would be adverse impacts on special status species, native ecosystems, and wildlife species. Impacts of projects, such as upland game guzzlers would be considered in the site-specific environmental assessments. If the project may effect a listed species, Section 7 consultation under Endangered Species Act would be initiated.

Raptor-proofing of power lines creates perches for ravens. Why is BLM requiring a mitigation measure that has negative impacts on desert tortoise? This is incorrect; ravens can perch on power lines and poles even if they are not raptor-proof. The method of raptor-proofing is an attempt to discourage raptors from perching and nesting on power lines. The reader is perhaps confusing this action with raptor protection standards designed to prevent accidental electrocution of raptors, not to facilitate nesting and perching.

Why doesn't the Resource Management Plan address the concept of increased raven populations due to increased perch sites? Page 4-13 of The Supplement addressed increased raven perch sites. Availability of perch sites, as a sole source, would probably not increase raven populations, but could increase tortoise predation by resident ravens. Most proposed corridors have existing power lines that provide roosting, perching and nesting sites for ravens. The addition of a parallel line would increase the number of perch sites but not significantly increase the proportion of tortoise habitat affected by those perch sites. In most areas, perch sites are probably not the limiting factor on raven populations. Raven populations have increased greatly over historic levels from expanding human habitation. Landfills offer edible waste, and highway use creates "road kills," providing excellent food sources.

Other Special Status Species

What protection will the final Resource Management Plan offer Cyprinodon Nevadensis? Cyprinodon Nevadensis mionectes and *Cyprinodon Nevadensis pectoralis* both occur in Ash Meadows National Wildlife Refuge. The area identified as essential habitat in the Ash Meadows Recovery Plan is designated as an Area of Critical Environmental Concern. BLM inholdings in Ash Meadows will be withdrawn for inclusion in the refuge. After this withdrawal is accomplished, the U.S. Fish and Wildlife Service will manage all of the habitat for these two species

Management direction to inventory habitat for key 'non-game' species and to establish sustained management programs should be incorporated into the Resource Management Plan. Management direction regarding inventory for special status species and key non-game species is included in The Plan.

Why do you use the term "sensitive" plant and animals species so often in the document? This term should be left to the U.S. Fish and Wildlife Service. Under a Memorandum of Understanding between the Nevada Division of Wildlife and BLM, "sensitive" species were identified. The Plan refers to special status species, including plants and animals, that are Federally listed as threatened, endangered, or as candidate species by the U.S. Fish and Wildlife Service, those listed by the State of

Nevada, and those jointly identified by BLM and the State, including those referred to above. When other Federal and state agencies with management authority over wildlife and plants identify species of concern, and the habitats supporting those species occur on BLM-managed land, this agency must address those species in its decision-making process.

How many candidate invertebrates, mammals, and birds occur at Ash Meadows and how does the BLM plan to manage them? According to the *Recovery Plan for the Endangered and Threatened Species of Ash Meadows, Nevada,* the area supports 15 invertebrates, one mammal, four plants, and one bird that were classified as candidate species. In addition, seven species of threatened or endangered plants, four species of endangered fish, and one threatened invertebrate also occur in the area. Appendix B of The Draft Plan lists special status species at the time the document was published. An updated list is included in The Plan (Appendix B). BLM land in the Ash Meadows Area of Critical Environmental Concern would be managed as discussed under Areas of Critical Environmental Concern, of The Plan. Lands in the Ash Meadows National Wildlife Refuge would continue to be managed by U.S. Fish and Wildlife Service. Management by BLM and the Fish and Wildlife Service is ongoing under a cooperative agreement. Because many species depend on springs, spring outflows or riparian habitats to survive, protection and restoration of springs and associated riparian habitat is a priority management action in the area.

Mesquite and mistletoe stands along the Virgin River, Muddy River, and Meadow Valley Wash support a diversity of wildlife species, including passerine birds. These areas should be protected from grazing impacts. Most of the allotments supporting significant stands of mesquite would be closed to grazing. The Muddy River allotment would be open to grazing. Mesquite areas would be managed according to the direction in The Plan. The Virgin River would be designated as an Area of Critical Environmental Concern. Efforts to control *Tamarix* would be initiated.

The Virgin and Muddy Rivers provide potential habitat for Arizona southwestern toad, relict leopard frog, and northern leopard frog. These resources are not dealt with or evaluated in the Resource Management Plan. Although not specifically mentioned in the text, *Rana onca, Rana pipiens,* and *Bufo microscaphus* would benefit from the proposed Virgin River Area of Critical Environmental Concern, the closure of the Virgin River Bottom Allotment to livestock grazing and efforts to control *Tamarix.*

The list of sensitive species as identified by BLM/Nevada Division of Wildlife should be included in The Plan. The BLM and the Nevada Department of Conservation and Natural Resources list of sensitive animals is included in Appendix B of The Plan. This list will be reviewed annually and updated as appropriate. The sensitive plant lists are in Tables 3-18 and 3-19.

How will special status plant species be treated in disposal areas? Impacts to sensitive plants would be evaluated for each land disposal action under the environmental analysis process. Special status species surveys would be conducted if the habitat is considered suitable. Retention of lands within the disposal area would be a management option.

The Draft Plan does not adequately address management of or impacts to neotropical birds, bats, and herptofauna. This is addressed in Chapters 2 and 4 (Fish, Wildlife and Special Status Species Management), in The Plan.

Why doesn't the Resource Management Plan propose protective measures for the Amargosa toad, which occurs at Ash Meadows National Wildlife Refuge? The species does not have habitat in the Las Vegas BLM District. The Amargosa toad occurs in the Battle Mountain District near Beatty, Nevada, not in Ash Meadows National Wildlife Refuge.

In Recreation Management of the plan, cave management is discussed. The second objective identifies primary unique resource opportunities in caves. Shouldn't bats be included as a unique resource opportunity? Biological values were added as one of the primary unique resource opportunities for cave management in Chapter 2 in The Plan.

Wildlife and Livestock Grazing

No credible study has been done linking sheep and cattle ranching with negative impacts to desert tortoise. How can the BLM propose to close the desert tortoise Areas of Critical Environmental Concern to livestock grazing? The desert tortoise

was listed as a threatened species under the Endangered Species Act. Until the tortoise is downlisted and removed from the list, or the Endangered Species Act is amended, BLM must address management of desert tortoise on public lands. The *Tortoise Recovery Plan* recommends livestock grazing be eliminated from Areas of Critical Environmental Concern. BLM policy requires implementation of recovery plan recommendations.

It appears that many of the proposed grazing restrictions are in areas where no tortoises currently live. Shouldn't BLM limit restrictions for desert tortoise protection to areas where tortoise occur? Proposed grazing Prescriptions 1 and 2 apply to areas that desert tortoise inhabit. Some areas covered by grazing Prescription 1 or 2 may include small areas that are not tortoise habitat, such as dry lake beds. These areas are too small and isolated to be reasonably managed differently than the surrounding areas. Those allotments/areas outside of tortoise Areas of Critical Environmental Concern, which are open to grazing, would be managed to allow yearlong grazing consistent with ephemeral grazing regulations.

Shouldn't the plan present a study proposal on impacts on the desert tortoise from livestock? Also, the Resource Management Plan should contain provisions to reopen allotments if a grazing study shows that livestock grazing is compatible with tortoise recovery. Proposals and individual studies are beyond the scope of this plan. However, the plan does not prohibit a livestock grazing study. The Biological Resources Division of U.S. Geological Survey, collected baseline data for a livestock grazing study (Phase 1) in desert tortoise habitat between 1992 and 1994. This data is currently being analyzed. The Management Oversight Group has recommended that Phase 2 of the grazing study not be implemented due to its high cost and the likelihood that such a study would not provide a definitive answer regarding the effects of grazing on desert tortoise. If a decision is made to reopen a closed grazing allotment, an amendment to The Plan would be necessary.

Will grazing Prescriptions 1 and 2 be implemented on all allotments in desert tortoise habitat or just in Category 1 and 2 tortoise habitats? Grazing would not be authorized in Desert Tortoise Areas of Critical Environmental Concern or allotments closed to grazing for other reasons. Grazing in open allotments would be consistent with Prescription 2.

The Resource Management Plan should authorize livestock grazing in Tortoise Areas of Critical Environmental Concern in accordance with the existing non-jeopardy biological opinion. Why is BLM exceeding the requirements of the non-jeopardy opinion? Federal agencies are required to take efforts to further the purposes of the Endangered Species Act, and manage for recovery of listed species. BLM policy also requires management for recovery of listed species in accordance with approved recovery plans. The *Tortoise Recovery Plan* recommends elimination of livestock grazing in Desert Tortoise Areas of Critical Environmental Concern. The Plan would prohibit livestock use in these areas.

The non-jeopardy biological opinion on livestock grazing was issued before the designation of critical habitat. Following the designation, BLM re-initiated Section 7 consultation with the U.S. Fish and Wildlife Service. A new biological opinion was issued on April 20, 1994 (U.S. Fish and Wildlife Service #1-5-94-F-107). Although the new opinion was also non-jeopardy, it covered an interim period of 2.5 years, during which time the planning process was initiated to implement tasks associated with the desert tortoise recovery plan. At the end of the 2.5 years, BLM re-initiated formal consultation to update and extend the biological opinion until the Las Vegas Resource Management Plan was completed. A third, non-jeopardy biological opinion was issued on March 25, 1997 (USFWS#1-5-96-F-296R), extending the time frame until June of 1998. After The Plan's completion, BLM is required to re-initiate consultation on livestock grazing. Based on designation of critical habitat and the *Tortoise Recovery Plan*, continuing to allow livestock grazing in Desert Tortoise Areas of Critical Environmental Concern would likely result in a jeopardy opinion.

Will tortoise population monitoring plots be installed as required by the biological opinion on livestock grazing? Monitoring required by the biological opinion could change based on critical habitat and the completion of the recovery plan for desert tortoise. Due to the high cost and labor intensive process involved in 60-day study plots, a more cost effective and accurate methodology to monitor tortoise population trends is under study by

Nevada Division of Wildlife and the Biological Resources Division of U.S. Geological Survey.

Will there be provisions in the final Resource Management Plan to allow for effective livestock management and the development of management alternatives, including development of water sources for livestock? In The Plan, livestock grazing would not be authorized in tortoise Areas of Critical Environmental Concern, therefore, there would be no need for associated water developments. In open allotments, the plan allows for effective livestock management.

Is livestock grazing a discretionary activity within bighorn sheep habitat, as referenced on page 2-227 of the Draft Resource Management Plan? It states that permitted actions, other than off-highway-vehicle events, will be allowed in bighorn sheep habitat. Yes, livestock grazing is a discretionary action. However, the management actions on page 2-227 references activities permitted under a special recreation use permit. Constraints on livestock grazing are listed under Livestock Grazing Management. Grazing is not specifically prohibited in bighorn sheep habitat in The Plan. Certain allotments are closed to livestock grazing because of desert tortoise and other reasons. Some of these closed allotments include bighorn sheep habitat. Some of the allotments that are remaining open also include bighorn sheep habitat.

Why does the Resource Management Plan allow for expanding wildlife populations, specifically bighorn sheep, while cutting back on livestock numbers? It seems that BLM is elevating wildlife as more important than livestock. Current utilization data in bighorn sheep habitat that is not grazed by livestock and wild horses and burros consistently shows slight-to-light forage use. Because BLM policy allows for moderate use, there is adequate forage for expansion of bighorn sheep populations in many areas. Should monitoring data indicate that excessive wildlife numbers are resulting in degradation of the habitat or are exceeding proper use factors, Nevada Division of Wildlife would be requested to reduce numbers through trapping and removal or increased hunting tags. In general, lack of water rather than lack of forage is the limiting factor on bighorn sheep populations.

Since a tortoise management area was established under the no action alternative, why doesn't BLM reinitiate Section 7 consultation on livestock grazing and relax restrictions on grazing outside of tortoise management areas? Section 7 consultation under Endangered Species Act would be initiated on proposals in The Plan that would change grazing restrictions outside Areas of Critical Environmental Concern. The tortoise management area established under the No Action Alternative is not sufficient to meet the objectives of the *Tortoise Recovery Plan.*

Why does the text on page 2-6 of The Supplement state that grazing will not be authorized in bighorn sheep habitat? This is incorrect. Page 2-7 states that domestic sheep grazing would not be authorized in bighorn sheep habitat. This would effect only one grazing allotment previously authorized for domestic sheep. The rationale to prohibit domestic sheep allotments in bighorn sheep habitat is based on evidence that shows bighorn sheep are extremely susceptible to disease organisms commonly carried by domestic sheep. However, in The Plan, domestic sheep grazing will not be permitted in any of the open allotments.

Wildlife and Minerals Management

Impact analysis disregards the beneficial impacts to wildlife from mining. Positive impacts to wildlife from mining are the result of mitigation due to the presence of the mine. Such mitigation lessens the negative impact of the mining activity, but does not generally translate into an overall benefit for wildlife. It would be more beneficial to wildlife if the mine were not there.

Mining may create new habitat features that favor certain species, such as bats. Abandoned mines have become an important source of habitat for bats. Throughout North America, human disturbance of caves, cave commercialization, deforestation, and urban and agricultural development have forced many bats from their traditional roosts. Displaced bats have gradually moved into abandoned mines. Of more than 6,000 mines surveyed in Arizona, California, Colorado, and New Mexico, up to 70 percent had evidence of bat use (Tuttle, M.D. and D.A.R. Taylor, *Bats and Mines*, Bat Conservation International, 1994).

As technology for mineral extraction improves, many old mines are being reworked, resulting in the destruction of old shafts, adits, and tunnels. Even during exploratory drilling, mine openings can be

covered as drill roads are bulldozed, or drills can penetrate and collapse underground workings. Blasting associated with mine construction and operation can disturb roosting bats. Bats may also be disturbed by personnel entering the mine to collect ore samples. A single disturbance to hibernating bats may result in such a loss of fat reserves that the bats cannot survive the remainder of the winter. A proposal to rework an old mine could result in a determination of negative impacts to bats. If the mine provides habitat for maternity colonies, the impacts could be significant.

Impact analysis in The Draft Plan purports impacts to wildlife from mining but does not quantify impacts. What data shows that there are impacts to wildlife from mining? There is data showing mortality to wildlife from mineral operations. Sources of data include Henny *et al.* 1993 "Cyanide and Migratory Birds at Gold Mines in Nevada" *Ecotoxicology*, and BLM Instruction Memorandum NV-93-384, Recent Mining Related Wildlife Mortality Data, August 26, 1993. This latter memo documents mining related mortality in Nevada to waterfowl, shorebirds, passerine birds, upland game species, amphibians, reptiles, large mammals, small mammals, rodents, rabbits, and raptors. These general groups include more than 91 species of birds, 28 mammal species, and six species of reptiles and amphibians.

In southern Nevada, at least two tortoises have been trapped in cyanide pits. Besides mortality due to cyanide or other hazardous materials, animals are crushed by heavy equipment or displaced from their home ranges. For example, more than 80 tortoises were removed from the BLM's community sand and gravel pits. Had these animals not been located and removed from the pit, they would have eventually been crushed by heavy equipment. Many other animals undoubtedly were crushed, including lizards, snakes, rodents, young of ground nesting birds, and rabbits. Removal of minerals through the open pit method destroys habitat, such as food and shelter. Not all wildlife species are mobile enough to move and avoid impacts by machines. For example, a nocturnal rodent such as the kangaroo rat would merely hide in its burrow, and would be very susceptible to being crushed. Animals capable of moving out of the way must relocate onto adjacent habitat that is generally occupied by other animals of the same species. There may be insufficient food and cover for both the resident and displaced animals.

Is there a factual basis for listing stipulations to prevent undue and unnecessary degradation to bighorn sheep habitat from mining? If so, what types of mitigation may be required to mitigate impacts to bighorn sheep? Yes, a large, open pit mine located in bighorn sheep habitat would destroy habitat features, such as forage, escape cover and thermal cover. Bighorn sheep would be denied use of part of their home range for the life of the mine and until reclamation is complete. Even then, reclamation would not result in complete restoration of all habitat features. Mitigation for impacts to bighorn sheep may include revegetation of mined areas, closure of access roads after the life of the mine, limiting access on roads during operations, providing a water source, fencing, and ensuring that open pits or quarries do not become traps for bighorn or other animals. Several bighorn sheep were recently trapped and died in an old quarry in the Bare Mountains. These issues need to be addressed during review of a proposed mining plan.

How much acreage is seasonally closed to mineral exploration from March 1 to September 30 (bighorn sheep and tortoise habitat)? There are no seasonal closures in The Plan.

Negative impacts to wildlife from mining is insignificant using current mitigation measures. Why isn't this reflected in Chapter 4? While it is true that mortality to avian wildlife has been greatly reduced due to proper management of cyanide leach ponds, there is still a potential for impacts to wildlife species from mining. These issues are addressed in review of a proposed mining plan.

Wildlife and Recreation Management

Why doesn't BLM leave existing roads open for casual use? Most existing roads would remain open for casual use. A minimal number would be closed and reclaimed. Approximately 30 percent of the resource area would be limited to designated roads and trails. The remainder would be limited to existing roads, trails, and dry washes.

The Resource Management Plan will result in Moapa Valley being surrounded by desert tortoise areas with no areas left for casual recreational use by local residents. Designation of Areas of Critical Environmental Concern does not result in the prohibition of picnicking, hiking, camping,

horseback riding, and other types of non-motorized casual use in these areas. There will be some limits on motorized use in Desert Tortoise Areas of Critical Environmental Concern. Vehicles will be limited to "designated roads and trails," and off road travel would be prohibited. There would be less restriction on off-highway-vehicle use outside Areas of Critical Environmental Concern. A substantial amount of public land surrounding Moapa is not included in the Area of Critical Environmental Concern.

The Resource Management Plan states "such off-highway-vehicle activities also often occur in areas that are believed to be essential to the existence of the desert tortoise in Nevada." This statement indicates that there is no hard evidence that adverse impacts to tortoise exist. This statement acknowledges that off-highway-vehicle racing occurs in areas that have been demonstrated by available data as essential to the recovery of the desert tortoise. It does not state there are no impacts to desert tortoise from off-highway-vehicle activity. Off-highway vehicle events have been recently authorized in areas identified in the *Tortoise Recovery Plan* as essential for recovery of the species and in areas designated as critical tortoise habitat by U.S. Fish and Wildlife Service.

The plan ignores the fact that mitigation for impacts of racing, as required by the U.S. Fish and Wildlife Service biological opinion, is implemented on each race. Mitigation through Section 7 consultation under Endangered Species Act does not eliminate impacts. Residual impacts to desert tortoise remain even after mitigation activities. For example, several tortoises were killed when run over by race cars on approved race courses.

The document cites impacts to desert tortoise from off-highway-vehicle racing without substantiation of such impacts. Off-highway vehicle racing does result in impacts to tortoise and their habitat. Mortality of tortoises has been documented on areas used for off-highway-vehicle events in Las Vegas BLM District. These impacts are derived from off-road travel by spectators and pit crews, short-coursing by drivers, and course widening on the Nevada 500, Nevada 400, and Gold Coast 250 courses, and due to tortoises run over when wandering on the courses. Impacts were also observed from casual off-highway-vehicle uses on existing roads and trails.

How can the Resource Management Plan close so many areas to off-highway-vehicle racing and not to casual use? Off-highway vehicle racing is highly regulated and has less impact than casual use. The Resource Management Plan should restrict casual use more than organized use. Casual and organized off-highway-vehicle use are both greatly restricted in The Plan. Less than one percent of the planning area would be designated as "open," where, off-highway-vehicle uses could occur anywhere, even off roads and trails. This represents a substantial change from the existing situation where large areas are designated as "open". On 99 percent of the lands covered by the plan, casual use would be restricted to existing and designated roads. Cross country travel would no longer be allowed.

Wildlife and Vegetation Management

Was The Draft Plan revised to accommodate the Special Status Plant Strategy Plan for the Las Vegas BLM District Office? The Plan provides management direction to accommodate the *Special Status Plants Strategy Plan* for the Las Vegas BLM District. Additional Areas of Critical Environmental Concern for special status plant species as a result of inventory and mapping activities could be added through the amendment process.

Wildlife and Wilderness

The Draft Plan discusses impacts to wildlife from non-designation of Wilderness Study Areas as wilderness. It is inappropriate to discuss management of wilderness areas before Congress takes action on wilderness. The discussion is appropriate because it informs the public of the proposed management and possible impacts to wildlife if, as proposed in the BLM's Wilderness Recommendations (1991), some of the Wilderness Study Areas are released from consideration as wilderness. The discussion in Chapter 4 does not make management decisions, but analyzes the impacts from proposed future management in Wilderness Study Areas.

Wildlife and Lands

What are the impacts on wildlife from land disposal? Most lands proposed for disposal in the Resource Management Plan have already been

compromised as wildlife habitat due to direct (i.e., crushing of animals and burrows by machinery) and indirect impacts from adjacent urban development (such as dumping, casual off-highway vehicle use, and pet dogs and cats). The kinds of species that remain in these areas are generally common and widespread, and viable populations would continue on lands that are retained, consequently impacts are not expected to be significant.

Why is so much desert tortoise habitat included in the land disposal area? Because at least 80 percent of the acreage in this planning area is within desert tortoise habit, most lands identified for disposal are also in tortoise habitat. Those remaining portions not in tortoise habitat are generally in the mountains and do not meet the criteria for disposal. With the exception of the Eldorado Lands and Apex disposal areas (both legislatively mandated), there is little overlap between critical tortoise habitat and disposal areas.

Why doesn't the plan indicate if special status species occur on lands within the disposal area? Special status plant and animal distribution data is not well documented for most species. Known locations of special status plant habitat are shown on Map 3-10, Threatened and Endangered Plants, of The Plan. Impacts to special status species from disposal actions would be addressed for individual Federal actions.

How large would culverts underneath the highway need to be to allow for movement of desert tortoise? The diameter of the culvert should be at least 18 inches, or large enough for an adult tortoise to pass within without getting stuck. Most culverts for flood control would be larger than necessary. An ongoing California study has shown that where a section of highway is fenced, tortoise mortality is significantly lower than on nearby unfenced portions. Tortoises in fenced areas are frequently observed pacing the fence line, and could easily be directed to a culvert. Tortoises burrow and do not fear entering small, dark passages.

BLM should allow U.S. Fish and Wildlife Service to withdraw critical tortoise habitat for a wildlife refuge. This is beyond the scope of the plan.

Designations of desert tortoise Areas of Critical Environmental Concern as right-of-way avoidance areas do not mitigate for direct impacts of utility construction. While these designations do not mitigate for impacts from utility construction, these actions reduce the potential that additional utilities would be installed in Areas of Critical Environmental Concern, particularly where there are viable alternative routes. The construction of fewer lines results in fewer direct impacts. Mitigation for utility construction projects includes both on and off-site mitigation on a site-specific basis. Mitigation for direct impacts often includes monitoring by a biologist during construction to remove animals from direct impact.

Wildlife and General Issues

PL 101-67, the Apex Legislation, specified that an order 3 soil survey be completed. This data should be incorporated into the management decisions of the Resource Management Plan. The soil survey was not completed due to a lack of funding. The soil survey data for those parts of Clark County that have been inventoried is available and will be used when making specific management decisions.

Why aren't standard mitigation measures for raptors and special status plants referenced in the Resource Management Plan? Standard mitigating measures are standard operating procedure and not specifically addressed in the plan.

Shouldn't the Desert National Wildlife Refuge be included in the Resource Management Plan? No. The Desert National Wildlife Refuge is managed by the U.S. Fish and Wildlife Service and is not part of the plan. However, the BLM and the Fish and Wildlife Service coordinate as needed.

Wildlife, Multiple Use and Federal Land Policy Management Act Actions

BLM is mandated to manage for multiple use under Federal Land Policy Management Act and therefore is violating Federal Land Policy Management Act by designating Areas of Critical Environmental Concern for desert tortoise and eliminating other uses such as livestock grazing. Federal Land Policy Management Act mandates multiple use for the land as a whole, not for every square foot. For example, Federal Land Policy Management Act states that public lands be managed in a manner to protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values, and where appropriate,

will preserve and protect certain public lands in their natural condition. Fish and wildlife resources are defined as principal uses under Federal Land Policy Management Act. The act also directs agencies to give priority to the designation and protection of areas of critical environmental concern.

Forestry Management

What would be the benefits from protecting mesquite trees through dwarf mistletoe control? Shouldn't an inventory be conducted of all woodlands recommended for harvest? A mesquite wood cutting area of 800 acres for the Mesquite area was established in The Plan in response to public requests. This represents a reduction in size from The Draft Plan, including an elimination of harvesting from the Crystal area. Harvesting would be allowed in limited quantities to allow preservation of mistletoe. Presently, mesquite trees are cut illegally, and the result is accumulation of branches, a natural fuel potential. Several fires were attributed to this kind of uncontrolled harvest action. The first management direction in the forestry section identifies the that a woodland management plan be completed prior to permitting harvesting.

The Environmental Assessment process would require an inventory, as well as agency and public review (including the Nevada Division of Wildlife). A literature search was completed to determine the feasibility of harvest of mesquite trees that were dying from mistletoe invasion. The study indicated that after the harvest the remaining tree would sprout and continue to provide for stand integrity. The area proposed for harvest possesses a limited number of mesquite trees infested with mistletoe.

Wouldn't removal of dead and downed wood negatively effect soil formation? No. All dead and downed wood would not be removed. The only reference to removal of dead and downed wood is for the 800 acres of Mesquite. This planning area lacks a pinyon/juniper woodland area. Impacts would be fully discussed in the site-specific burn Environmental Assessments.

Isn't the Management Direction regarding firewood harvest in Alternative C inconsistent with preservation and conservation of native ecosystems? No, for the following reasons: 1) Harvest of mesquite would only occur to ensure stand survival; and 2) Enough mistletoe would remain for *Phainopepla*. These actions are consistent with overall preservation of mesquite stands.

Where is the acreage of Pinyon/Juniper and conifer woodlands in the document? Table 3-7 on page 3-19 of The Draft Plan lists the vegetation communities in the Las Vegas BLM District. The estimated acres of Pinyon-juniper and conifer are 138,400. Page 2-49 lists an approximate acreage.

Why didn't you analyze the need of snags for cavity nesting birds? This level of analysis is beyond the scope of this planning effort. Snag management would be considered in site-specific analysis. Also, the Las Vegas BLM District supports very little pinyon/juniper and conifer vegetation communities. Proposed management would retain these lands at all-aged stands.

Livestock Grazing Management

Range Reclassification

Because BLM is unable to manage for sustained yield, resulting in uncontrolled utilization, why is allotment reclassification proposed? As a result of livestock permittees dismissing an appeal to a grazing decision, the BLM agreed to consider reclassification as an alternative in the Resource Management Plan. Range Reclassification was not included in the Proposed Resource Management Plan.

Discuss the basis to determine that 65 pounds per acre of forage was adequate for perennial range designation. Where are the criteria located in the document? The acres per Animal Unit Month is approximately 25 based on 800 pounds of forage per cow-calf pair at 50 percent utilization. If an area is producing 65 pounds per acre of forage and the allotment is 10,000 acres, then 650,000 pounds of forage is produced. Allowing for 50 percent utilization then 325,000 pounds of forage is available for all grazing animals in the area. The available forage would be allocated based on management direction for the area. This 325,000 pounds of forage could support 100 cattle for four months. The needs of wildlife and other grazing animals would also be considered, using studies on forage availability.

Why wasn't allotment reclassification addressed in the plan? The administrative process of reclassifying rangeland would not represent a significant impact, therefore, the action was not analyzed. Management of reclassified areas would result in intensified analysis, providing additional control over domestic grazing animals. Range Reclassification was not included in the Proposed Resource Management Plan.

Because the Mojave Desert at best can only support ephemeral grazing, why was grazing for this area proposed? Based on analysis of the vegetation data, there is adequate perennial forage to reclassify some allotments in this area. A perennial forage base is present in many areas. Also, the number of allotments proposed for reclassification presented in The Plan are fewer than those proposed in Alternative E of The Supplement. Range Reclassification was not included in The Plan.

National Park Service concurrence is required to reclassify any lands in Lake Mead NRA; are any acres proposed for such an action? No acreage involving National Park Service administered lands is proposed for reclassification. Range Reclassification was not included in the Proposed Resource Management Plan.

Range Management

Overgrazing seems to be the "status quo" on BLM land. Hasn't average grazing utilization for the past 10 years brought the range to poor conditions? Why is grazing allowed in Areas of Critical Environmental Concern or elsewhere until there is sufficient evidence to indicate the desert tortoise would not be in jeopardy and other species not impacted? Based on testimony at a 1994 hearing on livestock grazing in desert tortoise habitat, the range is generally considered in good ecological condition. In contrast, "heavy grazing" is considered to have occurred 50 to 100 years ago. Those areas that appear to be in poor condition are under continued analysis. Eleven allotments were considered to have potential for grazing authorizations under alternative E. Based on range management analysis, 11 allotments are considered viable for grazing. Nine of the 11 were utilized for livestock grazing over the past five years, and five are currently active. All are located outside the proposed desert tortoise Areas of Critical Environmental Concern. Stocking levels are very low, with about 900 cows for 3.6 million acres.

Forage condition and utilization inspections are completed before livestock are released on the rangeland. Allotments that remain open are consistently reviewed under policy, regulations and laws to ensure that grazing occurs at appropriate levels without adversely affecting other species. The BLM in 1989 issued grazing decisions that closed portions of allotments considered poor due to drought and high utilization. Litigation proceedings in this case by the permittees prevented decision enforcement.

Doesn't the plan reduce domestic livestock opportunities more than other users? No. Implementation of use allocations follows BLM policy, and is adjusted up or down as equitably as possible with current regulations.

Why is grazing allowed in the Flat Top Mesa allotment, an area that is overgrazed and in critical desert tortoise habitat? Flat Top Mesa is approximately five miles from the Arizona-Nevada border and was not designated as critical desert tortoise habitat. Only 6-8 horses utilize the vegetation for a 4-6 month period. Based on range management utilization guidelines, this area is not considered "overgrazed."

Who will conduct vegetation monitoring? Vegetation monitoring would be completed by using an interdisciplinary team.

Doesn't Prescription 2 leave only 40 percent of the vegetation for tortoise? Prescription 2 requires that 60 percent of the forage species by dry weight remain during the period that tortoise are active. However, grazing outside desert tortoise Areas of Critical Environmental Concern would be allowed consistent with the recovery plan.

Is grazing allowed in bighorn sheep habitat? The bighorn sheep objective does not recommend elimination of livestock grazing, only limiting competition between the animals in the area designated as Bighorn Habitat.

Because National Park Service has closed to grazing its lands adjacent to White Basin allotment, why has BLM not also closed its portion. Based on range management analysis, White Basin allotment is considered viable for grazing, and would remain open to livestock grazing in The Plan.

Are portions of the Lower Mormon Mesa and Overton Arm allotment located in Lake Mead National Recreation Area as shown on the draft plan map? Based on rangeline agreements signed in early 1954, the Overton Arm and Lower Mormon Mesa allotment boundaries include National Park Service/Lake Mead National Recreation Area lands. The allotment map in The Plan reflects the 1954 rangeline agreements.

Why shouldn't BLM require permittees to fence BLM and US Forest Service boundary lines? This agency authorizes grazing on BLM lands only. It is not considered reasonable or appropriate to require a permittee to fence a US Forest Service BLM boundary in order to run livestock.

Why didn't Table 3-1 in the draft plan include the Mt. Stirling allotment? Table 3-1 did not include Mt. Stirling because it is already a perennial allotment. That table only represented those allotments proposed for reclassification. This table was dropped, since range reclassification was not included in the Proposed Resource Management Plan.

What kinds of changes would implementation of the plan impose on Amargosa residents as a result of expanded restrictions on the Ash Meadows allotment and closing of other allotments? The Ash Meadows allotment was closed to grazing by Record of Decision, dated October 10, 1986, for the Esmeralda - Southern Nye Planning Area B, Resource Management Plan. Other allotments in the Amargosa Valley would be closed due to lack of use over the past 15 to 20 years. Analysis indicates these areas produce marginal forage for grazing animals.

In order to prevent confusion, why not drop the name of the Lake Mead National Recreation Area allotment. We do not feel the name is confusing or would lead to any confusion. Names of allotment usually are chosen based on landform or area names. Since this area is unalloted and is closed to grazing in The Plan, we see no reason to change the name.

Is it possible to designate lands in the Newberry Mountains allotment as unalloted? Unless the permittee is willing to relinquish the grazing privilege, it is not possible. The Newberry Mountain allotment is within Grazing District #5, designated by the Secretary of the Interior on November 3, 1936. A grazing preference was established that allowed livestock grazing. The Lake Mead National Recreation Area closed part of the allotment to grazing. The Newberry Mountain allotment would be closed to livestock grazing in The Plan.

Would there be opportunities to move livestock to areas closed to grazing under the Preferred Alternative? No, eleven allotments would be available for livestock grazing under The Plan. One allotment, Jean Lake, has potential for a viable livestock operation. Most allotments that have not been grazed for decades due to lack of infrastructure and would be closed to grazing.

While Nye County opposes closure of unalloted areas within the county, why is it BLM's objective to remove livestock grazing from all Nevada? Unalloted areas do not have adequate infrastructures or forage available for viable livestock operations. The BLM does not intend to remove all grazing from Nevada. In fact, 11 allotments are proposed for grazing utilization under The Plan. Areas where livestock grazing is determined appropriate would remain open.

Why does the Resource Management Plan propose essentially the "status quo" for livestock grazing management? Livestock use in Animal Unit Months decreased from about 30,000 in the 1980s to 11,800 in 1992. The total number of livestock that graze public lands in the planning area under current conditions rarely exceeds 1,000 head. The Plan would close all but 11 allotments. This use is not "status quo."

The amount of monitoring that is completed, shown on Table 3-22 of The Draft Plan, is outrageously poor. Additional studies should be set up to show condition, trend and utilization. The data is considered adequate for analysis under policy guidelines. The listing of the desert tortoise as a threatened species, though, has severely affected and altered the process. This agency would follow the guidance provided in the *Nevada Rangeland Monitoring Handbook* and the *Tortoise Recovery Plan* to implement new studies.

Why shouldn't BLM prioritize the active allotments and eliminate or close all inactive allotments? The Plan will identify those allotments open to livestock grazing. After approval of The Plan, intensive

management will occur on these allotments and managers will prioritize the workload. Most inactive allotments are closed in The Plan; those inactive allotments remaining open have potential for grazing livestock in the future.

We totally oppose the wish list of so-called range improvements. The Plan has fewer range improvements to reflect the reduction in allotments open to grazing.

Why aren't the Glendale, Kyle Canyon, Pittman Well, Stump Springs, Newberry Mountain, Younts Spring, and Table Mountain allotments open to livestock grazing? These allotments are managed under Prescription 1 restrictions identified in the *Grazing Biological Opinion*, which preclude the permitting of spring grazing. Although substitute resources and environments were considered, the *Grazing Biological Opinion* states that utilization on most allotments should be restricted to ensure the desert tortoise is not adversely impacted. The allotments referenced above are proposed for closure in The Plan.

What kinds of benefits occur to rangelands from livestock grazing? Analysis of "proper" livestock grazing activities indicates that the benefits of livestock grazing to the range are not significant.

What are the differences between forage condition and ecological condition? These are two very different indices. Forage condition relates only to the relative abundance of preferred forage species (The Draft Plan: page 3-22). Because there are few preferred forage species in the desert, this results in a poor forage condition index rating. Although there are a number of desired forage species in the desert ecosystem, they cannot be included in the forage condition rating.

A Potential Natural Community is a description of a conceptual biotic community that would emerge if all successional sequences were completed, under present environmental conditions, without interference by humans. Late seral rangelands that are shrub dominant may exhibit a limited quantity of forage species and would not be considered desirable for livestock grazing. Based on the National Resource Conservation Service Ecological Site Criteria, such an area may be considered at or near its potential. Late seral ranges may or may not have preferred forage species. An ecological rating is based on species-specific air dry weights expressed as a percentage of the total current years growth. This is compared to a percent species composition allowed based on the ecological site developed by the National Resource Conservation Service.

Study Proposals

Shouldn't the Resource Management Plan contain a study proposal on impacts on the desert tortoise from livestock. The Resource Management Plan provides a foundation or general outline of opportunities to study tortoise and livestock utilization. The proposals and individual studies are beyond the scope of this planning level.

Wild Horse and Burro Management

Habitat Management Areas: Wild Horse and Burro Expansion

The summary table in The Draft Plan indicates that there would be adverse impacts on wild horses and burros from the expansion of wildlife into Herd Management Areas. What kinds of wildlife would expand into the Herd Management Area's that do not naturally exist in that habitat? The development of artificial water developments for wildlife could result in wildlife populations expanding into areas currently utilized by wild horses and burros. This expansion would perpetuate competition among the animals for forage, water, and space. The introduction of desert bighorn sheep into new areas or the re-introduction of bighorn into unoccupied habitat could also increase the level of interspecific competition. Elk and wild turkeys were introduced into the Spring Mountains. If these animals expand onto BLM land, conflicts with wild horses and burros could result.

Relocation or natural movement of wild horses and burros from one Herd Management Area to another was analyzed, and should have the Nevada Division of Wildlife approval. Grazing impacts of wild horses and burros within Herd Management Areas and their movement within and between Herd Management Areas was analyzed in The Draft Plan, and is carried forward to The Plan. This action

would not require additional National Environmental Policy Act documentation or Nevada Division of Wildlife concurrence.

Habitat Management Areas: Appropriate Management Levels

The Supplement proposes to establish an Appropriate Management Level of zero for four Herd Management Areas. Isn't this in violation of the law? No, according to management policy and regulations, an Appropriate Management Level of zero animals may be established. Herd Management Areas were established with zero Appropriate Management Levels due to evaluated conflicts with a threatened species, a lack of forage needed to sustain a viable herd, and intrusion into private lands.

The Draft Plan states that realignment of the Spring Mountain Herd Management Area into smaller Herd Management Areas will benefit the management of wild horses and burros. Is this appropriate? Will this realignment expand the Herd Management Area? Herd Management Area boundaries would be realigned to reflect a more workable situation in respect to BLM and US Forest Service capabilities. The boundaries reflect the original 1971 locations. The Spring Mountains Herd Management Area was split into the Wheeler Pass, Johnnie, and Red Rock Herd Management Areas. While there is some interaction between the Herd Management Areas, it is minimal. Delineation of Herd Management Areas by each agency is necessary due to different planning schedules and efforts. A Memorandum of Understanding would be developed with the US Forest Service to coordinate management of all the wild horses. The goal would allow the wild horses the ability to move within a Herd Management Area.

Define the management direction that states that numbers of animals in the Herd Management Areas will be adjusted. Wouldn't there need to be an adjustment of burro numbers in Herd Management Areas where animals use both BLM and National Park Service lands? After studies are done to establish Appropriate Management Levels, the numbers of animals would be adjusted either up or down to meet the recommended level, including both BLM and National Park Service lands jointly used by burros.

The word "only" should be deleted from the statement in The Supplement, "Wild horses and burros will be removed from the Red Rock Herd Management Area "only" when grazing exceeds allowable use." The word "only" was deleted for The Plan, however, all agencies are bound by existing court decisions on the implementation of Wild Horse and Burro removals.

The number of wild horses and burros is out of control. Although this statement was true back in 1992, it is not true now. Numerous gathers were completed to reduce numbers significantly to manageable levels. Following the establishment of Appropriate Management Levels, adjustments would be implemented to ensure appropriate long-term levels are maintained.

The Muddy Mountain Herd Management Area will not support an Appropriate Management Level of 50 animals. Herd Management Area evaluation and monitoring studies would establish and verify Appropriate Management Level and the Herd Management Areas viability. The utilization percentages in The Plan are consistent with academic and BLM standards.

Shouldn't the Eldorado Herd Management Area be added to the list of Herd Management Areas to be monitored intensively as reported in Alternative A of The Draft Plan, page 2-58. The Plan proposes Eldorado Herd Management Area as a zero Appropriate Management Level. This would preclude monitoring.

What are the potential benefits to the desert tortoise from decreasing the number of wild horses and burros? Utilization limits were established to ensure resource protection and to benefit the tortoise. Adherence to those limits would apply to the total use of all species of public land users. Establishment of Appropriate Management Levels within Herd Management Areas will reflect threatened and endangered species issues.

It appears that livestock Animal Unit Months are being decreased and wild horse and burro numbers maintained in violation of multiple use principles. For example, wild horses and burros are allowed to consume 10,500 Animal Unit Months that would be available to livestock. Can't you reduce wild horses and burros numbers before livestock numbers are reduced? It seems that livestock are being removed from the entire desert. Wild horses

and burros are protected by the Wild Horse and Burro Act. This agency is required to manage viable herds, and either livestock or wild horses and burros numbers could be reduced based on adoption of activity plan objectives. To state that wild horse and burro numbers should be eliminated, or reduced before livestock, is inappropriate, contrary to multiple use principles, and contrary to the law.

Wild horse and burro numbers can be reduced under an emergency situation even if Appropriate Management Level has not been established. This policy meets the intent of the Wild Horse and Burro Act to achieve a viable natural ecological balance.

There is no direction to remove all livestock or wild horses and burros from the entire desert. Management of lands proposed within a desert tortoise Area of Critical Environmental Concern would prohibit livestock or wild horses and burros grazing. Those lands south of the Gold Butte Critical Habitat Unit in the Gold Butte allotment are not within Gold Butte Part A Area of Critical Environmental Concern, therefore, burro use is allowed. The established Appropriate Management Level of a maximum of 98 animals would be maintained by approved gathers.

Herd Management Areas should be managed conservatively so that forage use isn't excessive during periods of drought. Appropriate Management Levels will be established using existing conservative BLM standards. Appropriate Management Level is defined as the appropriate amount, not a minimum or maximum. Forage utilization would not exceed the level set in the Biological Opinion for livestock grazing.

Why do wild horses and burros have a utilization limit of 55 percent, but livestock is 50 percent? The wild horse and burros and livestock utilization would be adjusted to the limits listed in the biological opinion in desert tortoise habitat.

The Nevada Division of Wildlife opposes the statement that wild horses and burros outside their Herd Management Areas will only be removed after all reasonable efforts have failed to keep them within their Herd Management Area. This statement was changed for The Plan to state that wild horses and burros outside their Herd Management Areas would be removed as soon as logistically possible, but within BLM funding and scheduling constraints.

Desert tortoise Areas of Critical Environmental Concern should be managed for zero Appropriate Management Level. Desert tortoise Areas of Critical Environmental Concern occur in two locations in the planning area. The Eldorado Herd Management Area is proposed in The Plan as a zero Appropriate Management Level. Another Area of Critical Environmental Concern includes a small portion of the Gold Butte Herd Management Area, and The Plan would not allow management actions to be implemented to encourage use in this portion of the Herd Management Area.

What steps would be taken to preserve wild horses habitat in Amargosa Valley even though it is managed for zero animals? A Resource Management Plan provides only broad guidelines. Site-specific actions require activity plans, in this case, a Herd Management Area Plan. The activity plan would describe the steps proposed to enhance or preserve habitat. After a Herd Management Area is designated, it is managed at an Appropriate Management Level. The habitat in the Amargosa Herd Management Area is considered marginal and not sufficient to support a viable herd. Although a Herd Management Area cannot be eliminated, it may be managed for zero animals. Other proposed actions would be reviewed by the Wild Horse and Burro Specialist to ensure that habitat for horses is not completely destroyed.

Herd Management Area Boundary Changes

Are the Herd Management Area boundaries expanded in the plan? The Herd Management Area boundaries were initially established after the Act was passed in 1971. The boundaries were erroneously drafted in subsequent planning documents. The corrected boundaries are shown in The Plan.

Didn't The Draft Plan erroneously change the number of Herd Management Areas by moving the boundaries between agencies? The logical management boundary between BLM and the US Forest Service is the Nye County line. Management of animals along ownership boundaries is not practical or viable. Implementation is addressed in a Memorandum of Understanding.

Wild Horse and Burro Removal Program

The alternatives in the Resource Management Plan addressed removal of wild horses and burros, but did not discuss their disposition or removal techniques. The standing operating procedure is that animals removed from public lands enter the BLM adoption program to be offered to the public for maintenance. Removal techniques for wild horses and burros are standing operating procedures, subjected to public review during proposals for site-specific projects. Removal techniques include drive trapping and water trapping.

Does BLM have sale authority for wild horses and burros to maintain carrying capacity? This agency has an adoption program where wild horses and burros are sold to the public. This program is part of a plan to actively identify and reduce wild horses and burros herd sizes and meet Appropriate Management Levels to ensure a thriving natural ecological balance in the ecosystem.

Could the number of wild horses and burros be reduced by one third? The numbers of wild horses and burros would be managed at FY 83 levels, with adjustments based on the established Appropriate Management Level and monitoring data. Based on recent gathers the numbers were reduced by more than one third.

Water and Vegetation

Shouldn't monitoring studies be initiated within a quarter mile of all waters? Monitoring procedures and locations of studies would adhere to BLM standards.

How does the wild horse and burro plan address the need to protect riparian and spring areas from overgrazing? While springs can be fenced in Herd Management Areas to protect the riparian vegetation, laws require that water be provided off-site for all wildlife species, including wild horses and burros. Lack of maintenance on a protection facility would not be used as a reason to remove wild horses and burros. Ten springs were fenced in the Gold Butte Area, and others are proposed for similar protection methods, throughout the district.

The Nevada Division of Wildlife opposes leaving Yount and Stump Springs' allotments open to wild horse and burro uses. Yount and Stump Springs' allotments are within a Herd Management Area, but not within critical desert tortoise habitat or Areas of Critical Environmental Concern. Use of these allotments by wild horses and burros is appropriate.

Shouldn't water developments within Herd Management Areas be limited if they would conflict with uses by other herbivores, potentially expand horse use areas, or if wild horses and burros are over Appropriate Management Level? Water can be developed anywhere within a Herd Management Area for the management of "wild horses." Management facilities for wild horses and burros would be planned and developed by BLM, consistent with BLM policy. The Nevada Division of Wildlife would be invited to comment, however, BLM would make final management decisions and advise the Nevada Division of Wildlife of the actions.

We recommend a wording change in the Constraint on Wild Horses and Burros subsection to "but will reduce risks of death/injury to the animals and to humans as well as reducing the likelihood of property damage." The recommended text is in The Plan.

BLM should participate in a coordinated burro management plan with the Lake Mead National Recreation Area. The BLM did coordinate with the National Park Service on a recently completed burro management.

How will key species be determined? How many years does utilization need to be exceeded before animals are removed? Key species are chosen based on the assessed importance in the animals' diets. If utilization for grass species exceeds 50 percent in one year, the objective would not be met, and appropriate actions would be taken to meet the goal. Utilization levels are less for shrubs and forbs.

General Wild Horse and Burro Questions

Highway underpasses are not needed north of Pahrump. Wild horses and burros are managed within their existing boundaries. Management actions within those boundaries are the responsibility of the BLM. The construction of underpasses is recommended based on a policy to facilitate proper utilization of Herd Management Areas.

Define the term "genetically viable." What is a healthy viable herd? The concept of genetic viability is ambiguous; however, academia defines it as a minimum of 50 adult animal capable of interaction on a long-term basis. Populations may be managed below this level if augmentation of genetically similar animals is implemented. A healthy viable herd is considered to be a minimum of 50 "adult animals" with the capability of making contact within a Herd Management Area. This number of animals is necessary to maintain genetic viability.

Would BLM deny requests to "fence out" burros and horses along a public highway? No, fencing rights-of-way for public safety is appropriate. The agency responsible for fencing highway rights-of-way is the Nevada Department of Transportation, which works in cooperation with BLM. If the protected "Free Roaming" status of wild horses and burros is impaired, underpasses would be needed. A recent project is the 1994 and 1995 SR 160 fence from Pahrump north to SR 95.

Why is there no analysis of the effects of grazing by wild horses and burros and wildlife? Grazing effects are analyzed as total or cumulative impacts, and utilization limits apply to the total use by all species.

Wild horse and burro utilization studies should be conducted every three months on ephemeral ranges as prescribed for livestock. The frequency of monitoring would be determined by management based on evaluation according to BLM standards.

Cultural Resources Management

Identification Efforts for Archaeological and Cultural Values

How are archaeological sites found and evaluated? Section 106 of the National Historic Preservation Act requires agencies take into account the effects projects would have on cultural resources. Prior to approval of a Federal action, such as a right-of-way application, appropriate efforts must be taken to identify and evaluate significant cultural resources. The concept of significance is a cultural and scientific rating developed on a dynamic basis by regional state, Federal and university archaeologists, state museum historians, and interested members of the public such as avocationalist archaeologists belonging to Archaeo-Nevada Society and the Southern Nevada Rock Art Enthusiasts. The evaluation method is applied under the guidance of the State Historic Preservation Office, a state agency created by the National Historic Preservation Act.

What are the provisions for mitigation following a discovery of cultural resources? If notable properties are discovered, prior to or after approval of the Federal action, Section 106 allows attempts to mitigate adverse effects. Such mitigation may include data recovery through excavation, research from primary documents, photography, and mapping. The cultural resources management philosophy emphasizes that, although attempts to mitigate adverse effects are favored over a lack of efforts, it is generally not possible to fully mitigate adverse effects from a loss of cultural and religious values. Discovery of archaeological and cultural resources generally do not halt projects, but rather approval of the action is slowed while efforts are taken to achieve acceptable attempts for mitigation.

Wouldn't protection of significant archaeological sites and cultural resources have cumulative effects on numerous and various proposed lands actions? Based on the kinds of actions and numbers and locations of significant sites, protection of cultural sites does not have a cumulative effect. Discovery of archaeological and cultural resources generally do not halt projects, but rather approval of the action is slowed while efforts are taken to achieve acceptable attempts for mitigation. A review of cultural resources input on land actions in the past decade indicates a minimal number of projects were slowed or restricted based on protection or mitigation needs. The three largest examples are funding by Mr. Lewis for an excavation of

prehistoric food processing features in Meadow Valley Wash for a Desert Land Entry, fencing an historic Civilian Conservation Corps camp by Nevada Power, and construction by Kern River Pipeline of a subsurface tunnel under the Old Spanish Trail/Mormon Road.

What kinds of economic impacts would protection of significant cultural resource and archaeological sites have on the region? While there could be economic effects by restricting activities, such as mining, in certain locations, protection of the relatively small number of known and projected significant sites within the vast lands in the Las Vegas BLM District should not have a substantial monetary impact on users.

Why, if operators require cultural resource inventories prior to initiating mining activities, and mitigation work resolves conflicts, does The Draft Plan state that cultural resources are significantly affected from minerals management? It is rare that operators ensure the performance of archaeological inventories. In fact, mining case records indicate only 10 percent of the actions and 25 percent of the areas impacted were subjected to cultural resource inventories.

For example, Notices of Intent to Mine Five Acres or Less are not Federal actions. The archaeologist reviews each Notice, and based on a sensitivity evaluation, only affords inspection on those where there is a known level of high sensitivity, or about 10 percent of the actions. Also, due to the absence of requirements for reporting casual mining activities, surveys are never conducted.

A 1992 unauthorized sandstone procurement mining operation along the Bird Spring Range impacted a significant rock art site by removing several boulders with petroglyphs. Although Plans of Operations are Federal actions and require inventory, about 60 percent of the operators demand that BLM conduct the inventories. Considering that the Las Vegas BLM District is assigned only one archaeologist for review of all actions, these assignments tax limited resources of the cultural resource program. A small percentage of operators opt to expedite review of their plans by contracting permitted archaeologists to conduct intensive inventory and evaluation activities. Examples are Viceroy Mining, Chemical Lime Company for the Apex area, Nevada Pacific Mining Company for the Nelson area, and Bullfrog Mining for Bare Mountain. Where inventories reveal conflicts with important archaeological and cultural sites, mitigation efforts are undertaken, but in only a small percentage of the cases do the mining operators fund the activities.

The Draft Plan emphasized impacts to cultural resources from grazing activities. Why couldn't mitigation projects neutralize those effects. The cultural resources management philosophy in The Plan emphasizes that, although attempts to mitigate adverse affects are favored over a lack of efforts, it is generally not possible to fully mitigate adverse effects from a loss of cultural and religious values. Discoveries of archaeological and cultural resources generally do not halt projects, but rather approval of the action is slowed while attempts are taken to achieve acceptable attempts at mitigation.

Is there information concerning the previous effects to cultural resources from grazing activities in the past? While there is an absence of scientific studies or information prior to 1968, observations by BLM and academic archaeologists indicate that at least 20 significant prehistoric shelter and camp sites at major springs in this region were impacted by water development projects associated with grazing. Examples of the kinds of projects and impacts to sites are found in the Gold Butte/Cedar Basin area and at Bird Spring. The analysis of impacts in The Plan from most actions is an attempt to provide a realistic assessment of the wide range of effects that occur from approval of Federal actions.

Traditional Lifeway Areas

What is a Traditional Lifeway Area, and what management implications does this imply? The 1980 amendments to the National Historic Preservation Act directed the Secretary of the Interior to preserve and conserve *...intangible elements of our cultural heritage...and encourage the continuation of the diverse traditional prehistoric, historic, ethnic, and folk cultural traditions that underlie and are a living expression of our American heritage...* (NHPA Section 502; 16 U.S.C. 470a note). The principal method to fulfill this direction is to invite cultural groups to provide information concerning sensitivity of cultural values on Federal lands.

A Traditional Lifeway Area refers to a landscape that featured predominantly in the active physical and spiritual activities of a particular cultural group. A Traditional Cultural Property refers to a more specific location where a community has traditionally conducted exclusive or special activities, or has a unique significance in its spiritual or religious world. A Traditional Cultural Property may be encompassed by a Traditional Lifeway Area. The Traditional Cultural Property and Traditional Lifeway Area concepts were developed by the Advisory Council on Historic Preservation, an agency created by the National Historic Preservation Act, as a method to evaluate intangible cultural properties such as ceremonial areas. Native Americans are historically recognized as the original traditional users of the public lands.

The present designations are based on the identification of certain areas by Native American groups and individuals as important for the operation of their respective religions and lifeways. A Traditional Lifeway Area may include the possession of archaeological features and materials and specific plants and animals. The evaluation of a Traditional Lifeway Area or Traditional Cultural Property also addresses provisions of the American Indian Religious Freedom Act. The designation of an area as sensitive requires identification and evaluation of affects to cultural resources as the result of Federal actions under Section 106 of the National Historic Preservation Act. A Traditional Cultural Property may be determined as eligible for nomination to the *National Register of Historic Places* under 36 CFR Part 60.4(a). Regional Native American tribes and individuals have provided information to this agency concerning sensitive lands. While Native Americans generally consider all their traditional lands as culturally sensitive, they have participated in a process of evaluation that first selects the most sensitive acreage for a Traditional Lifeway Area designation.

Federal actions within a Traditional Lifeway Area or Traditional Cultural Property are reviewed in terms of effects to properties eligible for nomination to the National Register of Historic Places. For example, the location of specific plants that are necessary for the celebration of Native American spiritual values would be evaluated in terms of potential impacts to the flora and then in respect to religious rights protected under the American Indian Religious Freedom Act. Alternatives, such as project redesign, could be presented to avoid resources, or a plan developed to minimize or attempt to mitigate adverse effects.

The Bird Mountain/Quail Springs Traditional Lifeway Area is along an historic railroad right-of-way. Its values were presumably previously impacted. Is the designation consistent with others in the area? The designation was reviewed after publication of The Supplement, and not considered consistent with other Traditional Lifeway Areas. Therefore, the Bird Mountain Traditional Lifeway Area was not carried into The Plan. The area continues to be considered sensitive for cultural resource values, and Native Americans will be invited to provide input for all Federal actions in this locality.

Why isn't Spirit Mountain and the surrounding area proposed for a protective designation in the plan? Based on an analysis of the cultural significance of Spirit Mountain to the Native American tribes of the Lower Colorado River region, this landscape was designated as the Spirit Mountain Traditional Lifeway Area in The Supplement and was carried forward to The Plan.

Wouldn't the intent of the Christmas Tree Pass Special Recreation Area, with management direction that encourages casual uses, be in conflict with the intent to manage the area under the Spirit Mountain Traditional Lifeway Area? Based on an evaluation of the indirect and direct impacts from increased visitation associated with the establishment of camping and picnic facilities, the Special Recreation Management Area designation was considered in conflict with Traditional Lifeway Area management. While the Traditional Lifeway Area designation is a result of evaluation required by the National Historic Preservation Act and the American Indian Religious Freedom Act, designation of a Special Recreation Management Area is management discretion. The Special Recreation Management Area was not carried forward to The Plan.

Customs and Cultures

Are there provisions to protect the customs and cultures for those people who have been conducting a common livelihood for more than one generation, such as ranching or mining, on public lands? Provisions of the National Historic Preservation Act require agencies to evaluate ...*traditional prehistoric, historic, ethnic, and folk cultural*

traditions that underlie and are a living expression of our American heritage... (NHPA Section 502). The concepts of a Traditional Lifeway Area and Traditional Cultural Property provide an outline to evaluate intangible cultural properties such as ceremonial area. Descendants of the pioneers of areas such as Moapa Valley pose arguments they have certain preemptive rights.

In contrast, Native Americans are historically recognized as the original traditional users of the public lands. While they generally consider most public lands as one traditional cultural property, the use of designations of separate Traditional Lifeway Areas to meet provisions of Federal laws, including the American Indian Religious Freedom Act, necessitated a priority scheme that first emphasizes conservation in the most sensitive areas.

Efforts were taken to conserve a diversity of cultural properties that represent the physical locations of economic and cultural practices of a traditional non-Native group. For example, the YKL Ranch in Piute Valley was designated a cultural property eligible for nomination to the National Register of Historic Places due to its cultural uniqueness, physical integrity, and associations with national figures. Efforts will continue, within a priority scheme similar to that used for Native American cultural property designations, to evaluate specific locations that meet criteria for nomination to the National Register of Historic Places under 36 CFR 60.4. Such efforts will also take into account the nature of divergent cultural properties whose boundaries overlap, and evaluate these in a priority concept that recognizes Native Americans as original users of the lands. Additional designations for locations of non-Native American traditional cultural landscapes relies on selecting areas that meet regional importance criteria in a fashion similar to the evaluation of the YKL Ranch.

Protection of Cultural Resources and Area of Critical Environmental Concern Restrictions

Is it necessary to have a one-half mile restrictive corridor along the Old Spanish Trail/Mormon Road? Based on staff evaluations and public comments on The Draft Plan and The Supplement, the restrictions were not considered justified. The restrictions were not carried forward to The Plan. If proposed Federal actions would impact portions of the trail eligible for nomination to the National Register of Historic Places, efforts to mitigate the adverse effects would be completed.

Based on the perception of erosional impacts to Stump Spring, why isn't the designation of an Area of Critical Environmental Concern over the location premature in the absence of a water diversion system? An Area of Critical Environmental Concern designation provides an increased measure of reduction of impacts to cultural resources from certain kinds of discretionary actions, such as mining plans of operations. Consequently, the designation is considered positive in terms of conservation of archaeological values.

The remains of Crescent and Gold Butte townsites are minimal. The designation of an Area of Critical Environmental Concern over such a property precludes the active mining for the mineral values that originally attracted the people who founded those short-lived towns. Why should we preserve and protect such sites under Area of Critical Environmental Concern designations? The remnants of the historic townsites of Gold Butte and Crescent are designated for Area of Critical Environmental Concern protection in The Plan. Some comments questioned the need for conservation. The period from the 1860s to 1910 in southern Nevada is represented in mining history by stories, photographs, buildings, and unobtrusive remains of daily life of the humans. These remains consist of trash including cans and broken glass, dugout features, earthen tent platforms, and functional and entertainment items discarded by the workers. Popular history has a tendency to highlight remnants of the luxury classes.

This nature of dependence has meant that few buildings from this period remain intact in southern Nevada. As a result of a 1960's movement by historians, archaeologists and avocationalist history buffs, the National Historic Preservation Act was passed in 1966. This law provided for a listing of significant archaeological sites in a National Register of Historic Places. The criteria for significance includes scientific importance. Crescent and Gold Butte townsites, associated with mining exploration, do not exhibit *aesthetic* or *popular* historical remains such as buildings. The archaeological sites do possess artifacts and features that through scientific recordation and study could yield information about the lifestyles of the working

class mine laborers. While these sites were impacted from object collectors, the remaining artifacts could yield information concerning the lifeways of the common workers. From an academic position, these townsites are the best remaining locations for study of early 20th century miners.

Those numerous history buffs who value exploration of subtle marks on the landscape, and who have studied the available information concerning the working miners, requested conservation of a sample of episodic mining occupation sites. Considering there were several towns in southern Nevada that erupted and expired during this period, the need for preservation of only two under Area of Critical Environmental Concern designations do not appear to archaeologists, historians, or history buffs as excessive.

Are you taking sufficient efforts to conserve resources in the Sunrise Mountain/Rainbow Gardens area? Gypsum Cave is a significant cultural resource. This shelter cave site was subjected to excavations in the 1930s, and the descriptive summary published by Southwest Museum. The original values of the cave included the remains of extinct megafauna, evidence of 3,000 years of prehistoric use, and memories of traditional Native American cultural values. The site would be afforded protection within the Rainbow Gardens Area of Critical Environmental Concern.

Archaeological Rock Art Sites

The projected number of prehistoric rock art archaeological sites in the planning area seems excessively high. There are likely fewer in number, and they are highly significant. Is the projected number too high? The site number estimate was based on a review of cultural resource management data, with an emphasis on information provided by professional and avocational archaeologists. There are limitations to using such an estimate; for example, some archaeologists recorded separate panels as sites; others documented all related features within a large area, such as Sloan Petroglyph canyon, as one property. Certain individuals argue there could be decreased preservation emphasis on rock art based on the perception these kinds of sites are numerous and, thus, common. Regardless of the number of rock art locations, all are considered associated with traditional cultural values of Native Americans and eligible for nomination to the National Register of Historic Places under 36 CFR 60.4. This designation affords the properties protection under Federal laws.

Alternative D of The Draft Plan is favored due to the highest potential for the protection of rock art sites. How would the other alternatives treat these significant sites? Alternative D would provide protective advantages from the restriction of certain discretionary actions that could impact archaeological sites. A similar management emphasis was placed on cultural resources conservation in all alternatives, including that brought forward to The Plan.

Why is the discussion of paleontological resources in the cultural resources management section? While there may be perception problems due to distinctions between the programs, such as major differences in professional training, BLM regulations place management of paleontological materials and issues in the cultural resources program.

Lands Management

Disposal Areas

Why are public lands historically used for mining purposes identified for disposal? Who will pay for the mining claims if BLM disposes of the lands? Public land around traditional mining areas is identified for disposal strictly to establish locations for infrastructure purposes if there is eventual growth in those areas. Patented mining claims can be used as the patentee sees fit. There are no restrictions and some private land owners may want to develop their private land. The land in the disposal area could support the resulting population with public facilities such as schools, churches, and fire stations. Although BLM identified disposal areas in The Draft that may be encumbered by mining claims, disposal of the encumbered lands would only occur if the claims are relinquished or vacated, and there is a demonstrated need for disposal.

Why are unusually large amounts of public land identified for disposal, and by what authority? Without some guidelines in the Resource Management Plan, how will staff decide what is a

good disposal and what is not? What kind of documentation will be prepared for future disposal actions, and will the public have opportunities to comment on these actions? Section 202 of the Federal Land Policy and Management Act directs the Secretary to identify land disposal areas in planning documents. In accordance with the law, the Secretary must consider present and potential uses of the public land. Because The Plan is a 20-year plan, land was designated around existing communities to provide for possible future needs including public facilities. The intent of BLM management is not to sell or transfer land into private ownership, but to provide acreage to meet these future needs if and when growth occurs.

Before disposing of public land one or more of the following criteria must be met under Section 203 of the Federal Land Policy and Management Act: (1) such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency; or (2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or (3) disposal of such tract will serve important public objectives.

The disposal areas in The Plan are based on public comments on The Draft, The Supplement and staff coordination. The intent is to eliminate the need by Congress to establish prospective legislative disposal actions, such as the Eldorado Valley, Apex, Mesquite, and Aerojet legislation areas that provided for nondiscretionary transfer of over 150,000 acres of public land in the planning unit. Identification of larger disposal areas would allow the disposal of public lands to become a discretionary action, with public and local government input through a more thorough National Environmental Policy Act process. The Plan addresses the fact that site-specific National Environmental Policy Act documents would be prepared for future disposal actions.

How does the National Environmental Policy Act process work for identification of problems, mitigations and alternatives for rights-of-way, including corridors, disposals, and other lands actions? Are the mitigation measures proposed in the plan the maximum allowed? Prior to any public lands action, BLM must address impacts to all natural resource values (including Threatened and Endangered species) resulting from the action. When applicable, human health and safety concerns must also be addressed prior to authorization of site-specific rights-of-way within designated corridors. Designation of corridors does not satisfy nor preclude the National Environmental Policy Act process.

Consultation and coordination with local, state, and Federal agencies is completed prior to disposal of public lands. These agencies are requested to participate in easement identification for future roads, utilities and flood control facilities for inclusion in the patent. City, county, and state regulations and planning documents determine the kind of development that may occur following disposal, as well as the amount of allocated water in the disposal areas. Prospective buyers are encouraged to look at the properties and review this data prior to bidding, or submitting a sale or exchange proposal for public land. Areas identified for protection of the desert tortoise would not be disposed. Identification of Threatened and Endangered or candidate Threatened and Endangered species could preclude disposal.

Mitigative measures included in The Plan address concerns of most who commented. However, they do not preclude more restrictive measures (i.e., avoidance) identified through the site-specific National Environmental Policy Act documents that include local government and public input.

Can lands outside disposal areas be obtained under the Recreation and Public Purpose Act? Recreation and Public Purpose leases previously identified for sale and currently outside the proposed disposal areas would remain available for sale.

Shouldn't this plan emphasize exchanges? The Plan identifies disposal areas. Generally, public land exchanged for private land would be within these disposal areas. The public land in "checkerboard" areas, where BLM and private parcels are located in a random distribution pattern, is difficult for BLM to monitor and was included in the disposal areas. Unfortunately, some "checkerboard" land is not large enough nor does it meet criteria established by the exchange proponent. Therefore, public land located outside established disposal areas may be considered for exchange on a case-by-case basis provided that it meets the ten criteria identified in Chapter 2 of the proposed plan.

Is BLM going to retain all lands with tortoise habitat not transferred into private ownership in Eldorado Valley and Apex sale areas? Won't a Section 7 consultation be completed before the Eldorado Valley lands can be transferred? Will BLM retain the lands within the Eldorado Valley Sale Area that are encumbered by the proposed corridors? Approximately 19,000 acres in the Eldorado Transfer Area were not purchased by the Colorado River Commission and are retained in Federal ownership. The Colorado River Commission transferred title of the land to the City of Boulder City. Section 7 consultation under the Endangered Species Act was completed on the land prior to transfer.

Boulder City entered into an Agreement with Clark County and the U.S. Fish and Wildlife Service for a wildlife easement covering 85,000 acres of the 107,000 acres purchased, precluding development of the land. The land in the Apex area is within tortoise habitat, but was not determined critical habitat by the U.S. Fish and Wildlife Service or the *Tortoise Recovery Plan.* A Section 7 consultation under the Endangered Species Act was also completed for the Apex Sale Area.

The Eldorado Valley Act sale was nondiscretionary. The corridor locations identified in The Plan were reserved in provisions of the contract of sale between BLM and the Colorado River Commission, and were included in the subsequent title change to the City of Boulder City.

Why is BLM considering disposal of public lands within Wilderness Study Areas, Areas of Critical Environmental Concern, and the proposed Red Rock Expansion Area? No land is identified for disposal in Areas of Critical Environmental Concern, Red Rock, or Wilderness Study Areas in The Plan.

The U.S. Forest Service is concerned that decisions to dispose of public land contiguous to the National Forest System land has potential to create significant resource management problems on that land. Will the U.S. Forest Service have the opportunity to coordinate disposal areas with the BLM? There are no disposal areas contiguous to U.S. Forest Service land in The Plan. There was considerable reduction in size of disposal areas following comments and evaluation from The Draft. Also, the boundaries of the expanded Conservation Area should function as a buffer to the eastern portion of the forest from urban growth.

The Nevada Division of State Parks has existing Recreation and Public Purpose applications on file with BLM for land north of Valley of Fire State Park. The preferred alternative indicates the area involved in the application is in an area open to mining claim location. Does this alter the status of the existing applications? No, the lands classified for Valley of Fire State Park under the Recreation and Public Purposes Act is segregated from entry under the public land laws and mining laws. The land would remain segregated until a lease is authorized or until the segregation is revoked.

Why have the corridors been reduced in width and wattage restricted? This could hinder future transmission line development and upratings. The concern by power transmission companies with regard to terrain, technology, and construction expense is recognized, and efforts were taken to provide opportunities for existing and future power needs. As a result of public comment to The Draft and subsequent environmental impacts evaluations, the utility corridors were changed considerably. The one-to-three-mile wide corridors were reduced in size within the district. The corridors identified in The Plan are considered the best selection to adequately accommodate future use, prevent the criss-crossing effect of the past, and most efficiently mitigate effects to resources. Where possible, the corridors follow existing transmission rights-of-way. Voltage restrictions were not proposed for any corridors.

It appears there are Bureau of Reclamation lands within the Las Vegas Valley Disposal Area. Will BLM dispose of these lands? The Bureau of Reclamation submitted a map to BLM requesting land in T.21S., R.63E., Sections 26, 27, and 34 be excluded from the Valley disposal area. Prior to disposal of any Bureau of Reclamation-withdrawn acreage, that agency must relinquish its jurisdiction to BLM. Subsequent to the relinquishment, a site-specific environmental analysis would be completed to determine the highest and best uses of the land.

Why not modify and expand the existing Santini-Burton sale area rather than identify an entirely new Las Vegas Valley disposal boundary? A few of the remaining Burton-Santini Act lands are identified for exchange and Recreation and Public Purpose proposals. Most of the remaining lands,

approximately 5,000 acres, are managed under the Clark County Department of Aviation Cooperative Management Agreement with use restrictions. The Las Vegas Valley disposal boundary in the Clark County Management Framework Plan follows that requested by Clark County. The locations of the disposal area in The Plan is the result of coordination with local, county, state, and Federal agencies.

What is the reason for elimination of future Desert Land Entries? The availability of the necessary amount of water to "prove up" Desert Land Entry authorizations is questionable. Approximately 1,280 acre feet of unappropriated water is generally necessary to successfully irrigate crops in this region (1,600 acre feet if water is below baseline). Other factors that are reviewed prior to making a decision include the condition of soils, suitability of climatic conditions, and economic feasibility to raise salable crops.

Will BLM exclude land containing wetlands or riparian plant communities along the Virgin River from disposal areas? Public Law 99-548, Mesquite, Nevada Lands Transfer Plan, not only allowed sale of selected land in the Mesquite area, but also provided a protective withdrawal of certain riparian land along the Virgin River. Other riparian land along the Virgin River was subsequently acquired by BLM in an exchange. The Virgin River Area of Critical Environmental Concern precludes disposal of remaining riparian land.

Two alternatives in The Draft identified land in T. 32 S., R. 66 E., sec. 29, within the Laughlin disposal area. Is this land included in a disposal area in The Plan? The land remains in a land disposal category in The Plan, but is under a Bureau of Reclamation withdrawal and would require relinquishment to BLM prior to disposal.

Will you clarify what the phrase "withdrawn from all public land laws" means on page S-51 of The Draft? "Withdrawn from all public land laws" means the land is segregated from entry through lease or disposal, but open to mineral entry and rights-of-way.

Would BLM consider adding a disposal area in Stewart Valley, Nevada, and would the adjacent land owners be given a preference right to acquire the lands? Nye County has not indicated additional land is needed for impending growth in Stewart Valley, consequently, The Plan does not include this acreage in a disposal area. A plan amendment could be completed if the need arises for public land to accommodate changing infrastructure or public purpose facilities.

Land Use Authorizations

Doesn't resolution of unauthorized agricultural use or occupancy through a land use authorization encourage future trespass actions? How will BLM provide for rehabilitation of impacts to resources through the proposed leasing system? This planning document does not preclude resolution of unauthorized trespass. It allows use of options that follow appropriate laws and regulations to resolve unauthorized uses. The Plan proposes resolution through the method most beneficial to the general public and the government. For example, charging back rental at fair market value prior to lease or sale could be a benefit to all parties.

Resolution of unauthorized agricultural or other occupancy uses of public lands would be addressed on a case-by-case basis through the National Environmental Policy Act environmental process. Impacts to natural resources, public benefits served, and costs incurred during the unauthorized use, would be evaluated before a decision to authorize use is made. Site-specific stipulations would be included in the lease document. Consideration would include the plan proposal that land within the special management areas would be retained in Federal ownership.

Withdrawals and Airport Leases

Peak Power Corporation has applications for two Federal Energy Regulatory Commission projects in Clark County. Will these be included and analyzed in The Plan? Individual Federal proposals, such as the Sheep Mountain and Eldorado pumped storage hydro-electric projects for the Federal Energy Regulatory Commission, are considered outside the scope of this planning document.

Will the final plan identify areas or locations for public airport leases? Site-specific locations for airport leases are beyond the scope and not identified in The Plan. The plan proposes that actions such as airport leases be evaluated under the

National Environmental Policy Act environmental review on a case-by-case basis.

Is the public airport facility referenced on page 3-53 the same as the public airport application listed in Appendix I, page I-80? No, the application described in Appendix I, page I-80 is on public land. Page 3-53 referred to airport facilities or landing strips on private lands. This is Appendix D in The Plan.

Rights-of-Way Management

Will the land that the Nevada Army National Guard identified for their needs for training exercises in Southern Nevada be addressed in The Plan? No, the Nevada Army Natiional Guard training needs in southern Nevada are sitespecific and beyond the scope of The Plan. Actions proposed by Nevada Army National Guard would be evaluated under the National Environmental Policy Act environmental process, with public and agency participation.

Access Needs

Has a right-of-way been authorized for the road that crosses the proposed Ash Meadows Area of Critical Environmental Concern from Pahrump to Amargosa Valley? If not, will one be authorized if this area is considered a right-of-way avoidance area? There are no intentions to close the existing paved road running through Ash Meadows Area of Critical Environmental Concern from Pahrump to Amargosa Valley. However, Nye County could claim responsibility for this road under RS2477.

Why is access in the Ivanpah Valley Area of Critical Environmental Concern being limited to designated roads rather than to existing roads and trails? If this takes place, could the private property owners in the area file for a right-of-way so that permanent access is guaranteed? The Ivanpah Valley Area of Critical Environmental Concern was dropped from further consideration. Access will continue to be available on existing roads and trails. Private property owners could request a right-of-way to their property, however, the cost would be at fair market rental and they would be responsible to coordinate construction with the county.

Flood Control Facilities

The Clark County Regional Flood Control District is concerned that the omission of explicit guidance regarding flood control facilities from the plan will preclude the possibility of implementing necessary flood control programs. Will the language for flood control facilities in the No Action Alternative be carried forward in The Plan? The text in the No Action Alternative in The Draft regarding flood control structures and facilities was not carried forward to The Plan. The standard operating procedures for all rights-of-way are included in Appendix of this document and should address your concerns.

After spending millions of dollars on flood control, why do flooding problems still exist? The Clark County Regional Flood Control District (Flood Control District) has put in effect a 20-year flood control plan that, when completed, should resolve most flooding problems. However, addressing flood control is an ongoing process, with yet more expenditures and short-term and long-term benefits. The BLM's role is to issue rights-of-way on public land for flood control facilities to the Flood Control District. It is the responsibility of the local agencies to properly maintain the facilities. Prior to disposal of land, BLM coordinates with local and state agencies, including the Flood Control District, to identify land that should be retained in Federal ownership due to their flood potential.

Communication Site Facilities

What do you consider an existing communication site? Isn't it impractical to limit communications to only existing sites? An existing communication site is an area with existing communications facilities and space available for the location of additional facilities. There are 36 existing communication sites on public lands in the planning area. With the exception of AM transmission sites, a majority are on mountaintops with between 1 and 15 buildings and related facilities. Because the sites lack exact locational boundaries, most mountaintops have room for expansion. The sites would be managed more efficiently for both users and the agency if site management plans were developed. There are no intentions to restrict the growth of communications in southern Nevada, rather, to organize as much as possible. For example, co-location uses are promoted in order to utilize the existing sites to the greatest extent and reduce costs to the secondary user. New technology, especially

in cellular communications, may result in requests for other sites. Proponents have the responsibility to propose locations and uses, and the individual actions would be addressed under the National Environmental Policy Act environmental review.

Utility Corridors

Shouldn't there be a moratorium on all corridor designations within the Las Vegas BLM District, as well as the other 13 western states, until an Environmental Impact Statement determination is made concerning requirements for a modern, secure, safe electrical transmission network? Wouldn't it be more feasible for BLM to identify avoidance areas and exclusion areas instead of corridors? Supplemental Program Guidance For Land Resources in BLM Manual 1623.5 directs BLM to identify corridors for utility transportation, and address the locations, width and specifications for management of the corridors. Identification of avoidance and exclusion areas instead of corridors would not meet this obligation.

The locations of corridors for the Las Vegas BLM District lands identified in The Plan are the results of efforts to minimize acreage, provide for the needs of future users, and respond to concerns of the private and local agency landowners adjacent to or near existing powerlines. The intent of the identification process is to restrict the random distribution and proliferation of transmission lines in an unorganized pattern.

Human health, safety, and environmental concerns must be addressed during the National Environmental Policy Act process before authorization of any site-specific rights-of-way within designated corridors. Avoidance and mitigation measures for sensitive species are part of this process and not within the scope of this level of planning document. The designation of corridors does not satisfy or preclude the National Environmental Policy Act process.

Clark County requests the following text for the final Resource Management Plan, "Utility/transportation rights-of-way may be designated within the Las Vegas Valley on BLM-administered lands on a case-by-case basis with prior County approval." Specific language is not needed in an objective or management direction to ensure Clark County's involvement. The BLM and Clark County entered into a Memorandum of Agreement to ensure complete cooperation and coordination on major projects or other specific types of projects as identified by the County.

Identification of utility corridors only provides specific areas for future powerlines rights-of-way. County, city, and state permits must be obtained by the proponent prior to construction. Coordination among the proponent and Federal and local agencies would continue prior to issuance of a right-of-way for a large transportation facility.

The preferred alternative in The Draft left a 6-mile gap in the corridor between the Aerojet and Apex sale areas. There is an existing right-of-way authorized through that area running north-south along U.S. Highway 93. Would BLM consider designating this area part of the corridor system? This alternative was based on information given to us during the draft stage of the plan. The Plan would designate a continuous corridor along U.S. Highway 93 between the Aerojet and Apex areas.

Won't the large power transmission lines with high voltage in the corridors have damaging effects on human beings and the listed and endangered species, in particular, Rainbow Gardens? The concern about the environmental sensitivity of the area was addressed in the evaluation process after publication of The Draft. The width of the corridor was reduced in The Plan to 1,400 feet for use by existing and known potential users. Efforts would be taken to ensure impacts are kept to a minimum.

The "B-AB" corridor is the only corridor in this area carried forward in The Plan. Mitigation measures for protection of the California bear poppy could include standard mitigation procedures for special status plant habitat, ensuring a qualified botanist conducts pre-construction surveys, and spacing of towers in low density areas.

In The Plan, corridors are reduced from The Draft from 1 to 3 miles to 1,400 to 3,000 feet in width. An effort was made to avoid populated and private land, where possible. Establishing corridors provides control over the random placement of large power transmission lines. When identified in the National Environmental Policy Act process, mitigation measures would be established to lessen the effects of electromagnetic fields to humans. It would be the responsibility of the power transmission companies to use the best technology

available for specific projects.

In 1995, BLM officials accompanied Nevada Power Company in the field to conduct readings on electromagnetic fields. The readings showed electromagnetic fields emitted from large aerial power transmission lines to be less than that from the power distribution lines buried in front of homes. The aerial lines were 430 feet from existing residences. Any future lines would be placed further away.

Why are the corridors in this plan so wide? Won't this action circumvent National Environmental Policy Act compliance when a utility wants to come through this area? The sizes of utility corridors in The Draft were reduced considerably in The Plan. Most corridors follow existing transmission lines and range from 1,400 to 3,000 feet in width. The new designations are more responsive to the concerns of the general public and local governmental agencies, should cause less degradation to all natural resources, and are more compatible with reasonable construction practices. Corridor criteria, included in The Plan, refers to acceptable engineering and technical practices used in the construction of individual power transmission lines. Not all practices are applicable in all areas. For example, use of helicopters for construction in environmentally sensitive areas may not always be feasible or safe. Mitigation procedures for habitat would be decided on a case-by-case basis during the scoping and the Section 7 consultation process under the Endangered Species Act.

Evaluation of a proposal would be conducted in the National Environmental Policy Act process prior to authorizing any rights-of-way on public land, whether inside or outside the corridors (see Chapter 3, Affected Environment, Rights-of-Way). The proponent must obtain necessary permits from city, county, state, and Federal agencies. Designation of corridors in The Plan does not satisfy or preclude the National Environmental Policy Act process, it only identifies a preferred access route, but does not provide a blanket authorization.

Although utility corridors were identified in the plan, is there a possibility for deviation from these corridors? Utility lines could be placed outside the designated corridors; however, the corridors are the preferred routes. Deviations would be reviewed under the National Environmental Policy Act compliance, including justification on technical reasons. The proposed project would require review by public and governmental agencies.

How can a corridor be designated through an Instant Study Area? Were other alternatives analyzed? The "B-AB" corridor that crosses the Sunrise Mountain Instant Study Area would only be available if Congress drops the Instant Study Area from further wilderness consideration. Efforts were taken to reduce impacts in this corridor. Its width was reduced in The Draft to 1,400 feet in The Plan for use by existing and potential users. The IPP-McCullough powerlines would be the east boundary of the corridor to the Lake Mead cross-over. From that point, the IPP-McCullough power-lines would be the west boundary to ensure maximum use and project future lines away from impending development. Lines crossing the Lava Butte area would be placed east of the existing powerlines.

In The Plan, the designated corridor along the Muddy Mountains Wilderness Study Area was reduced in width and lies outside the Wilderness Study Area. There was substantial opposition to other corridor choices by private land owners, local government, and other Federal agencies.

Corridor "D" in The Draft (in the Henderson, Rainbow Gardens, and Sunrise area) was not designated in The Plan because portions are on Bureau of Reclamation withdrawn lands reserved for the Southern Nevada Water Authority's Treatment and Transportation Facilities.

The City of North Las Vegas is opposed to a corridor running through the northern most portion of the Valley. Will this corridor be designated in the final planning document? Would BLM include language in the final document requiring local government sign-off or approval on right-of-way applications from private or quasi-public utility providers? Alternatives to this route were evaluated, and the corridor in the northern most portion of the Valley was not carried forward to The Plan. Although coordination among BLM and local governments, private utilities, and developers in issuing rights-of-way for roadways, utilities, and sewer facilities to meet community development and expansion is standard, it is not reasonable for this level of discussion to occur for relatively small rights-of-way applications. It is the responsibility of local governments to ensure these projects meet their planning criteria prior to issuing construction permits.

Won't the utility corridors cause visual impacts that will decrease private and public land values? The presence of corridors could devalue private and public lands to some extent; therefore, efforts were taken to identify corridors along existing power transmission lines and minimize impacts. Because this planning area is in a pathway for major transmission lines, the proposed corridors in The Plan represent attempts to reduce the proliferation of scattered transmission lines by routing future lines through areas already disturbed by similar actions, for example, Sunrise Mountain Instant Study Area and Henderson areas.

There would be only one continuous corridor or route designated through these areas (corridor "B-AB" in The Supplement), at a maximum width of 1,400 feet. No construction would occur in the Sunrise Mountain Instant Study Area unless Congress drops it from further wilderness review. Sunrise Mountain Instant Study Area is a sensitive area, and efforts would be taken to ensure impacts are kept to a minimum.

Why doesn't this plan address underground utilities other than power transmission lines? Is the Kern River pipeline going to be designated a corridor? Has BLM been contacted by the North American Water and Power Alliance regarding a water pipeline right-of-way? The Plan corridor Map Number 2-5 identified designated corridors. During the scoping process the Kern River Pipeline right-of-way was not identified as a preferred route. Individual rights-of-way outside corridors, such as the Kern River Pipeline, are not shown in The Plan. No proposal has been submitted to BLM by the North American Water and Power Alliance for any future water pipeline project.

The original intent for the plan was to provide corridors for all large utility transportation lines; however, public comments indicated major power lines are of greater concern. The corridors were designed to follow existing transmission lines, but it is impossible to cross a large block of land without encountering private parcels. Not all linear transportation projects are compatible with electrical transmission lines, and locations outside the designated corridors may be necessary. Such actions would be addressed by the 43 CFR 2800 regulations, which allow for granting of all rights-of-way including large water transportation pipelines. Issuance of rights-of-way as standard operating procedures are not discussed in the planning document.

Are Southern California Edison's Eldorado-Pisgah 230-kV transmission lines within the area proposed for the South McCullough Range Wilderness Study Area? If the area is designated for wilderness, could BLM do the following: 1) preserve access and rights to operate and maintain the existing facilities, 2) modify the boundaries of the proposed wilderness area to exclude all existing proposed facilities from the wilderness area, and 3) exempt existing facilities and our operations from the effects of wilderness designation, thereby, permitting continued normal operation?

The boundaries of the existing Wilderness Study Area were not increased. Edison's Eldorado-Pisgah proposed 230-kV transmission lines would be addressed as an individual action, not in The Plan. The Interim Management Policy for lands under wilderness review preclude issuance of rights-of-way through Wilderness Study Areas unless they are non-impairing in nature. The location of the right-of-way would be assessed in terms of conflicts of the wilderness law during review under the National Environmental Policy Act.

Shouldn't the plan provide the general range of widths of existing right-of-way corridors for comparison with what is proposed? Identification of the range of widths of all single power transmission line rights-of-way in the area of designated corridors is beyond the scope of this planning document.

Right-of-Way Exclusion Areas

What is the meaning of the statement "All Areas of Critical Environmental Concern are designated as areal right-of-way exclusion areas, including material site rights-of-way?" Also, will BLM exclude peregrine management areas from powerline corridors? Areal rights-of-way are not linear; rather they are site-type rights-of-way, like communication sites and power substations, projects that have potential to cause relatively large surface disturbance in concentrated areas. Material site rights-of-way were specifically addressed in this statement. However, in The Plan the Las Vegas Valley, Valley West, Gold Butte, Coyote Springs, Mormon Mesa and Piute/Eldorado Areas of Critical

Environmental Concern are open to material site rights-of-way, with some restrictions.

Peregrine falcon management areas are not addressed in The Plan. There is no convincing evidence of peregrine habitat in the planning area, and peregrine falcon management areas were not identified.

Couldn't right-of-way exclusion areas significantly reduce the ability for future mineral resource and industrial expansion, requiring infrastructure? The Draft and The Supplement excluded material site rights-of-way from all Areas of Critical Environmental Concern. There are currently 181 material site rights-of-way issued on BLM lands in the planning area. These sites are activated on an as-need basis, and along with other private and BLM-designated gravel pits, should provide for future infrastructure needs for the next 20 years in both Clark and Nye counties.

Acquisitions Management

Shouldn't BLM try to acquire sensitive private lands through exchange procedures only, to insure against increased Federal ownership? Red Rock Canyon National Conservation Area is within a proposed Area of Critical Environmental Concern, and undeveloped, available private lands would be reviewed for exchange proposals. There are presently two private exchanges that include offered lands within the Red Rock Canyon National Recreation Area. Areas with natural resources that are assessed as realistic for management were identified for acquisition in The Supplement. These include lands within Areas of Critical Environmental Concern, undeveloped acreage in the Aerojet legislative disposal area, and private lands along the Virgin River. Lands under BLM-management in other planning areas was not addressed. The text concerning acquisitions was carried forward in The Plan.

Although lands were identified for acquisition, it is not a goal to purchase private lands only to add to Federal ownership in this state. There is also no limitation to a specific form of acquisition, and budget constraints could preclude purchase of nonFederal lands. Exchange is preferred over sale or purchase. Land acquisition is proposed for Areas of Critical Environmental Concern, but no disposal.

Recreation Management

Casual Uses

Will horse riding, camping and hiking be allowed on public lands where my family and I traditionally ride and camp? Are these opportunities identified in the plan? Yes, The Draft Plan, The Supplement and The Plan does not restrict casual uses such as hiking, horseback riding, picnicking, and camping throughout the planning area, and within all Areas of Critical Environmental Concern. Depending on the management prescription for an area, access may be limited to existing roads, trails, or dry washes, or to designated roads.

I have been target shooting at Sunrise Mountain area for decades, and now I'm not allowed to. Where can I bring my children to teach them to shoot? Target shooting within Las Vegas Valley is prohibited due to urbanization and development. This coincides with the Clark County shooting ordinance. Clark County entities and private groups are conducting feasibility studies and exploring areas for organized shooting facilities outside the Illegal Firearm Discharge Area of Las Vegas valley. The only areas now open to shooting are north of Apex and south of Sloan.

Is there a discussion on the Gold Butte Back Country Byway? This byway is discussed in Chapter 3, page 3-56, of The Draft Plan. The objectives and management direction are intended to enhance recreational opportunities along the Byway and surrounding lands, and continue managing all byways for public enjoyment.

Recreation and Areas of Critical Environmental Concern Management

The Sunrise Mountain and Rainbow Gardens area is a dangerous target shooting area and dump site. What is BLM going to do to clean this area? Why would BLM propose additional uses in the Sunrise Mountain area when it's already heavily used? Will the Rainbow Gardens area be limited to existing roads? The Rainbow Gardens area is a site of considerable casual off-road vehicle activities in recent years, including significant amounts of irresponsible use involving shooting and travel off "existing roads." These activities damage the

botanical and scenic values for which the Area of Critical Environmental Concern designation was proposed. Shooting would be prohibited, consistent with the Clark County shooting ordinance.

The Plan would limit off-road vehicle use to existing roads, trails, and dry washes in the Sunrise/Rainbow gardens area to protect land, vegetation, geological resources, and managed for dispersed casual multiple use. The Sunrise/Rainbow gardens area represents unique urban-wildland recreation management opportunities to interpret the area for its unique geology, and for hiking and riding trails. The Special Recreation Management Area designation would offer more intensive management of the multiple uses of the area presently receiving heavy use. Development of a plan, or Recreation Area Management Plan, would involve the public in identifying hiking, bicycling, equestrian, off-road vehicle trails, picnic areas, parking/staging areas, and shade ramadas. Implementation of the plan would propose routine patrols to help manage and protect natural resources.

What kind of BLM management will occur at Big Dune, and will camping, off-road vehicle or ATV riding be allowed? Big Dune is a highly popular off-road vehicle area for locals and other casual recreationists from the Beatty and the Las Vegas areas. The off-road vehicle management objective for Big Dune Special Recreation Management Area would manage Big Dune for moderate casual off-road vehicle, camping, and other dispersed recreational uses in the dune area. Long-term recreation management within Big Dune would consider the minimum habitat requirements for several special status invertebrate species. Managing Big Dune would occur in a manner that would prevent the future listing of the four candidate wildlife species.

The proposed Big Dune Special Recreation Management Area is 12,800 acres; the Area of Critical Environmental Concern is proposed at 1,920 acres, and limited to the primary dune area only. Big Dune would be designated an Area of Critical Environmental Concern, a designated right-of-way avoidance area, and withdrawn from mineral entry. Approximately 200 acres of the Area of Critical Environmental Concern would be closed to off-road vehicle use in a restricted area on the north side of the dunes. Big Dune would be designated a Special Recreation Management Area to address and resolve conflicts between recreation and sensitive species. A Recreation Area Management Plan would be developed to identify locations for dedicated ingress/egress, staging loci, parking areas, and group camping around the dune; to plan and construct an informational kiosk to educate and inform visitors of crucial beetle habitat; and to reduce environmental impacts to vegetation and wildlife.

Off-Road Vehicle Use Designations

Off-road vehicle designations as described in The Supplement are confusing, and seemingly overbearing. How will I know on the ground where I am allowed to ride my motorcycle or ATV? The off-road vehicle designations were rewritten and consolidated in an attempt to be more clear. The planning area is separated into four off-road vehicle designations, shown on Map 2-10. The boundaries were revised based on public input and evaluations by BLM. "Open" to motorized uses allows unlimited motorized access.

The open category is limited to a portion of Big Dune and Nellis Dunes Special Recreation Management Areas. In Areas of Critical Environmental Concern, roads would be "designated" open or closed, and posted. In the Special Recreation Management Areas and the Extensive Recreation Management Area outside critical tortoise habitat, "limited to existing roads, trails, and dry washes" restricts motorized vehicles to existing roads, trails, two-track routes, and dry sand/gravel washes used for traditional access. Closed areas would be permanently posted, and are limited to Hidden Valley Area of Critical Environmental Concern, and approximately 200 acres within the Big Dune Area of Critical Environmental Concern to protect crucial dune beetle habitat.

Will racing be allowed in areas outside Nellis Dunes? In The Draft Plan, The Supplement, and carried forward to The Plan, the Extensive Recreation Management Area would be managed for a full spectrum of dispersed and organized recreational opportunities. High speed off-road vehicle competitive events would be allowed in the Nellis Dunes Special Recreation Management Area, the Jean Lake\Roach Lake Special Recreation Management Area, and in other areas of the Extensive Recreation Management Area shown on

the Off-Road Vehicle Race Area Map, outside designated critical desert tortoise habitat Areas of Critical Environmental Concern. However, outside of the "open" areas all off-road vehicle racing use would be limited to existing routes.

Restricted Off-Road Vehicle Uses in Areas of Critical Environmental Concern

According to The Draft Plan and The Supplement, will motorcycle riding be restricted in Areas of Critical Environmental Concern? Yes, in Areas of Critical Environmental Concern and in the area between State Highway 160 and U.S. Highway 95, roads not designated and posted "open" would be designated and posted "closed." Most of the rest of the planning area would be limited to existing roads, trails, and dry washes limiting motorized vehicles to existing roads, trails, two-track routes, and dry sand/gravel washes. The vast majority of casual off-road vehicle recreationists limit themselves to these existing routes of travel. It would be illegal to drive off roads in most of the planning area. Non-speed events would be allowed in Areas of Critical Environmental Concern. Events would be limited to existing roads and trails, in Areas of Critical Environmental Concern. Non-speed events would include dual sport self-guided motorcycle scenic tours, commercial tour guides, ex club outings and rides, and other events on a case-by-case basis.

If BLM and U.S. Fish and Wildlife Service designate the Nelson Hills area within the Piute Valley Area of Critical Environmental Concern, will racing be eliminated, and will I be able to ride my motorcycle there anymore? The Management Objective was revised for the Nelson Hills area, and not included within the Piute Valley Area of Critical Environmental Concern. The Nelson Hills area would be available for casual and competitive off-road vehicle use, limited to existing roads, trails, and dry washes.

Wild and Scenic River Designation

If Congress designates and includes the Virgin River into the National Wild and Scenic River System, what will happen to our water rights, and will the water be removed from agricultural uses? If the Interior secretary designates the Virgin River as a study river, BLM and the National Park Service would have suitable time and funding to complete the wild and scenic river study report for suitability for designation as a component of the Wild and Scenic River System. This would provide opportunities for the public and government agencies to review the entire Virgin River at one time. All water rights applications, dams, other projects and agricultural uses and issues would be reviewed at that time.

Cave Management

How was the 3,200 acre estimate of caves/karst resources derived and what does the term "significant" mean? The 3,200 acres figure was an intuitive judgement based on a limited number of reconnaissance inspections of accessible portions of the planning area. The sample was projected for the area using an estimated number of 50 caves/karst resources within 64 acres (one-tenth of a square mile). These were multiplied for an estimated total.

The *Federal Cave Resources Protection Act* of 1968 defines cave resources as any material or substance occurring naturally in caves on Federal lands. This includes biological, paleontological, cultural and geologic resources. A "significant" cave refers to a cave feature that was evaluated by the authorized officer and determined to have biotic, cultural, mineralogic, paleontologic, geologic, hydrologic, or other values for scientific, educational, or recreational purposes.

How can BLM recommend areas within 1/4 mile of a significant cave be closed to mineral entry? Are cave inventories planned in the future? The Federal Cave Resources Protection Act of 1988 (16 U.S.C. 4301-4309) provides criteria and procedures for determination of "significant caves." If a cave does not satisfy those criteria, it would remain open to mineral entry under the General Mining Law. A cave that meets the criteria would remain closed to mineral entry pending a decision by the Secretary of Interior as to its "significance." When cave locations are identified, they would be surveyed, inventoried for the presence of wildlife and other features, and managed under a site-specific cave management plan.

Wilderness Management

Will BLM manage Wilderness Study Areas as wilderness if Congress does not designate them Wilderness Areas? No. BLM will not manage Wilderness Study Areas as wilderness if Congress does not designate them as such. Any lands in Wilderness Study Areas released from wilderness consideration by Congress will be managed for multiple use purposes.

Why are the Sunrise Mountain and Virgin Mountain Instant Study Areas included in table 2-2 located on page 2-30 of The Draft Plan? The Sunrise Mountain Instant Study Area and Virgin Mountain Instant Study Area are included in this table because these Instant Study Areas have not yet been released by Congress. BLM recommended these areas as nonsuitable for designation as wilderness; however, by law, only Congress can make the final determination and release the areas from their Instant Study Area status.

The BLM Wilderness Intensive Inventory appears insufficient for the Buffington Pockets (NV-050-0230) roadless unit, with the wrong conclusions drawn. The Overthrust Belt Special Wilderness Inventory for Buffington Pockets was completed in 1980. The conclusions given on the Wilderness Inventory Summary Sheet identified three reasons for not recommending the Buffington Pockets area for Wilderness designation: 1) The solitude criteria was not met. Solitude was less than outstanding because of minimal vegetation screening, a narrow C-shaped configuration and the less complex topographic diversity; 2) Primitive recreational opportunities are available, but neither diversity nor their quality were found to be outstanding; 3) Major impacts such as mining are too extensive to rehabilitate with hand or natural processes. Because NV-050-0230 does not meet the basic criteria, it was not recommended. There are no plans to include the unit for additional wilderness review.

Will the Final Resource Management Plan use the term "subject to" instead of open when referring to mineral exploration in Wilderness Study Areas released by Congress? All Wilderness Study Areas are open to entry under the general mineral laws. Only designated Wilderness Areas, created by Acts of Congress, are closed to mineral entry. However, mining claims within a WA continue, subject to valid existing rights on the date of creation of a Wilderness Area. All public lands are "subject to" to general mining laws. However, some are "open" to entry while others are "closed" to entry based on Secretarial and Congressional mineral withdrawals, and Acts of Congress. BLM Manual 1624.31A.1. requires all areas under study in a Resource Management Plan be identified as either "open" or "closed" to the operation of the mining laws.

Is there a plan to manage lands released as Wilderness Study Areas consistent with multiple-use mandates? Would racing be allowed and would acreage be subject to disposal in released Wilderness Study Areas? Congress was presented BLM's recommendations of those areas for protection for their wilderness values. Protection of other resource values noted in the report would be accomplished through recommendations provided in The Plan. Page 2-44 of The Supplement notes the general management guidelines for released Wilderness Study Area management. Lands released from Wilderness Study Area designations would be managed consistent with multiple-use policy, laws and regulations. It is doubtful that racing would be allowed in the former Wilderness Study Areas since they are by definition roadless and would be managed as limited to existing roads and trails, which do not exist. There is no land disposal acreage in Wilderness Study Areas in The Plan, consequently, release from the designation would not subject any of these lands to disposal.

Will Wilderness Study Areas released by Congress become Areas of Critical Environmental Concern or Special Recreation Management Areas through this plan? None of the Wilderness Study Areas were directly nominated as Areas of Critical Environmental Concern. However, several Wilderness Study Areas not recommended for wilderness designation are included within Areas of Critical Environmental Concern (including Million Hills, Jumbo Peak, Garret Buttes, Virgin Mountains, and portions of Arrow Canyon). Part of the Muddy Mountains Wilderness Study Area is included in the Muddy Mountain Special Recreation Management Area.

Will the BLM protect areas adjacent to Wilderness Study Areas? There is no authority to impose additional protection to areas adjacent to Wilderness Study Areas. The revision of Wilderness Study Area boundaries would be more appropriately addressed when a wilderness bill is considered in Congress.

Would all Wilderness Study Areas be managed as recreational areas? Other than the Muddy

Mountains area mentioned above, no special emphasis on recreation would occur. Released areas would be managed under policy and regulations that apply to other BLM-administered lands.

Is the Lucky Gypsum Claim area in a proposed Wilderness Study Area? The Lucky Gypsum Claims are in the vicinity of the Sunrise Mountain Instant Study Area, an area recommended by BLM as not a suitable Wilderness Study Area.

Will the Logandale 202 area be recommended for Wilderness? The Logandale Section 202 area would be dropped from further wilderness review because the area does not meet the required standards.

It appears that BLM is designating Wilderness Areas. Doesn't Congress designate Wilderness Areas? The Plan does not preempt Congressional action with regard to designating wilderness. The intention is to provide the public an indication of the future management of areas that Congress does not designate as wilderness.

Is there a conflict in laws or regulations to tunnel underneath an Area of Critical Environmental Concern or Wilderness Study Area for utilities? There would not be a conflict if a proponent proposes construction of a subsurface tunnel beneath an Area of Critical Environmental Concern if it did not impact the resource value that prompted the Area of Critical Environmental Concern designation. The Interim Management Policy for Wilderness Study Area management states, "New rights-of-way may be approved for *temporary* uses that satisfy the nonimpairment criteria." A tunnel would not be considered a temporary use.

Minerals Management

General Questions About Minerals

Will the disposal of the surface and mineral estates of public lands be analyzed? Disposal of the surface estate has already been analyzed. Because none will leave Federal ownership, there is no need to analyze the loss of the mineral estate. Regulations (43 CFR 2720) allow for the disposal of nonexisting mineral values for no cost except an application fee of fifty dollars. Known mineral values may only be disposed if they interfere with or preclude appropriate nonmineral development and such use is more beneficial than the mineral development. This disposal must be made at fair market value. Only a limited number of disposal actions meet this criteria and few applicants are willing to pay fair market value for the available mineral estate. Thus, the only portion of the mineral estate that is normally disposed is the nonexistent portion.

Has BLM complied with requirements for public participation and are maps available showing lands recommended to be withdrawn from mineral entry? All requirements of 43 CFR 1610.2 (Public participation) were met, in particular 1610.2(h) that states, "Supporting documents to a resource management plan shall be available for public review at the office where the plan was prepared." Maps showing established boundaries of lands recommended for withdrawal from the operation of the general mineral laws are available for inspection at the BLM Las Vegas Field Office.

How and when will proposed impacts from new mineral developments be addressed? The Supplement stated, "The economic potential of mineral development cannot be estimated because of the great uncertainty regarding the existence of mineral deposits in sufficient quantity and quality to be commercially feasible." The Plan would be amended annually as needed. All impacts, including economic, from new mineral development would be addressed through this amendment process when they become quantifiable.

What law authorizes the location of mining claims? The location of mining claims is authorized by the General Mining Law of May 10, 1872 (17 Stat. 91, 30 U.S.C. §22). The location of mining claims is a nondiscretionary action, and no permit is required. The law states, "Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase..."

Aren't new mineral finds nearly always associated with old known mineralized areas? New mineral finds are *not* always associated with old known mineralized areas. An example would be Nevada's disseminated gold deposits.

What is the status of the sand and gravel leases? The Las Vegas Valley Land Disposal Area would

be closed to sand and gravel leasing. The existing sand and gravel lease applications within the Las Vegas Valley would not be approved. After June 1, 1999, existing leases within the Las Vegas Valley disposal area would not be renewed, but would be considered under 43 CFR for sand and gravel applications within community pits. No sales under the 3600 regulations would be made until the leases expire.

How will BLM treat its reserved mineral interest in the public lands? Patents and other conveyance documents issued under the Federal Land Policy and Management Act must contain a reservation to the United States of all minerals unless specific findings are made by the Secretary. Section 209(a) of the Federal Land Policy and Management Act (43 USC 1719(a)), states, "All conveyances of title issued by the Secretary ... shall reserve to the United States all minerals in the lands, together with the right to prospect for, mine, and remove the minerals under applicable law and such regulations as the Secretary may prescribe, except that if the Secretary makes the findings specified in subsection (b) of this section, the minerals may then be conveyed together with the surface to the prospective surface owner as provided in subsection (b) of this section."

Section 209(b) of the Federal Land Policy and Management Act authorizes the Secretary to convey mineral interests owned by the United States where the surface is or will be in non-Federal ownership if either 1) he has reason to believe that there are no known mineral values in the land, or 2) the reservation of ownership of the mineral interests in the United States interferes with or precludes appropriate **non-mineral** development of the land **and** such non-mineral development would be a more beneficial use of the land than its mineral development. Mineral interests are conveyed subject to the regulations stated in 43 CFR 2720.

Will adequate sand and gravel sites be made available for construction work? Sand and gravel sites will be made available for construction work, subject to County zoning and permit requirements.

How does BLM distinguish between common varieties and uncommon varieties of mineral materials? In *McClarty* v. *Secretary of the Interior*, 408 F2d 907, 908-909 (1969), the Ninth Circuit Court of Appeals set forth the current standards to distinguish between common varieties and uncommon varieties of mineral materials.

Why is BLM so slow in invalidating mining claims that are in flagrant violation of the mining laws; isn't this mismanagement? As a mining claim is an interest in and a claim to property, the U.S. Supreme Court ruled that it may not be declared invalid except in accordance with due process (Cameron v. *United States*, 252 US 450, 1920). The BLM must abide by the requirement of due process. This process can take decades, as evidenced for the dredge group of sand and gravel claims located in Las Vegas Valley. The BLM began those contest proceedings in 1954, and the final appeal was made to the U.S. Supreme Court in 1981, which was 27 years later *McCall* v. *Andrus*, 628 F2d 1185, (9th Cir., July 10, 1980), *cert. denied*, 49 USLW 3710 (March 23, 1981). Due to limited funding, BLM has not been able to complete validity examinations for all mining claims.

Will a mineral inventory showing known mineral deposits be prepared for the planning area? In Chapter 3 of the Environmental Impact Statement mineral potential is discussed and specific maps are referenced (Maps 3-12 to 3-14). This information was used to analyze mineral potential. Mineral potential reports are a guide for managers to make specific decisions weighing all resource values. They are completed on land exchanges when site-specific information is required for the decision making process. A specific mineral potential report was not completed for The Plan.

Is southern Nevada really a "hotbed" of fraudulent mining activities or is BLM mismanaging the mineral resources? It is fact, not fiction, that southern Nevada is a hotbed of fraudulent mining activities. Due to limited funding, the agency has not been able to complete validity examinations for all mining claims. Nuisance mining claims are common in the area. Some of the more notable examples are the claims the Cities of Mesquite and North Las Vegas were forced to purchase within their land sale areas and the claims the Department of Energy was forced to purchase at Yucca Mountain. In all three cases, a validity examination should have been made on the mining claims. However, the time frames required to give the mining claimants their rights to due process would have precluded all the planned projects.

On July 25, 1974, the Comptroller General issued report number B-118678 in which he stated at page 10: "Those people who file mining claims on public land and who do not actively explore for and develop minerals may prevent those who wish to conduct legitimate mining activity from entering the land for that purpose; this, in effect, hinders the development of mineral resources, contrary to the intent of the mining laws." The report included inspection of 240 randomly selected unpatented mining claims in Arizona, California, Colorado, and Wyoming. Page 8 states that while non-mining activities were noted on some claims: "Of the 240 mining claims, 239 were not being mined at the time of our visits, and there was no evidence that any mineral extraction had ever taken place on 237 of the claims. Also, we found no evidence of mineral exploration work, such as pits, shafts, or cuts on the land, for 146 of the 240 claims. On the basis of our sample results, we estimate that no minerals had ever been extracted on 197,000 of the estimate 200,000 claims."

Why does The Draft Plan arbitrarily state on page 2-32 that surface occupancy will be avoided "on or within one-quarter mile of developed or designated recreation facilities?" This statement is incorrect. The Draft Plan does not state that surface occupancy will be avoided "on or within one-quarter mile of developed or designated recreational facilities." It states that it would be avoided whenever possible. The one-quarter mile distance was proposed to ensure that operators are aware of and take efforts to allow continued use of developed recreation facilities.

What mining plans of operation require approval prior to the commencement of any mining operation? 43 CFR 3809.1-4 (Plan of operations: When required) mandates that an approved plan of operations is required prior to commencing the following: 1) Operations that exceed the disturbance level (5 acres) described in 43 CFR 3809.1-3 (Notice: Disturbance of 5 acres or less); 2) Operations in areas designated for potential addition to, or an actual component of, the national wild and scenic rivers system; 3) Operations in designated Areas of Critical Environmental Concern; 4) Operations in areas designated as part of the National Wilderness Preservation System and administered by BLM; and 5) Operations in areas designated *closed* to off-road vehicle as defined in 43 CFR 8340.

What is the meaning of the symbol "" on page 2-2 of The Draft Plan and why are the statements so vague and ambiguous?* Page 2-2, the first paragraph under the "No Action Alternative" heading states, "Note: Objectives and Management Direction followed by an asterisk, "*", are taken verbatim from the Esmeralda-Southern Nye Resource Management Plan (Planning Area B). All other Objectives and Management Direction are reproduced verbatim from the Clark County Management Framework Plan." Although many statements in this section may be vague, they cannot be changed because the No Action Alternative retains the status quo. They can only be modified and elaborated as done for Alternatives A through E.

On page 2-81 of The Draft Plan, how can "standard conditions" be standard if they are imposed on just 16 percent of the fluid mineral estate? The term "standard terms and conditions" refers to a set of stipulations that is part of every oil and gas lease. There is no relationship between the percentage of an area subject to these stipulations and whether or not these stipulations are "standard."

On page 4-9 of The Draft Plan, does "all" mineral exploration affect plants? No, but plants are affected by most mineral exploration activities as well as all mineral development activities.

On page 4-20 of The Draft Plan, why is no mention made of the benefits of recording, stabilization, collection, excavation, curation, and other actions? These benefits were not discussed because Chapter 4 describes environmental consequences and is not the proper forum for discussing possible mitigative measures. Although these kinds of actions may provide mitigation, their beneficial nature is questionable.

On page 4-61 of The Draft Plan, doesn't the use of uncertainty as an excuse for failing to address the economic potential of mineral development skew the decision against land use? There is great uncertainty regarding the existence of oil/gas deposits in sufficient quantity and quality to be commercially feasible. Using uncertainty as an excuse for failing to address the economic potential of mineral development is neutral and does not skew decisions for or against land use. The Supplement, "The economic potential of mineral development cannot be estimated because of the great uncertainty regarding the existence of mineral

deposits in sufficient quantity and quality to be commercially feasible." All impacts, economic and otherwise, from new mineral development would be addressed through this amendment process when they become quantifiable.

On page 4-118 of The Draft Plan, aren't the oil and gas impacts overstated? No, oil and gas impacts are reasonably stated. There is great uncertainty regarding the existence of oil/gas deposits in sufficient quantity and quality to be commercially feasible. In fact, absent this data, possible oil and gas impacts may be understated by excluding field development.

Doesn't oil and gas exploration affect only a small portion of the Las Vegas BLM District? Yes, the estimated exploration disturbance would be roughly two-tenths of one percent of the Las Vegas BLM District.

Shouldn't BLM request technical input from U.S. Geologic Service and Bureau of Mines regarding the Las Vegas BLM District Resource Management Plan since BLM's geologists have too narrow a background to adequately prepare and review this plan? 43 CFR 2310.3-2 requires that a minerals resource analysis be prepared by a qualified mining engineer, engineering geologist, or geologist for the Secretary or the Congress to make a decision or recommendation on a requested withdrawal. There is no requirement that the mineral potential be examined by the U.S. Geologic Service and/or the U.S. Bureau of Mines. The added expertise of a mining engineer, petroleum engineer, and/or mineral economist is not required by either laws or regulation.

On page 3-71, where will BLM list and describe minerals that are currently being mined in the Amargosa Valley? Minerals such as sepiolite, saponite, calcium bentonite, hectorite, and zeolites would be individually listed and described in the mineral inventory of the area encompassed by The Plan.

On page 4-14, are there significant mortality impacts to wildlife from minerals activities? Yes, impacts to wildlife from mineral exploration and development would include direct mortality during construction, loss and degradation of habitat, harassment, increased possibilities of incidental take during these activities, and the proliferation of access roads into wildlife habitat. Depending on the extent and location of the activity, impacts may be significant.

On page 4-20, will seismic surveys using vibrators result in significant impacts to cultural resources? Seismic testing, using vibrators involves truck mounted ground vibrating devices that typically use existing roads. Overland travel over previously undisturbed ground would only occur in gently sloping areas accessible to these trucks. Opening of previously inaccessible areas, and effects to intangible cultural or religious values that could only be identified by associated cultural groups, such as values in Traditional Lifeway Areas.

Mineral Closures and Withdrawals

Will the withdrawal of lands from mineral entry interfere with my property rights? There will be no interference with any property rights, including "proven, producing mineralized claims", as the proposed withdrawal will be subject to all valid rights on the date of the withdrawal. In *United States* v. *Rich Knoblock et al.*, IBLA 90-249, October 18, 1994, stated at 131 IBLA 114-115, "It is a truism long recognized that, despite the mandates of the law, individuals often locate mining claims at the first indication of value, long before evidence is collected that might justify the development of the claims. As long as a discovery ultimately occurs while the land remains open to mineral entry, the Government will not concern itself with the order of the acts of location and discovery. See *Cole* v. *Ralph*, 252 U.S. 286 (1920). However, where the Government has determined to withdraw land from the operation of the mining laws, only such claims already continuing a discovery are excepted from the force of this action, since only such claims possess rights as against the United States."

That case further explains that any individual who locates a claim prior to making a discovery holds the risk that the Government will withdraw the land before a discovery can be completed, thereby negating all his efforts . Sharing a similar risk are those who know of the statutory requirement that discovery precede location, but refrain from staking a claim until such time as a discovery is shown to exist.

What is the purpose of the proposed withdrawal of the Las Vegas Valley Air Quality Non-Attainment

Area from the mining laws? The purpose of the proposed withdrawal of the Las Vegas Valley Air Quality Non-attainment Area from the operation of the general mining laws, subject to valid existing rights on the date of the withdrawal, was to address the need to comply with Federal, state, and local air quality standards for minerals actions occurring on lands administered by BLM.

In The Plan, the Las Vegas Valley disposal area, which is smaller than the non-attainment area, Map 2-3, would be closed to locatables, leasables and open to salables. The need for sand and gravel in the Las Vegas Valley is recognized by leaving the community gravel pits open to mineral material sales, subject to conformity with the State Implementation Plans for PM10 and carbon monoxide emissions.

What lands will contain closures to locatable, leasable, or saleable mineral entry, and how were they determined? The Supplement was issued in an attempt to address various concerns made by representatives of the minerals industry, specifically concerning the semi-primitive, nonmotorized recreation opportunity spectrum areas. The Supplement emphasized biodiversity and the protection and recovery of the threatened desert tortoise. This alternative was modified based on evaluation of the No Action Alternative and Alternatives A, B, C, and D, and input from the public, and carried forward to The Plan. All Areas of Critical Environmental Concern, Nellis Dunes, Muddy River, and Virgin River riparian zones and floodplains would be recommended for withdrawal from the operation of the general mining laws subject to valid existing rights on the date of the withdrawal. (see Table 2-12 in The Plan) They would be closed to solid mineral leasing and to all mineral material disposals, to include material site rights-of-way, except along specific highway corridors, and fluid mineral leasing would be subject to no surface occupancy stipulations.

Are public lands exempt from withdrawal when the lands encompass valid mining claims that would qualify for patent? All withdrawals from the operation of the general mining laws are subject to valid existing rights on the date of the withdrawal. It is possible that lands with valid existing rights might become completely surrounded by withdrawn lands.

Can existing withdrawals be terminated by decisions made in a planning document? Existing withdrawals cannot be terminated by decisions made in a planning document. Existing withdrawals may only be revoked at the specific request of the agency holding the withdrawal or through the withdrawal review process mandated by the Federal Land Policy and Management Act.

Isn't it absurd to withdraw lands from existing mining districts and from around old mines? It is not absurd, many people think lands in existing mining districts and around old mines have been exhausted, or "mined out." The reason the mining districts and mines ceased to operate is because a prudent person would not continue to extract minerals when the market or commodity price is low. In reality, existing districts or old mines typically have potential for future extractions and it is that potential conflict with other uses that requires withdrawal from minerals.

Can public lands be withdrawn or reclassified for a specific use only by an Act of Congress? Are areas that are closed to mineral entry also closed to mineral exploration? Areas closed to mineral entry are not necessarily closed to mineral exploration. It is possible to withdraw or classify lands for a specific use without an Act of Congress. However, the management activity that necessitated the withdrawal may preclude access or any earth disturbing work, or removal of samples from the withdrawn lands.

Under Alternative D, how many acres would be open and closed to the location of mining claims? Under Alternative D, approximately 4 million acres would be open to the location of mining claims, and 632,065 acres would be closed.

Why are lands left open to mineral leasing in the Preferred Alternative when they are closed to mineral leasing in Alternative B? Areas closed to all mineral leasing (fluid and solid) in Alternative B were left open to all mineral leasing (fluid and solid) in Alternative D of The Draft Plan, because there would be no reason to offer the six alternatives (No Action, A, B, C, D, and E) if all were the same. Based on evaluation of all comments, the areas closed to mineral leasing are listed in Chapter 2, under M-N-1g.

Mineral Status of Specific Locations

What is the status of the mineralized district in T.70S., R.15E.? Map 2-10 in The Supplement was read incorrectly. T.70S., R.15E. does not exist. T.15S., R.70E. is the correct legal description. Sections 1, 12-14, 23-27, and 34-36 of T.15S., R.70E. occur within the boundary of the Virgin Mountain Area of Critical Environmental Concern. The remainder (sections 2-11, 15-22, and 28-33) of this township occur within the boundary of the Gold Butte A Area of Critical Environmental Concern. The historic Copper King (Bunkerville, Great Eastern, Key West, Virgin Peak) mining district is recognized as including both the Great Eastern and Key West mines. Subject to valid existing rights, these areas are recommended for withdrawal.

What is the status of the rock quarry on the south end of Mount Potosi? A building stone quarry is located at the south end of Mount Potosi on the Flagstone #1-10 group of association placer mining claims. Three claims are located on BLM lands and the other seven are on U.S. Forest Service lands. Six claims are under examination for validity pursuant to mineral patent application N-55979 submitted by Thelma Poole et al.

Why weren't the Bullfrog Mine and its owner, LAC Minerals Ltd., notified that the Las Vegas BLM District Resource Management Plan was being prepared? The Bullfrog Mine is located in the Tonopah Resource Area of the Battle Mountain District. The Draft Plan addresses only this planning unit, and the Bullfrog Mine is outside the boundaries.

Why are patented mining claims in T. 20 S., R. 66 E., Calville Wash, not shown on map 2-25B in The Draft Plan? There are no patented mining claims in either T.20S., R.66E. or in Calville Wash. There are patented mining claims northwest of this location in Lovell Wash in T. 20 S., R. 65 E., Sec. 11-14. The small scale of the map prohibits showing of all patented lands.

Mineral Status of Areas Outside the Planning Area

Does BLM have any responsibility in the management of either the surface or mineral estates located within the Lake Mead National Recreation Area? Doesn't 43 CFR 3109.2 give the Lake Mead National Recreation Area authority to approve, stipulate, or deny lease applications on Park Service lands? BLM is not responsible for surface management within the Lake Mead National Recreation Area. However , BLM has the responsibility for managing the mineral estate of all lands that are located within the Lake Mead National Recreation Area, subject to their General Management Plan. Because locatable minerals are leasable within the Lake Mead National Recreation Area, the mineral estate is administered by BLM's Nevada State Office in Reno. This estate was originally the responsibility of USGS (Conservation Division) until the division was disbanded and its duties divided between BLM and Minerals Management Service.

The Memorandum of Understanding between BLM and the National Park Service relates to cooperation between the two agencies. The reference to the Lake Mead National Recreation Area authority in approving or denying lease applications in 43 CFR 3109.2 only pertains to oil and gas leasing. However, all leasing is subject to the Lake Mead National Recreation Area General Management Plan.

What is the mineral status of lands involved with the Valley of Fire State Park? The lands that comprise Recreation and Public Purpose application N-36868 for the Valley of Fire State Park are open to the operation of the general mining laws, while lands patented to the State of Nevada through Recreation and Public Purpose and classified for disposal through Recreation and Public Purpose (applications N-3836 and N-4202) are closed to the operation of the general mining laws.

Minerals, Caves, Areas of Critical Environmental Concern and Wilderness

Shouldn't karst areas remain open for mineral entry? Because karst areas are considered more valuable for their geologic scientific values than for mineral values, they are closed to mineral entry. The Supplement replaced the term "significant caves and karst resources" with the term "significant caves and alcoves." This change was carried forward to The Plan.

What is the status of Wilderness Study Areas regarding mineral entry, and how will the Resource Management Plan identify this status? Will the Resource Management Plan reflect terminology changes related to Congressional actions on Wilderness Study Area designation, from

"not designated" to released? Wilderness Study Areas are open to mineral entry under the general mineral laws. Only Wilderness Areas, as created by Acts of Congress, are closed to mineral entry. Mining claims with valid discovery rights, on the date of the creation of the Wilderness Areas would remain valid. Wilderness Study Areas are managed under the Interim Management Policy, an interim plan during the study process. Surface disturbance that might impair wilderness values is not allowed. Claims may still be located and non-impairing assessment work performed in Wilderness Study Areas under the General Mining Law. Claim development in a non-impairing manner would be very difficult. The changes in management from "not designated" to "released" are discussed in The Plan.

What is the status of mineral withdrawals, sand and gravel sources, and mineral resources in released Wilderness Study Areas? Environmentally suitable sources of sand and gravel are provided to meet the development needs of southern Nevada. Mineral resources in released Wilderness Study Areas would be available for development consistent with other resource values.

Why aren't the lands located south of the Virgin Mountains and Gold Butte Areas of Critical Environmental Concern protected within an Area of Critical Environmental Concern of their own? The entire Gold Butte area is an Area of Critical Environmental Concern in The Plan. Also, approximately 73 percent of the BLM administered lands located south of the Virgin Mountains Area of Critical Environmental Concern and Gold Butte A Area of Critical Environmental Concern are within the boundaries of the Gold Butte B Area of Critical Environmental Concern, providing certain administrative protection.

Why are Areas of Critical Environmental Concern open to fluid mineral leasing? The rationale for leaving the Areas of Critical Environmental Concern open to fluid mineral leasing in The Plan is that fluid mineral leases are discretionary actions. Additionally, tortoises within the Areas of Critical Environmental Concern could be fully protected by implementation of the no surface occupancy stipulations.

Hazardous Materials Management

Why did the Resource Management Plan fail to address hazardous materials management? While The Draft Plan did not address hazardous materials management, a section concerning this issue is within The Plan. The Hazardous Materials Program has responsibility to evaluate all actions including land use authorizations and disposals, mining and milling activities, and unauthorized land uses. Land use decisions incorporate consideration whether hazardous materials would be used to develop appropriate management prescriptions. Site-specific inventories for hazardous materials are conducted as part of land use compliance actions when lands are proposed for disposal or acquisition. Mining and milling sites are inspected to determine appropriate management for hazardous materials. Knowledge of the locations of these activities alerts the agency concerning existing and potential problems. The agency attempts to minimize releases of hazardous materials through compliance with current regulations. When hazardous materials are released into the environment, impacts on resources is assessed and appropriate response, removal and remedial actions are taken.

Fire Management

Why does the plan suggest erosion can be controlled through implementation of the Las Vegas BLM District Normal Fire Rehabilitation Plan? The plan should provide a summary description of the Fire Rehabilitation Plan. The Las Vegas BLM District Normal Fire Rehabilitation Plan is intended to aid in reducing erosion after wildfires only. It is not stated, nor implied, that it is intended to apply to all potential erosion situations or that fire is the greatest contributor to erosion. An explanation of the purpose of the Fire Rehabilitation Plan was added to The Plan.

What is the rationale for using prescribed fire for resource enhancement and protection? Fire should only be used if it is a benefit to the natural ecosystem. Would there be any prescribed burns without site-specific plans? The two objectives are general guidelines for evaluating the needs for prescribed burns. Prescribed burns are restricted to situations or areas where studies determine that the action would be a positive benefit to the natural ecosystem. There are few areas that meet all these conditions. A site-specific Environmental Assessment and burn plan would be required to analyze any proposed prescribed burn. This process

requires public and agency cooperation and review. Site-specific mitigation, rationale, and procedures would be discussed in detail.

Planning and National Environmental Policy Act

What is the status of lands and issues, such as hunting and shooting, within Red Rock Canyon National Conservation Area? Lands located within the boundaries of Red Rock are not within the planning area, and therefore not part of The Plan. A separate General Management Plan is being prepared to address all Red Rock lands.

Isn't Assumption 1 in Chapter 4 not "real world?" Funding and staffing should not be "pie in the sky." The availability of funding is uncertain, and often beyond the control of local BLM offices. Congress controls the funding to government agencies through the Federal Budget. Agencies are required to follow specific mandates, laws, regulations and policies, and in developing a proposed budget request make certain assumptions concerning funding. The Plan identifies numerous objectives and management directions based on analyses of needs to implement existing laws, regulations and policy.

This Resource Management Plan planning is a meaningless exercise. Don't these documents simply become "stuck on a shelf" and become ignored? Planning documents such as The Plan are referenced for all actions, such as recreation permits, rights-of-way, and grazing permits, to ensure conformance with existing land use plans. Plan conformance is required by regulations and policy and is documented in categorical exclusions, environmental assessments, and administrative determinations.

There is no reference to the existing cooperative agreement between State Parks and BLM. The cooperative agreement between the Division of State Parks and BLM would continue. Developing and maintaining cooperative agreements with other agencies that are considered consistent with the goals of BLM is a standard operating procedure. At the level of planning in a document such as the Resource Management Plan, identification of each cooperative agreement is not appropriate.

Does the Resource Management Plan fit Ecosystem Management Policy? The Resource Management Plan fits well with the ecosystem management approach. Coordination with other states and agencies is ongoing. The BLM coordinates with other entities on a habitat basis to ensure that Desert Tortoise Recovery Unit boundaries are not delineated by state or county lines. Management of the desert tortoise is the main reason for preparation of the Resource Management Plan.

Why doesn't the Resource Management Plan analyze specific impacts, such as the effects from land disposal to soil, water, air and vegetation, on a site-specific basis? The intent of a 20-year planning document such as a Resource Management Plan is to outline resource objectives and provide general guidance to process individual actions such as approval for the disposal of specific land parcels or processing of individual rights-of-way. Due to a determination that desert tortoise protection is a major issue, this resource management is emphasized in the plan. An analysis of impacts to specific resources such as vegetation from site-specific actions is beyond the scope of The Plan. Site-specific environmental analysis would be completed on a case-by-case basis to comply with the National Environmental Policy Act. If this analysis identifies a parcel with a resource that requires protection, then the management process would determine if the action would be appropriate.

Why weren't public comments to BLM addressed? The written and oral comments provided by the public during scoping meetings, after publications of The Draft Plan and The Supplement, and in public meetings held after publication of The Draft Plan, were reviewed and used by the staff to develop The Plan.

Could actions other than those proposed in The Draft Plan and The Supplement be implemented to accomplish the goals of this plan? Actions not in conformance with a Resource Management Plan cannot be implemented without a plan amendment. For example, closing allotments to grazing due to lack of funding to protect riparian areas is not a feasible action. Private water rights make it difficult to improve riparian habitat conditions, unless a cooperative permittee is involved. BLM is actively working with cooperative permittees to fence riparian areas, providing water outside the fence for livestock and wild horses and burros, where appropriate.

By combining alternatives, the BLM is not following the proper National Environmental Policy Act process to develop the final plan. The process to develop The Plan is stated in BLM Manual 1616. "The proposed plan may utilize an alternative identified in the draft plan and draft Environmental Impact Statement, portions of other alternatives, or a modified alternative previously analyzed in detail." The public was provided with a set of alternatives, two public comment periods, and eight hearings. The Plan would be analyzed through the appropriate National Environmental Policy Act process.

All individuals, agencies and groups who provided comments during the comment periods have the right to protest The Plan to the BLM Director prior to issuance of a Record of Decision. The protests can only address issues identified in the original comments. The Director's decision is final. The Interior Board of Land Appeals has consistently dismissed any appeal on a Resource Management Plan based on a determination that such cases are outside its jurisdiction. The Interior Board of Land Appeals further stated that the BLM protest period is the only procedure available to resolve differences concerning land use plan decisions. The plan would be forwarded to Congress for review based on the elimination of uses from tracts of land of 100,000 acres or more. Also, there is no requirement for BLM to select the preferred alternative. In this case BLM would select a modified version of Alternative E for The Plan.

Aren't mitigation measures developed through the National Environmental Policy Act process? This is correct. The management direction in The Plan describes the National Environmental Policy Act process that is used for mitigation actions.

Does the 6th Assumption for Analysis imply BLM would analyze undefined disposal areas for impacts. The action for analysis is only the disposal, and specific disposal areas are identified in each alternative.

Why doesn't the environmental consequences section analyze impacts to livestock grazing from lands actions such as rights-of-way, withdrawals, and development of corridors. Based on analysis of the actions in association with the proposed allotments, the determination was made that lands management would not significantly impact the use of any allotment open to grazing. For example, proposed powerline corridors cross only two allotments that would remain open to grazing. Of the two, the Jean Lake allotment already has several powerlines.

Are actions that would occur on private lands considered within the scope of BLM's review? The National Environmental Policy Act states that when considering cumulative impacts the agency should analyze reasonably foreseeable future actions on both public and private lands (40 CFR 1508.7). Therefore, actions occurring on private lands that add cumulatively to the impacts caused by all projects in an area both private and Federal are within the scope of BLM review.

The BLM did not allow the public input early in the process. Weren't the scoping meetings poorly attended due to a lack of advertising to the parties most directly affected? The agency provided adequate opportunities for scoping during nine public meetings held in the urban and rural centers in southern Nevada. The public was notified through the publication of a Notice of Intent in the Federal Register.

The Resource Management Plan should focus first on the positive benefits to people and the Nation. Resource management plans are written to comply with existing laws, regulations, executive orders, and policy. Economic impacts of the proposed plan are included in the document. Impacts to people are not uniform in either a positive or negative sense. Because numerous laws were passed to protect the environment, the BLM is required by law to propose necessary measures to protect the public land resource.

The Resource Management Plan needs to be a "stand alone" document. Only one alternative, which may contain sections from other alternatives, was selected for The Plan. The alternative was selected based on its assessed potential to "stand alone." This would reduce any confusion to the reader.

Why doesn't the Resource Management Plan contain discussion on how or where actual work will be done? An implementation plan will be completed after approval of the Resource Management Plan. Implementation is a method to systematically accomplish those actions determined by approval of The Plan. A clear implementation plan is critical to prepare funding proposals and

workload estimates, and prioritize and schedule staff workload to ensure Resource Management Plan decisions are completed. Copies of the implementation plan will be available at the Las Vegas BLM District office after its completion.

The Resource Management Plan needs to be more specific on coordination with State, County agencies. Coordination with state and county agencies is standard operating procedure. It is not appropriate in this level of planning document to identify each Memorandum of Agreement. The coordination would continue.

Why didn't the plan identify or consider specific state or county plans in objectives and management direction, within the proposed action? The Plan would be in conformance with those regional plans that are consistent with Federal laws. However, each specific plan would not be identified within the document.

Why doesn't The Draft Plan fulfill National Environmental Policy Act requirements to identify: 1) unavoidable adverse environmental effects, 2) the relationship between short-term uses and long-term productivity, and 3) irreversible commitments of resources? Unavoidable adverse and short-term and long-term impacts are discussed in the Environmental Consequences section of the document. Irreversible commitments of resources are those that can not be reversed, except perhaps in the extreme long-term, such as species that become extinct, removal of subsurface ore and rangeland conditions that are depleted beyond its "threshold." The protection provided through the listing of the desert tortoise and similar actions identified in The Draft Plan are not considered irreversible.

Why didn't The Draft Plan offer mitigation for reducing or offsetting adverse economic impacts to the livestock industry? The 43 CFR identifies compensation to livestock permittees for their interest in range improvements located on public lands. Identifying specific mitigation for offsetting economic impacts is beyond the scope of The Plan.

Why was the Clark County Habitat Conservation Plan identified in an alternative if the plan was not complete, and only a draft? Extensive coordination occurred among Clark County, U.S. Fish and Wildlife Service, and BLM to ensure growth could continue in the Las Vegas Valley, after the desert tortoise was listed as threatened. The Plan reflects this coordination.

The alternatives are not different enough to meet National Environmental Policy Act requirements. The kinds of proposals and protection actions for resources vary among alternatives, are considered "different enough" for National Environmental Policy Act requirements.

BLM violated 40 CFR, 1508.20. Council on Environmental Quality regulations were not violated. According to the National Environmental Policy Act 1500.1 (c), "The National Environmental Policy Act process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore and enhance the environment." The desert tortoise, a threatened species, is part of the environment. Due to its listing, steps must be taken to ensure its survival.

The BLM does not quantify potential impacts. The impacts were stated in an acceptable format, and many were quantified in Chapter 4 of The Draft Plan and The Supplement.

The Resource Management Plan/Environmental Impact Statement is not in conformance with the National Environmental Policy Act because specific mitigation is not referenced, nor is the probability of mitigation implementation discussed. The document is in conformance with the National Environmental Policy Act. Mitigation is built into the alternatives where necessary. Any additional mitigation for specific projects would be developed during a separate National Environmental Policy Act process for each individual proposed action.

Doesn't implementation of this plan have the potential, under Presidential Executive Order 12630, to be considered a "taking" of real and intangible property and property rights? Multiple use management on public lands does not constitute a "taking" of private lands. Proper management should enhance natural resource values and preserve them for the enjoyment of all in the future. The following citation is from Presidential Executive Order 12630, noted incorrectly in the comment as 12930.

Presidential Executive Order 12630 refers to "takings" of private lands. Section 2. *Definitions.* For the purpose of this Order: (a) "Policies that

have takings implications" refers to Federal regulations, proposed Federal regulations, proposed Federal legislation, comments on proposed Federal legislation, or other Federal policy statements that, if implemented or enacted, could effect a taking, such as rules and regulations that propose or implement licensing, permitting, or other condition requirements or limitations on **private** property use, or that require dedications or exactions from owners of **private** property. "Policies that have takings implications" **does not include**: . . . (4) Studies or similar efforts or planning activities..."

How does BLM propose to increase ranger patrols in tortoise habitat areas as proposed by the Resource Management Plan? How will BLM will enforce off-road vehicle designations? Two BLM law enforcement officers are currently assigned to patrol the proposed tortoise Areas of Critical Environmental Concern. The officers are funded by the *Clark County Short-term Habitat Conservation Plan*. Citations are issued by law enforcement officers under applicable Federal regulations. They work closely with the Metropolitan Police Department, Nevada Highway Patrol, U.S. Fish and Wildlife Service and the Nevada Division of Wildlife Law Enforcement Branch. The BLM law enforcement ranger staff, with assistance from other agencies when needed, would enforce the rules or laws for all resource programs.

Socioeconomic Values

What kinds of economic impacts would implementation of the plan cause to the grazing constituents? Analysis of The Draft Plan and The Supplement in relation to grazing management found that the incremental regional economic benefits derived would be extremely small in comparison with the No Action Alternative (USFWS 1993). In Chapter 4, BLM financial analysis of the affected livestock operations reached the same conclusion. Nonetheless, the customary lifestyle of livestock operators (ranchers) is very much appreciated and respected. There is also the realization that many ranchers depend on their grazing operations for a supplemental income and means of subsistence if necessary, to include a lifeway that develops a commendable work ethic and sense of independence.

Nonetheless, BLM is compelled to comply with the provisions of the Endangered Species Act that mandates the protection and conservation of the endangered desert tortoise. The Act mandated the consideration of the economic benefits, costs, and other relevant effects of critical habitat designation in determining actions to protect and conserve the listed specie. According to the economic analysis of the USFWS in 1993, economic costs were less than the benefits to protect and conserve the desert tortoise.

Won't there be an adverse decline of economic benefits if off-road vehicle racing locations are reduced? No. The decision to concentrate racing activity from areas of higher ecosystem values to lesser values would provide benefits in the preservation of the species and ecosystems for the southern Nevada population. No data indicated any loss of income as a result of BLM's decision to reduce land availability for off-road vehicle racing or use. In fact, the 76 to 229 million dollars range of income that the off-road vehicle industry generates could increase with continued marketing efforts by the industry,

Won't the restrictions on mining in the plan adversely affect the economic basis of a large number of people in southern Nevada? The mining industry provides substantial income and employment opportunities in southern Nevada. However, the economic benefits of the mining industry in Southern Nevada are not as great in comparison to other industries except Nye County. Opportunities to expand mining activities in Southern Nevada are constrained by the actions in The Plan. There is a restriction for extracting sand and gravel resources to a minimal number of regional pits that will be located as close to the resource and construction markets as possible. This would tend to reduce the level of disturbance to the urbanites who want better air quality, less traffic congestion, and landscape problems in their neighborhoods.

The reduction of mining in rural locations is a result of legislated tortoise and wilderness designations that requires BLM compliance. Also, the result of examination of the public values and attitudes in this area indicates the need for a sustained economic growth with minimal impact on the quality of life (Sodin 1995).

GLOSSARY

ACRE-FOOT: The volume of water that will cover an acre of land to a depth of one foot (323,851 gallons or 43,560 cubic feet).

ACTIVITY PLAN: A detailed, specific plan for management of a single resource program or plan element undertaken as necessary to implement the more general resource management plan decisions.

ADVERSE EFFECT (Cultural Resources): Alteration of the characteristics which contribute to the use(s) determine appropriate for a cultural resource or which qualify a cultural resource property for the *National Register of Historic Places* to such a degree that the appropriate use(s) are reduced or precluded, or the cultural property is disqualified from *National Register of Historic Places* eligibility. Criteria in the regulations of the Advisory Council on Historic Preservation (36 CFR Part 800) guide the process for making the determination of effect.

AIR POLLUTION: Accumulation of aerial wastes beyond the concentrations that the atmosphere can absorb and which may, in turn, damage the environment.

AIR QUALITY CLASSES: Classes established by the Environmental Protection Agency (EPA) that define the amount of air pollution considered significant within an area:

> I: Almost any change in air quality would be considered significant.
> II: Deterioration normally accompanying moderate, well-controlled growth would be considered insignificant.
> III. Deterioration up to the national standards would be considered insignificant.

ALCOVE: A small rock shelter.

ALL-TERRAIN VEHICLE: Any motorized off-highway vehicle 50 inches or less in width, having an unladen dry weight of 600 pounds or less. The vehicle also has three or more low-pressure tires, handle bars for steering control, and a seat designed to be straddled by the operator.

ALL-TERRAIN BICYCLE: A bicycle equipped for both street riding and off-road trail riding.

ALLOTMENT: An area allocated for the use of the livestock or one or more qualified grazing permittees or lessees which includes prescribed numbers and kinds of livestock under one plan of management.

ALLOTMENT MANAGEMENT PLAN: A documented program which applies to livestock operations on the public lands, which is prepared in consultation with the permittee (s) or lessees involved, and which : 1) prescribes the manner in which livestock operations will be conducted in order to meet the multiple-use, sustained yield, economic, and other needs and objectives as determined for the public lands through land use planning.

ALLUVIAL FAN: A fan-shaped accumulation of disintegrated soil material; water deposited and located in a position where the water departs from a steep course to enter upon a flat plain or open valley bottom.

ALLUVIUM: Material, including clay, silt, sand, gravel, or similar unconsolidated sediments, deposited by a stream bed or other body of running water.

AMBIENT AIR QUALITY: Prevailing condition of the atmosphere at a given time; the outside air.

ANIMAL UNIT MONTH (AUM): The amount of food or forage required by an animal unit (one cow or five sheep) for 1 month.

ANNUAL PLANT SPECIES: A plant that completes its life cycle and dies in 1 year or less.

APPARENT TREND: An interpretation of the direction of change in vegetation and soil protection over time, based on a single observation. Apparent trend is described in the same terms as measured trend except that when no trend is apparent, it shall be described as none.**AQUIFER:** A water-bearing unit of permeable rock or sediment which is capable of yielding water to wells.

APPROPRIATE MANAGEMENT LEVEL (AML): The number of wild horses and burros suitable for a herd management area as determined through BLM's planning process and evaluation of monitoring data.

AQUIFER: A formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield economical quantities of water to wells and springs.

ARCHAIC PERIOD: An archeological period of about 8,000 years ago, and continuing to approximately A.D. 500.

ARCHEOLOGICAL DISTRICT: An area that provides a concentration of cultural properties in a discrete, definable location.

AREA OF CRITICAL ENVIRONMENTAL CONCERN: Areas within the public land where special management attention is needed to protect and prevent irreparable damage to important historical, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

ASPECT SPECIES: A vegetation species that appears to be dominant in the landscape, although it may be only a small percent of the total vegetation composition.

BASE PROPERTY: Lands or water sources on a ranch that are owned by or under long-term control of the operator.

BIOMASS: The total quantity of living organisms of one or more species per unit of space (called species biomass) or of all the species in a community (called community biomass).

BROWSE: (noun) That part of leaf and twig growth of shrubs, woody vines, and trees available for animal consumption. (verb) To consume browse.

BROWSERS: Animals which feed primarily on browse.

CALICHE: A layer in the soil more or less cemented by calcium carbonates (CaCo3), commonly found in arid and semiarid regions.

CAMPSITE: A cultural site type representative of all periods consisting of temporary habitation areas which usually contain a lithic scatter, evidence of fire use, ground stone, and pottery scatter.

CANDIDATE SPECIES: Any species of plant or animal listed in the for consideration to be listed as threatened or endangered by U.S. Fish and Wildlife Services (USFWS) under the Endangered Species Act. Definitions for Categories 1 and 2 candidate species, excerpted from the *Federal Register*, are as follows:

> *Category 1:* Taxa for which the USFWS currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species. Presently, data are being gathered concerning precise habitat needs, and for some of the taxa, concerning the precise boundaries for critical habitat designations. Development and publication of proposed rules on these taxa are anticipated, but, because of the large number of such taxa, could take some years. Also included in category 1 are taxa whose status in the recent past is known, but that may already have become extinct.
>
> *Category 2:* Taxa for which information now in possession of the USFWS indicates that proposing to list them as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules. Further biological research and field study usually will be necessary to ascertain the status of the taxa in Category 2, and some of the taxa are of uncertain taxonomic validity. It is likely that some of the taxa will not warrant listing, while others will be found to be in greater danger of extinction than some taxa in category 1.

CARRYING CAPACITY: Maximum stocking rate possible without inducing damage to vegetation or related resources. It may vary from year-to-year on the same area due to fluctuating weather conditions and forage production. (See Grazing capacity.)

CAVE: Any naturally occurring void, cavity, recess, or system of interconnected passages which occurs beneath the surface of the earth or within a cliff or ledge (including any cave resource therein, but not including any vug, mine, tunnel, aqueduct, or other

manmade excavation) and which is large enough to permit an individual to enter, whether or not the entrance is naturally formed or manmade. Such term shall include any natural pit, sinkhole, or other feature which is an extension of the entrance.

CLAY: A mineral soil separate consisting of particles less than .0.002 millimeters in equivalent diameter.

CLIMAX VEGETATION COMMUNITY: The final or stable community in a series of successive vegetation states which is self-perpetuating and in dynamic balance with the physical and biotic environment.

COMMUNITY: A group of plants and animals living together in a common area and having close interactions.

CONTRAST (VISUAL): The effect of a striking difference in the form, line, color, or texture of an area being viewed.

CONTRAST RATING: A method of determining the extent of visual impact of an existing or proposed activity that will modify any landscape feature.

COORDINATED RESOURCE MANAGEMENT PLAN: A plan for management of one or more allotments that involves all the affected resources, e.g. range, wildlife, and watershed.

COVER: Small rocks, litter, basal areas of grass and forbs, and aerial coverage of shrubs that provide protection to the soil surface (i.e. in contrast to bare ground.)

CRITICAL SOILS: Soils that (1) contain very highly saline soils and/or (2) are very susceptible to water erosion.

CRITICAL WATERSHED: An area of soils that (1) have a high potential for salt yield; (2) are subject to severe water and wind erosion when disturbed; (3) have high runoff potential during storm events; (4) are subject to frequent flooding; or (5) have a potential for loss of vegetation productivity under high rates of wind and water erosion.

CRITICAL WILDLIFE HABITAT: Is defined in the Endangered Species Act as follows (i) The specific areas within the geographical area occupied by an animal species at the time it is listed in accordance with the provisions of section 4 of this Act on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific area outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

CRUCIAL WILDLIFE HABITAT: Sensitive use areas that are necessary to the existence, perpetuation, or introduction of one or more species during critical periods of their life cycles.

CULTURAL PROPERTY: Any definite location of past human activity, habitation or use identified through a field inventory (see below), historical documentation or oral evidence. This term may include (1) archeological or historic sites, structures and places, and (2) sites or places of traditional cultural or religious importance to a specific group, whether or not represented by physical remains. Cultural properties are managed by the system of inventory evaluation, protection, and use.

CULTURAL RESOURCES: Those fragile and non-renewable remains of human activities, occupations, and endeavors as reflected in sites, buildings, structures, or objects, including works of art, architecture, and engineering. Cultural resources are commonly discussed as prehistoric and historic values, but each period represents a part of the full continuum of cultural values from the earliest to the most recent.

CULTURAL RESOURCE INVENTORY CLASSES: BLM 8100 Manual provides through classes of inventory.

> *Class I* is an Existing Date Inventory: an inventory study of a defined area designed to provide a narrative overview (cultural resource overview) derived from existing cultural resource information and to provide a compilation of existing cultural resource site record data on which to base the development of BLM's site record system.

Class II is a Sampling Field Inventory designed to locate and record, from surface and exposed profile indications, all cultural resource sites within a portion of a defined area in a manner which will allow an objective estimate of the nature and distribution of cultural resources in the entire defined area. The Class II inventory is a tool utilized in management and planning activities as an accurate predictor of cultural resources in the area of consideration. The primary area of consideration for the implementation of a Class II inventory is a planning unit. The secondary area is a specific project in which an intensive field inventory (Class III) is not practical or necessary.

Class III is an intensive field inventory designed to locate and record, from surface and exposed profile indications, all cultural resource sites within a specified area. The acceptable form to conduct this survey is for a qualified archaeologist to walk transects with a maximum interval of 100 feet. The inventory is used to identify any resources that may qualify for nomination to the *National Register of Historic Places*. Normally, upon completion of such inventories in an area, no further cultural resource inventory work is needed. A Class III inventory is appropriate on small project areas, all areas to be disturbed, and primary cultural resource areas.

CULTURAL SITE: A physical location of past human activities or events. Cultural resource sites are extremely variable in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features. Prehistoric and historic sites which are recorded as cultural resources have sociocultural or scientific values and meet criterion of being more than 50 years old.

DESERT PAVEMENT: A natural, residual concentration of wind-polished, closely packed pebbles, boulders, and other rock fragments, mantling a desert surface where wind action and sheetwash have removed all smaller particles. It usually protects the underlying, finer-grained material from further deflation. The coarse fragments commonly are cemented by mineral matter.

DESIGNATED RIGHT-OF-WAY CORRIDOR: A parcel of land, either linear or areal, that has been identified by Secretarial Order, through the land use planning process, or by other management decision, as a preferred location for existing and future rights-of-way grants and suitable to accommodate more than one type of right-of-way or one or more rights-of-way which are similar, identical, or compatible.

DESIRED PLANT COMMUNITY: The plant community that has been determined through a land use or managementn plan to best meet the plan's objectives for a site. A real documented plant community that embodies the resource attributes for the present or potential use of an area, the desired plant community is consistent with the site's capability to produce the required resource attributes through natural succession, managementn intervention, or a combination of both.

DIVERSITY: An attribute of an area which is an expression of both the total number and relative abundance of species, communities, or habitats. Relative abundance can be measured by numbers of individuals, cover, or various other characteristics.

EARLY SERAL STAGE: A plant community with a species composition which is 0-25% of the potential natural community one would expect to find on that ecological site.

ECOLOGICAL SITE: A kind of land with a specific potential natural community and physical site characteristics differing from other kinds of land in its ability to produce vegetation and to respond to management.

ECOLOGICAL STATUS: The present state of vegetation and soil protection of an ecological site in relation to the potential natural community for the site. Vegetation status is the expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble that of the potential natural community. If classes are used, they should be described in ecological rather than utilitarian terms. Soil status is a measure of present vegetation and litter cover relative to the amount of cover needed on the site to prevent accelerated erosion.

ECONOMIC IMPACT: The change, positive or negative, in economic conditions (including distribution and stability of employment and income in affected local and regional economies) that directly or indirectly result from an activity,' project, or program.

ECOSYSTEM: A complex self-sustaining natural system which includes living and nonliving components of the environment and the circulation of matter and energy between organisms and their environment.

ECOSYSTEM MANAGEMENT: The skillful use of ecological, economic, social, and managerial principles in managing ecosystems to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values and services over the long term. Also, a process of land and resource management that emphasizes the care and stewardship of an area to ensure that human activities will be carried out to proctect natural processes, natural biodiversity, and ecological integrity.

ENDANGERED SPECIES: An animal or plant whose prospects for survival and reproduction are in immediate jeopardy, and as further defined by the Endangered Species Act of 1973.

ENVIRONMENTAL ASSESSMENT (EA): A concise public document for which a Federal agency is responsible that serves to: (a) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact; (b) aid an agency's compliance with the National Environmental Policy Act (NEPA) when no environmental impact statement is necessary; (c) facilitate preparation of a statement when one is necessary. An EA includes brief discussions of the need for the proposal, of alternatives as required by Sec. 102 (2) of NEPA, of the environmental impacts of the proposed action and other alternatives, and a listing of agencies and persons consulted.

ENVIRONMENTAL CONSEQUENCE: A temporal or spatial change in the human environment caused by an act of man. The change should be (1) perceptible, (2) measurable, and (3) relatable through a change agent to a proposed action or alternative. A consequence is something that follows an antecedent (as a cause or agent). Consequences are synonymous with impacts and effects.

ENVIRONMENTAL IMPACT STATEMENT (EIS): A written analysis of the impacts on the environment of a proposed project or resource management plan.

EPHEMERAL RANGE: A rangeland that does not consistently produce enough forage to sustain a livestock operation but may briefly produce unusual volumes of forage to accommodate livestock grazing.

EROSION: The wearing away of land surface by wind, running water, and other geological agents.

EVALUATION (Cultural Resources): The analysis of cultural resource inventory records, the application of professional judgement to identify characteristics that contribute to possible uses for recorded cultural resources, and the recommendation of appropriate use(s) for each resource or group of resources. National Register eligibility criteria, 36 CFR Part 60, are interpreted through or with reference to BLM evaluation criteria.

EXISTING RIGHT-OF-WAY CORRIDOR: A parcel of land, without fixed limits or boundaries, that is being used as the locations for one or more rights-of-way.

EXOTIC SPECIES: A species which is not native to the United States.

EXTENSIVE RECREATION MANAGEMENT AREAS (ERMAs): Areas where recreation is unstructured and dispersed and where minimal recreation-related investments are required. ERMAs provide recreation visitors the freedom of choice with minimal regulatory constraint.

FEDERAL LAND: Land owned by the United States, without reference to how the land was acquired or which federal agency administers the land, including mineral or coal estates underlying private surface.

FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA): Public Law 94-579, which gives the BLM legal authority to establish public land policy, to establish guidelines for administering such policy and to provide for the

management, protection, development and enhancement of the public land.

FIRE MANAGEMENT: The integration of fire protection, prescribed burning, and fire ecology knowledge into multiple use planning, decision making, and land management activities.

FORAGE: All browse and herbaceous foods available to grazing animals.

FORAGE UTILIZATION: An index of the extent to which forage is used. Utilization classes range from slight (less than 20 percent) to severe (more than 80 percent).

FORB: Any herbaceous nonwoody plant that is not grass or grass-like.

GRASS: Any of a family of plants with narrow leaves, jointed stems, and seed- like fruit.

GRAZING PREFERENCE: The total number of AUMS of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee or lessee. Active preference combined with suspended non-use make up total grazing preference.

GROUND WATER: Water beneath the land surface, in the zone of saturation.

GULLY EROSION: Removal of soil leading to formation of relatively large channels or gullies cut into the soil by concentrations of runoff.

HABITAT: A specific set of physical conditions that surround the single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

HABITAT MANAGEMENT PLAN (HMP): A written and officially approved plan for a specific geographical area of public land which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives, and outlines procedures for evaluating accomplishments.

HAZARDOUS WASTE OR MATERIAL (HAZMAT): Any substance that poses a threat to the health or safety of persons or the environment. These include any material that is toxic, ignitable, corrosive, or radioactive.

HEAVY USE: Indicates that 60-80 percent of current year's forage production has been eaten or destroyed by grazing animals.

HERD MANAGEMENT AREA PLAN (HMAP): A written and officially approved plan for a specific geographical area of public land which identifies wild horse (or burro) herd use areas and habitat, identifies population and habitat objectives, establishes the sequence of actions for achieving objectives, and outlines procedures for evaluating accomplishments.

HISTORICAL CULTURAL RESOURCES: Historical cultural resources include all mines, ranches, towns, resorts, railroads, trails, and other evidence of human use from the time of the entrance of the Europeans to 1938.

INSTANT STUDY AREA: In additional to the study of roadless areas, Section 603(a) of FLPMA mandated that areas that were formally identified as natural or primitive areas be studied for their wilderness characteristics. With the passage of FLPMA, these *instantly* became study areas. The recommendations for Instant Study Areas in Nevada were completed in 1985 and forwarded to Congress, where they have received no action, and cotinue to the managed under the policies of the Interim Management Policy and Guidelines for Lands Under Wilderness Reivew (IMP).

ISOLATED TRACT: A parcel of public lands surrounded by non-federal lands.

KARST: A type of topography that results from dissolution and collapse of limestone, dolomite, or gypsum beds and is characterized by closed depressions or sinkholes, caves, and underground drainage.

KEY FORAGE SPECIES: Forage species whose use serves an indicator of the degree of use of associated species.

LAND DISPOSAL: A transaction that leads to the transfer of title of public lands from the federal government.

LATE SERAL: A plant community with a species composition which is 51-75% of the potential natural community one would expect to find on that ecological site.

LEASABLE MINERALS: Minerals such as coal, oil shale, oil and gas, phosphate, potash, sodium, geothermal resources, and all other minerals that may be acquired under the Mineral Leasing Act of 1920, as amended.

LIMESTONE: A sedimentary rock consisting chiefly (more than 50 percent) of calcium carbonate, primarily in the form of calcite.

LITHIC: A stone or rock exhibiting modification by humans. It generally applies to projectile points, scrapers and chips, rather than ground stone.

LITHIC SCATTER: A prehistoric cultural site type where flakes, cores, and stone tools are located as a result of the manufacture or use of the tools.

LOAM: Soil material that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.

LOCATABLE MINERALS: A mineral subject to location under the 1872 mining laws. Examples of such minerals would be gold, silver, copper, and lead as compared to oil and natural gas, which are leasable minerals.

LONG-TERM PLANNING: Twenty years and beyond; approximately the year 2012.

MANAGEMENT FRAMEWORK PLAN (MFP): A planning decision document that establishes for a given planning area land use allocations, coordination guidelines for multiple use, and management objectives to be achieved for each class of land use or protection. An MFP is prepared in three steps: (1) resource recommendations, (2) impact analysis and alternative development, and (3) decision making.

METALLIC MINERALS: Those minerals whose native form is metallic or whose principal products after refinement are metallic.

MIC ALLOTMENT CATEGORY CRITERIA:

Maintain Category Criteria

a. Present range condition is satisfactory.
b. Allotments have moderate or high resource production potential, and are producing near their potential.
c. No serious resource-use conflicts or controversies exist.
d. Opportunities may exist for positive economic return from public investments.
e. Present management appears to be satisfactory.
f. Other criteria appropriate to Environmental Impact Statement area.

Improve Category Criteria

a. Present range condition is unsatisfactory.
b. Allotments have moderate to high resource production potential and are producing at low to moderate levels.
c. Serious resource-use conflicts and controversies exits.
d. Opportunities exist for positive economic return from public investments.
e. Present management appears unsatisfactory.
f. Other criteria appropriate to Environmental Impact Statement area.

Custodial Category Criteria

a. Present range condition is not a factor.
b. Allotments have low resource production potential, and are producing near their own potential.
c. Limited resource-use conflicts and controversies exist.
d. Opportunities for positive economic return on public investment do not exist or are constrained by technological or economic factors.
e. Present management appears satisfactory or is the only logical practice under existing resource conditions.
f. Other criteria appropriate to Environmental Impact Statement area.

MID SERAL STAGE: A plant community with a species composition which is 26-50% of the potential natural community one would expect to find on that ecological site.

MINERAL ENTRY: The location of mining claims by an individual to protect his right to a valuable mineral.

MINERAL WITHDRAWALS: Closure of land to mining laws, including sales, leasing and location, subject to valid existing rights.

MITIGATION: The lessening of a potential adverse effect by applying appropriate protection measures, the recovery of cultural resource data or other measures.

MODERN URBAN: One of the six classes of the recreation opportunity spectrum. In modern urban areas, opportunities to experience recreation in affiliation with individuals and groups are prevalent, as is the convenience of recreation sites and opportunities. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant. Opportunities for competitive spectator sports are common, as are opportunities to use parks and open spaces highly influenced by people.

MODERATE USE: Indicates that 40-60 percent of current year's forage production has been eaten or destroyed by grazing animals.

MONITORING: The orderly collection and analysis of data to evaluate progress in meeting resource management objectives.

MULTIPLE USE: Management of public lands and their various resource values so that they are used in the combination best meeting the present and future needs of the American people. Relative resource values are considered, not necessarily the combination of uses that will give the greatest potential economic return or the greatest unit output.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): National standards, established under the Clean Air Act by the Environmental Protection Agency (EPA), prescribed levels of pollution in the outdoor air which may not be exceeded. There are two levels of NAAQS: primary, set at a level to protect the public health from air pollution damage, and secondary set at a level to protect public welfare from air pollution damage.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) OF 1969: A law enacted on January 1, 1970 that established a national policy to maintain conditions under which man and nature can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations of Americans. It established the Council on Environmental Quality for coordinating environmental matters at the federal level and to serve as advisor to the President on such matters. The law made all federal actions and proposals which could have significant impact on the environment subject to review by federal, state, and local environmental authorities.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): The primary federal law providing for the protection and preservation of cultural resources. NHPA established the National Register of Historic Places, the Advisory Council on Historic Preservation, and the State Historic Preservation Officers.

NATIONAL REGISTER OF HISTORIC PLACES (NRHP): A list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, and culture maintained by the Secretary of the Interior. Expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 U.S.C. 462) and Section 101(a) (1)(A) of the National Historic Preservation Act.

NATURAL AREA: Land managed for (1) retention of its typical or unusual plant or animal types, associations or other biotic phenomena; or (2) its outstanding scenic, geologic, soil or aquatic features or processes.

NONPOINT POLLUTION: Pollution from scattered sources, as opposed to pollution from one location, e.g. a manufacturing plant.

NONUSE: Current authorized grazing use (in AUMs) that is not used during a given time period. Nonuse is applied for and authorized on an annual basis.

OFF-ROAD VEHICLE (ORV): Any motorized vehicle capable of or designed for cross-country travel

over any type of natural terrain.(43 CFR 8340.0-5(a)). Often use interchangeably with OHV.

OFF-HIGHWAY VEHICLE: Any motorized vehicle or mechanical transport designed for moving people or materials in or over land, water, snow or air that has moving parts and that is powered by a living or nonliving power source. This does not include wheelchairs when used as necessary medical appliances. This term is used interchangeably with ORV which more specifically refers to motorized vehicles as defined in 43 CFR 8340.

OFF-HIGHWAY VEHICLE DESIGNATIONS: BLM designations used in this document are as follows:

> **Open areas** are designated areas and trails where ORVs may operate without restrictions.
>
> **Limited areas** are designated areas and trails where the use of ORVs is subject to restrictions such as limits on the number or types of vehicles allowed or the dates and times of use, limit of use to existing roads and trails, or limit of use to designated roads and trails.
>
> **Closed areas** are areas and trails where the use of ORVs are permanently or temporarily prohibited. Emergency use of vehicles is allowed.

OVERGRAZING: Consumption of vegetation by herbivores beyond the endurance of a plant to survive.

PERENNIAL PLANT SPECIES: A plant that has a life cycle of 3 years or more.

PERENNIAL STREAM: A stream of portion of stream which flows continually.

PERMITTEE: One who holds a permit to graze livestock on public land.

PETROGLYPH: A form of rock art manufactured by incising, scratching or pecking designs into rock surfaces.

PICTOGRAPH: A form of rock art created by applying mineral based or organic paints to rock surfaces.

PLANT COMMUNITY: One or more plant species growing in association on a given location of area.

PLAYA: The usually dry and nearly level lake plain that occupies the lowest part of a closed depression.

POTENTIAL NATURAL COMMUNITY: The stable biotic community that would become established on an ecological site if all successional stages were completed without human interference under present environmental conditions.

PREDATOR: An animal that preys on one or more other animals.

PRIMITIVE: One of the six classes of the recreation opportunity spectrum. Primitive areas offer recreation opportunities for isolation from the sights and sounds of human activities, where a visitor can feel a part of the natural environment, experience a high degree of challenge and risk, and use outdoor skills.

PROPER FUNCTIONING CONDITION: Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filter sediment capture bedload, and aid floodplain development; improve against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is a result of interaction among geology, soil, water, and vegetation.

PROPOSED SPECIES: Any species of plant or animal formally proposed by the U.S. Fish and Wildlife Service (USFWS) to be listed as threatened or endangered under the Endangered Species Act.

PUBLIC LAND: Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States

acquired ownership, except lands located on the Outer Continental Shelf; lands held for the benefit of Indians, Aleuts, and Eskimos; and lands in which the United States retains the minerals, but surface is private.

RANGE IMPROVEMENT: A structure, development or treatment used to rehabilitate, protect or improve the public lands to advance range betterment.

RANGE SITE: Rangeland that differs in its ability to produce a characteristic natural plant community. A range site is the product of all the environmental factors responsible for its development. It is capable of supporting a native plant community typified by an association of species that differ from other range sites in the kind or proportion of species or in total production.

RANGE TREND: The direction of change in range condition; it indicates whether range condition is improving, declining or remaining stable.

RANGELAND CONDITION (ECOLOGICAL): The present state of the vegetation on a range site in relation to the climax (natural potential) plant community for that site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the climax plant community for the site. Rangeland condition is basically an ecological rating of the plant communitY

There are four classes that are used to express the degree to which the composition of the present plant community reflects that of the climax.

Condition Class	Range Site
Excellent	76-100
Good	51-75
Fair	26-50
Poor	0-25

RANGELAND CONDITION TREND: The direction of change in rangeland condition.

RAPTOR: Any predatory bird (such as a falcon, hawk, eagle or owl) that has feet with sharp talons or claws adapted for seizing prey and a hooked beak for shearing flesh.

RECREATION OPPORTUNITY SPECTRUM: A continuum used to characterize recreation opportunities in terms of setting, activity, and experience opportunities. Six classes are included: Primitive, Semiprimitive Nonmotorized, Semiprimitive Motorized, Roaded Natural, Rural, and Modern Urban.RIGHT-OF-WAY (ROW) An easement or permit which authorizes public land to be used for a specified purpose that generally requires a long narrow strip of land. Examples are roads, powerlines, pipelines, etc.

RECREATION VISITOR DAY: An aggregation of 12 visitor hours. A visitor hour is the presence of one or more persons on land and water for outdoor recreation for periods totalling 60 minutes; one person for one hour, two persons for one-half hour each, and so on.

RIPARIAN/WETLAND AREA: A riparian/wetland area is an area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.

RIPARIAN ZONE: The banks and adjacent areas of water bodies, water courses, seeps, springs, and meadows, whose waters provide soil moisture sufficiently in excess of that otherwise available locally so as to provide a more moist habitat than that of contiguous plains and uplands.

ROADED NATURAL: One of the six classes of the recreation opportunity spectrum. Roaded natural areas offer about equal opportunities for affiliation with other user groups or isolation from sights and sounds of human activities. Such areas provide the opportunity for visitors to have a high degree of interaction with the natural environment. Challenge and risk opportunities are not very important except in specific challenging activities. The practice of outdoor skills may be important. Opportunities for both motorized and nonmotorized recreation are present.

ROCK ART (PETROGLYPH OR PICTOGRAPH):. An Archaic to Modern cultural site type consisting of incised or painted figures such as people, animals, plants or abstracts on a rock surface.

ROCK SHELTER: An archaeological or cultural resource site type consisting of an area protected by an overhanging cliff. Rock shelters were used by aboriginal Native Americans from the earliest known presence in the region until the early 1920s. The sites are often associated with the same materials as a campsite or rock art.

RUNOFF: A general term used to describe the portion of precipitation on the land that ultimately reaches streams; may include channel and non-channel flow.

RURAL: One of the six classes of the recreation opportunity spectrum. In rural areas, opportunities to experience recreation in affiliation with individuals and groups are prevalent, as is the convenience of recreation sites. These factors generally are more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant except in activities involving challenge and risk.

SAND: Individual rock or mineral fragments in a soil that range in diameter from 0.05 to 2.0 millimeters. Most sand grains consist of quartz, but they may be of any mineral composition. The textural class name of any soil that contains 85 percent or more sand and less that 10 percent clay.

SECTION: One square mile or 640 acres.

SECTION 202 WILDERNESS STUDY AREA: A Wilderness Study Area under study through the authority of Section 202 of the *Federal Land Policy and Management Act* of 1976. This requires recurrent land use planning by the Bureau of Land Management.

SEDIMENT: Solid, clastic material, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by water, wind, or ice and has come to rest on the earth's surface.

SEMI-PRIMITIVE MOTORIZED RECREATION: One of the six classes of the recreation opportunity spectrum. Semiprimitive motorized areas offer some opportunities for isolation from the sights and sounds of human activities, but this is not as important as opportunities for primitive recreation. Use of these areas involves the opportunities for visitors to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills. Such an area provides an explicit opportunity to use motorized equipment while in the area.

SEMI-PRIMITIVE NON-MOTORIZED RECREATION: One of the six classes of the recreation opportunity spectrum. Semiprimitive nonmotorized areas offer some opportunities for isolation from the sights and sounds of human activities, but this is not as important as opportunities for primitive recreation. Use of these areas involves the opportunity for visitors to have a degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills.

SENSITIVE SPECIES: Species of plant and animal designated as such by the BLM State Director, in cooperation with the State of Nevada Department of Conservation and Natural Resources. BLM policy is to provide these species with the same level of protection as is provided for candidate species under BLM Manual 6840.06D.

SEVERE USE: Utilization in excess of 80 percent.

SHORT-TERM IMPACT: Ten years or less; approximately the year 2001.

SILT: Sedimentary material consisting primarily of mineral particles intermediate in size between sand and clay/

SLIGHT USE: Indicates that 0 to 20 percent of current year's forage production has been eaten or destroyed by grazing animals.

SOILS: (a) The unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for the growth of land plants. (b) The unconsolidated mineral matter of the surface of the earth that has been influenced by genetic and environmental factors including parent material, climate, topography, all acting over a period of time

and producing soil that differs from the parent material in physical, chemical, biological, and morphological properties and characteristics.

SOIL ASSOCIATIONS: (a) A group of defined and named taxonomic soil units occurring together in an individual and characteristic pattern over a geographic region, comparable to plant associations in many ways. (b) A soil mapping unit in which two or more defined taxonomic units occurring together in a characteristic pattern are combined because of map scale or intermixing of taxonomic units.

SOIL COMPACTION: A decrease in the volume of a soil as a result of compressive stress from livestock trampling as an example.

SOIL DEPTH:

Lower boundary in inches.	
Very shallow	12
Shallow	12 – 20
Moderately deep	20 – 36
Deep	36 – 40
Very deep	40

SOIL PROFILE: A succession of soil zones or horizons beginning at the surface that have been developed through normal soil-forming processes.

SOIL SERIES: A group of soils having genetic horizons (layers) that, except for texture of the surface layer, have similar characteristics and arrangement in the profile.

SPECIAL RECREATION MANAGEMENT AREA (SRMA): An area where special management or intensive recreation management is needed. Recreation activity plans are required, and greater managerial investment in facilities or supervision can be anticipated.

SPECIAL STATUS SPECIES: Special status species include all species of plants and animals that are federally listed as threatened, endangered or candidates for listing; species proposed for listing as threatened or endangered; species listed by the State for reasons of endangerment or extinction; and species identified by the BLM as sensitive.

SUCCESSION: An orderly process of community development that involves changes in species structure and community processes with time; it is reasonably directional and, therefore, predictable.

SUSTAINED YIELD: The achievement and maintenance in perpetuity of a high level of annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

THREATENED SPECIES: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, and as further defined by the Endangered Species Act of 1973.

THRIVING NATURAL ECOLOGICAL BALLANCE: A thriving ecological balance occurs when: 1) use of key perennial forage species within Herd Management Areas does not exceed 50 percent for grasses and 45 percent of current year's growth for shrubs and forbs; 2) forage plant species exhibit static or apparent upward trend; 3) sufficient water is available for the number of animals found in the Herd Management Area; and 4) the wild horses and burros found in an area are in fair to good physical condition throughout the year.

TRADITIONAL CULTURAL PROPERTY: A specific location where a community traditionally conducted exclusive or special activities, or has a unique significance in its spiritual or religious world. Its principal values are often intangible, and not restricted to locations of archaeological artifacts or locations. A Traditional Cultural Property may be encompassed by a Traditional Lifeway Area.

TRADITIONAL LIFEWAY AREA: A specific location where a community traditionally conducted exclusive or special activities, or has a unique significance in its spiritual or religious world. Its principal values are often intangible, and not restricted to locations of archaeological artifacts or features. A Traditional Cultural Property may be encompassed by a Traditional Lifeway Area.

UTILIZATION: The portion of the current year's forage production that is consumed or destroyed by grazing animals.

VEGETATION STATUS: The expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble that of

the potential plant community (see early seral, mid seral, late seral and potential natural community).

VIABLE POPULATION: A population that contains an adequate number of individuals appropriately distributed to ensure a high probability of long-term survival without significant human intervention.

VIEWSHED: The landscape that can be directly seen under favorable atmospheric conditions from a viewpoint or along a transportation corridor.

VISUAL RESOURCES: Visible features of the landscape including land, water, vegetation, and animals.

VISUAL RESOURCE MANAGEMENT (VRM): The planning, designing, and implementation of management objectives for maintaining scenic value and visual quality on public lands (see appendix on BLM Visual Resource Management).

WASH (DRY WASH): The channel of a flat-floored ephemeral stream, commonly with very steep to vertical banks cut in unconsolidated material. It is usually dry but can be transformed into a temporary watercourse or short-lived torrent after heavy rain within the watershed.

In southern Nevada, dry washes are commonly used transportation corridors due to flat sand or gravel surfaces, lack of vegetation and accessibility as compared to the surrounding terrain. Casual off-road vehicle use would be limited to those dry washes greater than 8 feet in width.

WILDERNESS CHARACTERISTICS: Identified by Congress in the 1964 Wilderness Act; namely size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values such as geological, archeological, historical, ecological, scenic, or other features. It is required that the area possess at least 5,000 acres or more of contiguous public land or be of a size to make practical its preservation and use in an unimpaired condition; be substantially natural or generally appear to have been primarily by the forces of nature, with the imprint of man being substantially unnoticeable; and have either outstanding opportunities for solitude or a primitive and unconfined type of recreation.

WILDERNESS STUDY AREAS (WSA): A roadless area which has been found to have wilderness characteristics.

WILDERNESS STUDY CRITERIA: The criteria and quality standards developed in the Wilderness Study Policy to guide planning efforts in the wilderness EISs.

WILD HORSE AREA: An area of the public lands which provides habitat for one or more wild horse herds.

WILD HORSE: All unbranded and unclaimed horses and their progeny that have used public lands on or after December 15, 1971, or that do use these lands as all or part of their habitat.

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ACRONYMS AND ABBREVIATIONS

ABZLAA	Aerojet Buffer Zone Lease Agreement Area
ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ADC	Animal Damage Control
AIRFA	*American Indian Religious Freedom Act* of 1978
AML	Appropriate Management Level
AMNWR	Ash Meadows National Wildlife Refuge
AMP	Allotment Management Plan
AMRP	Ash Meadows Recovery Plan
AMS	Analysis of the Management Situation
APE	Area of Potetnial Effect
AQCR	Air Quality Control Regions
AQS	Air Quality Standard
ARMP	Approved Resource Management Plan
ATB	All Terrain Bicycle
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
BCB	Back Country Byway
BMP	Best Management Practices
BO	Biological Opinion
BOR	Bureau of Reclamation
BLM	Bureau of Land Management
CCHD	Clark County Health District
CCRFCD	Clark County Regional Flood Control District
CEQ	Council on Environmental Quality
CDCA	California Desert Conservation Area
CFR	Code of Federal Regulations
CHU	Critical Habitat Unit
CRA	Caliente Resource Area
CRBSP	Colorado River Basin Salinity Project
CRC	Colorado River Commission
CRMP	Coordinated Resource Management and Planning
DCA	Desert Conservation Area
DCP	Desert Conservation Plan
DEIS	Draft Environmental Impact Statement
DLE	Desert Land Entry
DNWR	Desert National Wildlife Range
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DPC	Desired Plant Community
DRMP	Draft Resource Management Plan
DRP	Draft Resource Plan
DTCC	Desert Tortoise Conservation Center
DWMA	Desert Wildlife Management Area
DVNEA	Desert View Natural Environmental Area
DVNM	Death Valley National Monument
DWMA	Desert Wildlife Management Area
EA	Environmental Assessment
ECC	Erosion Condition Class
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	*Endangered Species Act* of 1973
ESL	Endangered Species List
ESR	Erosion Susceptibility Rating
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Area
FDWS	Federal Drinking Water Standards
FEIS	Final Environmental Impact Statement
FFMA	Fire Fuels Management Area
FLPMA	Federal Land Policy and Management Act
FMIR	Fort Mojave Indian Reservation
FP	Flood Plain
FRLSP	Floyd R. Lamb State Park (formerly Tule Springs)
FRP	Fire Rehabilitation Plan
FSA	Fire Suppression Area
FUA	Fire Use Area
FY	Fiscal Year
GAO	General Accounting Office
GIS	Geographic Information Systems
GMP	General Management Plan
HAZMAT	Hazardous Materials
HCP	Habitat Conservation Plan
HMA	Habitat/Herd Management Area
HMAP	Herd Management Area Plan
HMP	Habitat Management Plan
I-	Interstate (highway)
IBLA	Internal Board of Land Appeals
IMP	Interim Management Policy
IPP	Intermountain Power Project
ISA	Instant Study Area
LADWP	Los Angeles Department of Water and Power
LDA	Lands Disposal Areas
LLDA	Laughlin Land Disposal Area

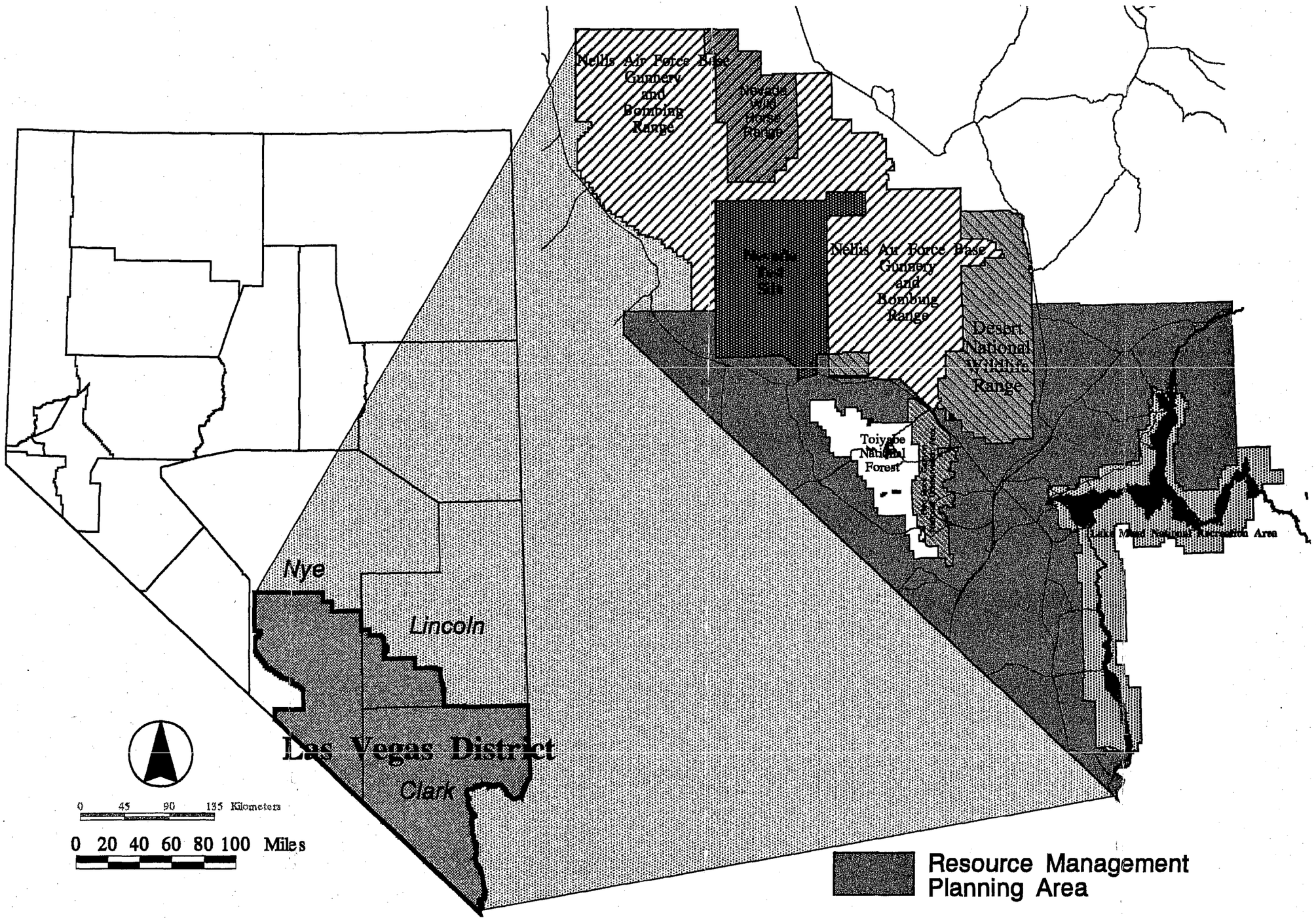
LMNRA	Lake Mead National Recreation Area (NPS)
LVDO	Las Vegas District Office (BLM)
LVDRL	Las Vegas Dunes Recreation Lands
LVPIR	Las Vegas Paiute Indian Reservation
LVVAQNA	Las Vegas Valley Air Quality Non-attainment Area
LVVWD	Las Vegas Valley Water District
MAT	Marketplace-Allen 500 kV Transmission project
MCL	Mid-Carpace Length
MDA	Minerals Disposal Area
MFP	Management Framework Plan
mg/l	milligrams per liter
MMS	Mineral Management Service
MNSAMP	Mojave National Scenic Area Management Plan
MNWR	Moapa National Wildlife Refuge
MOA	Memorandum of Agreement
MOG	Management Oversight Group
MOU	Memorandum of Understanding
MRIR	Moapa River Indian Reservation
MSA	Management Situation Analysis
NAAQS	National Ambient Air Quality Standards
NAFB	Nellis Air Force Base
NAFR	Nellis Air Force Range
NBS	National Biological Survey
NDOT	Nevada Department of Transportation
NDOW	Nevada Division of Wildlife
NDF	Nevada Division of Forestry
NEPA	National Environmental Policy Act of 1969
NERC	National Ecology Research Center
NHA	Natural Hazard Area
NHPA	*National Historic Preservation Act* of 1966
NOI	Notice of Intent
NPS	National Park Service
NRCA	National Resources Conservation Service (previously SCS)
NRI	National Rivers Inventory
NRS	Nevada Revised Satutes
NRSTF	National Range Studies Task Force
NSO	Nevada State Office
NTS	Nevada Test Site
NWHR	Nevada Wild Horse Range
NWR	National Wildlife Refuge
ONA	Outstanding Natural Areas
ORV	Off-road Vehicles
OST/MR	Old Spanish Trail/Mormon Road
OSWMA	Overton State Wildlife Management Area
PFC	Proper Functioning Condition
PNC	Potential Natural Community
PRP	Proposed Resource Plan
PRMP/FEIS	Proposed Resource Management Plan/Final Environmental Impact Statement
PL	Public Law
RAMP	Recreation Activity/Area Management Plan
R&PP	Recreation and Public Purposes (Act)
RFDS	Reasonable Foreseeable Development Scenario
RFFA	Reasonably Foreseeable Future Action
RL	Recreation Lands
RMA	Recreation Management Area
RMAP	Recreation Management Area Plan
RMP	Resource Management Plan
RNA	Resource Natural Area
RPS	Rangeland Program Summary
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Right-of-way
RRCNCA	Red Rock Canyon National Conservation Area
RRCRL	Red Rock Canyon Recreation Lands
RSD	Release Site Description
RZ	Riparian Zone
SCS	Soils Conservation Service (name change to NRCA)
SDRMP	Supplement to the Draft Resource Management Plan
SHPO	State Historic Preservation Office
SMA	Special Management Area
SMBR	Sheep Mountain Bombing Range
SMNA	Sunrise Mountain Natural Area
SMNRA	Spring Mountains National Recreation Area (Toiabe National Forest)
SR	State Route (highway)
SRA	Stateline Resource Area
SRMA	Special Recreation Management Area
SSS	Special Status Species
T&E	Threatened and Endangered (Species)
TAS	Total Adjusted Sign
TCP	Traditional Cultural Property
TDS	Total Dissolved Solids
TLA	Traditional Lifeway Area
TMA	Tortoise Management Area
TNC	The Nature Conservancy
TNF	Toiyable National Forest
URTD	Upper Respiratory Tract Disease

USAF	United States Air Force
US	United States
USC	United States Code
USDI	United States Department of the Interior
USGS	United States Geological Survey
USFS	United States Forest Service
USFWS	United States Fish and Wildife Service
USLW	
VMNNA	Virgin Mountain National Natural Area
VOFSP	Valley of Fire State Park
VRM	Visual Resource Management
VRNRL	Virgin River National Recreation Lands
WA	Wilderness Area
WAPA	Western Area Power Administration
WH&B	Wild Horse(s) and Burro(s)
WHBA	*Wild Horse and Burro Act*
WMP	Watershed Management Plan
WSA	Wilderness Study Area
WSR	Wild and Scenic River

INDEX

Air Quality ---------- 3-2, 3-7
Alternatives ----------2-1, 2-2
Acquisition ----------2-28
Animal Damage Control ----------2-11
Appropriate Management Level----------2-22
Areas of Critical Environmental Concern----------1-8, 2-4, 2-10, 2-15, 2-33, 2-40, 3-37
Ash Meadows----------3-29
Big Dune ----------2-31, 3-30
Cave Management----------2-34
Clark County Habitat Conservation Plan ----------83
Clean Air Act----------3-2
Climate ----------1, 3-7, 3-15
Consistency with Other Plans ----------1-11
Consultation and Coordination----------5-1, 5-2
Corridors----------1-8, 1-9, 2-26
Cultural----------2-22,3-49, 4-24, 4-36, 4-58
Cumulative Impacts----------4-33, 4-53
Desert Bighorn Sheep ----------16, 3-32, 3-33
Desert Tortoise Recovery Plan----------3-36, 4-57
Desired Plant Community ----------2-9
Erosion Condition----------2-9
Erosion Susceptibility ----------2-9
Fire Management----------2-7, 2-38, 2-39, 3-78
Fish Management----------2-4, 2-10
Forestry ----------2-5, 2-20, 3-41, 4-18, 4-35
Hazardous Materials ----------2-7, 2-38, 3-78
Herd Management Area----------2-21, 3-48
Irreversible and Irretrievable Commitment of Resources ----------4-59
Land Disposal ----------1-6, 2-23, 2-24, 2-25, 3-55, 4-20, 4-36
Land Management----------2-6, 2-23, 3-54, 3-84, 4-25, 4-36, 4-38, 4-39, 4-59, 5-4
Livestock Management ----------11, 2-5, 2-20, 2-21, 3-34, 3-38, 4-23, 4-35, 5-4
Mesquite ----------9, 2-20, 3-39
Minerals Management ----------1-7, 1-9, 2-7, 2-35, 3-73, 3-84, 4-30, 4-41 to 4-53, 4-59, 5-4
Nellis Dunes----------2-29
Non-Speed Events----------2-33, 4-28
Off Highway Vehicle Use ----------7, 2-6, 2-32
Plan Amendment ----------6-1, 6-2
Plan Implementation----------2-1, 6-1
Planning Process Overview ----------4
Planning Issues and Criteria ----------1-5, 1-10
Potential Natural Community ----------2-9
Proper Functioning Condition ----------9, 4-12

Public Scoping ----------5-1
Purpose and Need ----------1-1
Recreation Management ----------2-6, 2-29, 4-27, 4-41, 4-59
Recreation Opportunity Spectrum----------2-6, 3-62
Rights-of-Way ----------2-6, 2-26, 3-57, 4-26, 4-40
Riparian Management ----------2-3, 2-9, 3-21, 4-11, 4-34, 4-56
Short-term Uses vs Long-term Productivity ----------60
Socio-economics----------3-80, 4-32
Soils/Erosion ----------2-8, 3-7, 3-8, 4-5, 4-34, 4-55, 4-58
Special Recreation Management Areas ----------6, 2-29 to 2-31
Special Status Species----------2-17 to 2-19, 3-34, 3-35, 3-41
Tamarisk----------2-9
Traditional Lifeway ----------2-23, 2-24
Unavoidable Impacts----------4-58
Vegetation----------2-3, 2-9, 3-22, 3-34, 4-14, 4-35, 4-57, 4-58
Vegetation Communities ----------22
Virgin River ----------15, 3-16, 3-59
Visual Resource Management----------2-10, 3-30, 4-16, 4-35, 4-58
Water Quality ----------8, 3-19
Wild and Scenic Rivers ----------34, 3-63, 4-30, 4-41
Wild Horses and Burros ----------1-12, 2-5, 2-21, 3-48, 4-23, 4-36, 4-58, 5-4
Wilderness Study Area ----------2-34, 3-64 to 3-72, 3-79, 4-30, 4-41
Wildlife ----------4, 2-10, 4-5, 4-18, 4-35, 4-58



Resource Management Plan

Bureau of Land Management
Las Vegas District

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Map # 1-1

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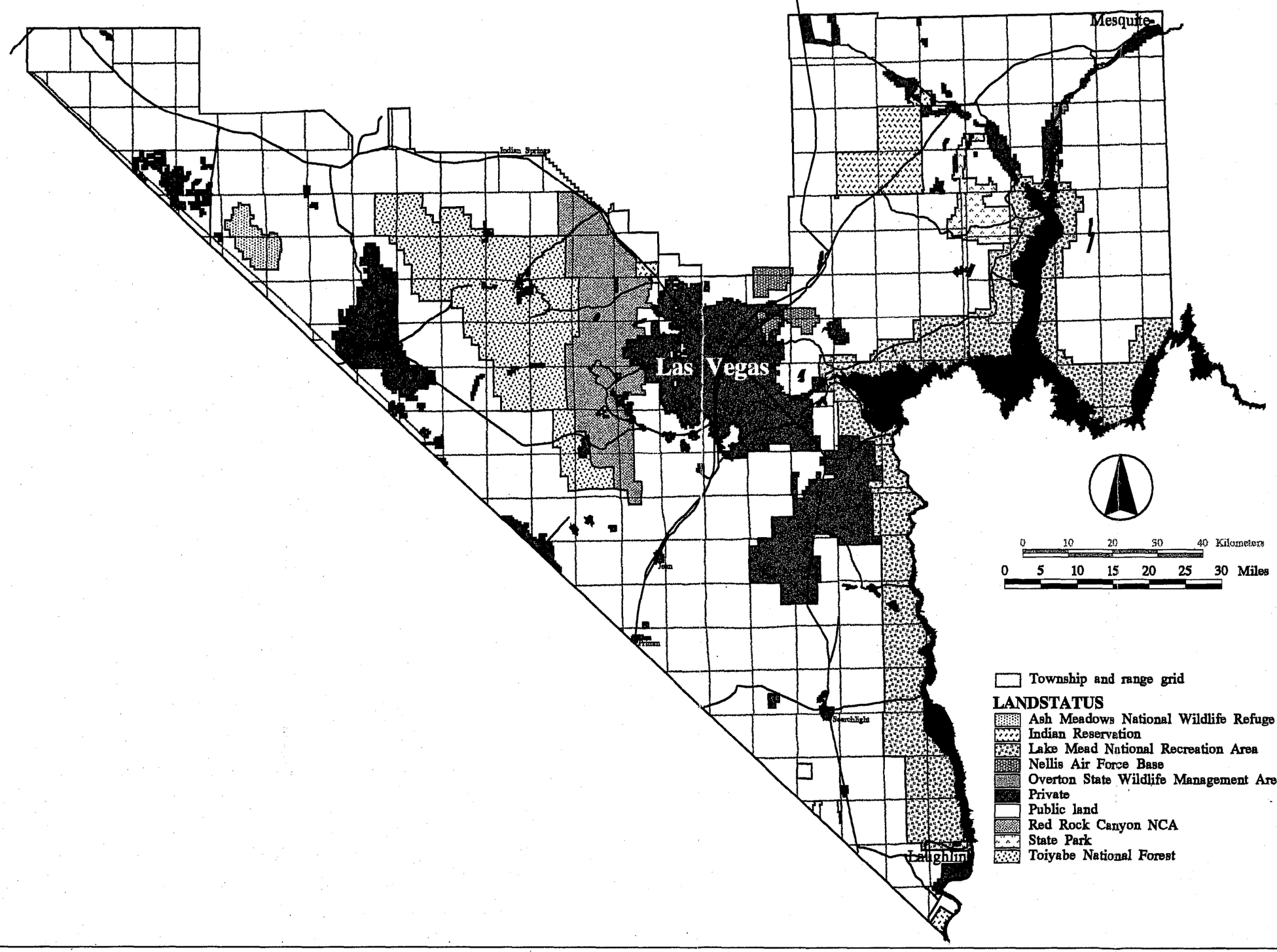

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Map # 1-2

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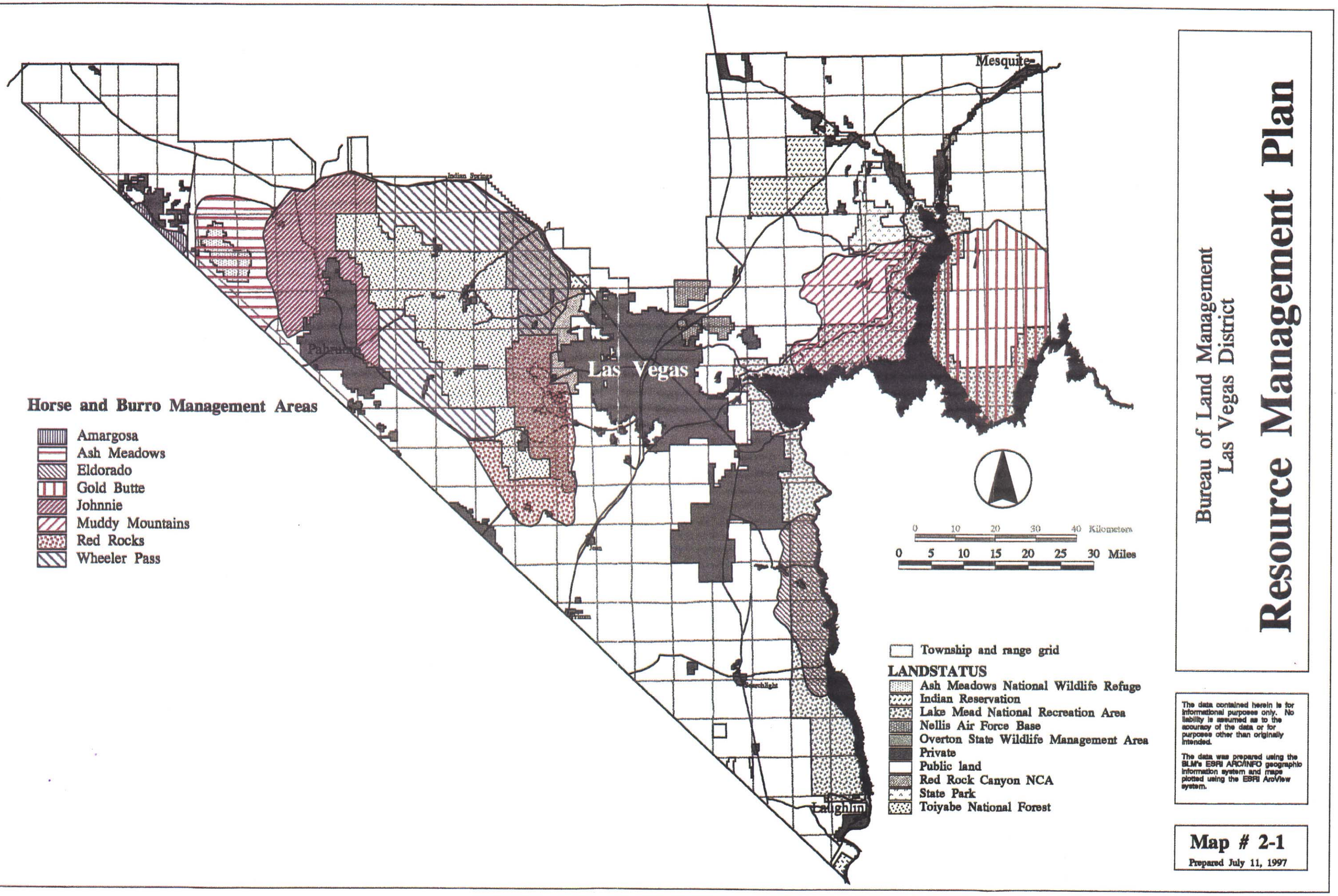
Mesquite
Indian Springs
Pahrump
Las Vegas
Searchlight
Laughlin
Horse and Burro Management Areas
Amargosa
Ash Meadows
Eldorado
Gold Butte
Johnnie
Muddy Mountains
Red Rocks
Wheeler Pass
0 10 20 30 40 Kilometers
0 5 10 15 20 25 30 Miles
Township and range grid
LANDSTATUS
Ash Meadows National Wildlife Refuge
Indian Reservation
Lake Mead National Recreation Area
Nellis Air Force Base
Overton State Wildlife Management Area
Private
Public land
Red Rock Canyon NCA
State Park
Toiyabe National Forest
Bureau of Land Management
Las Vegas District
Resource Management Plan
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Map # 2-1
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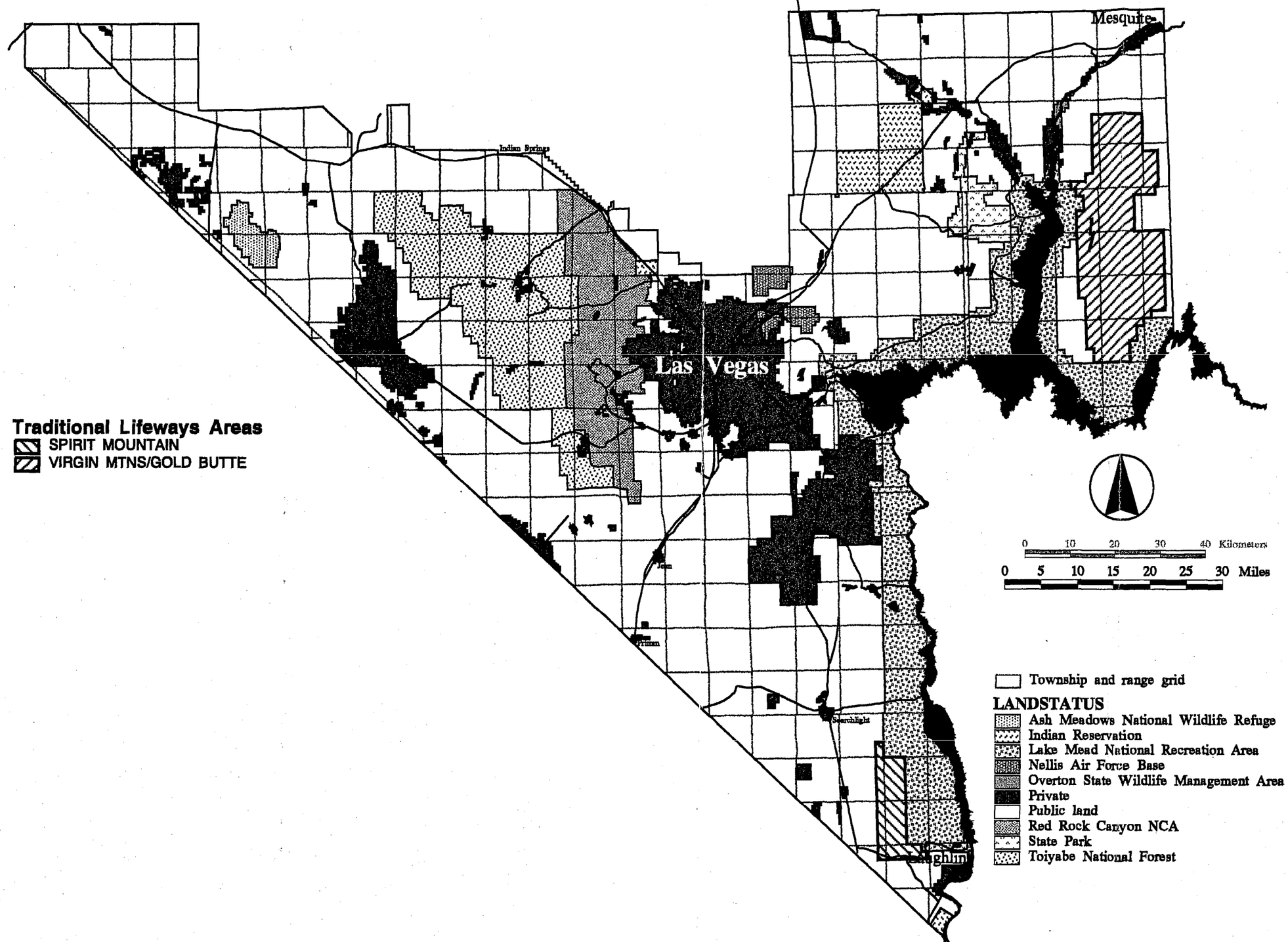

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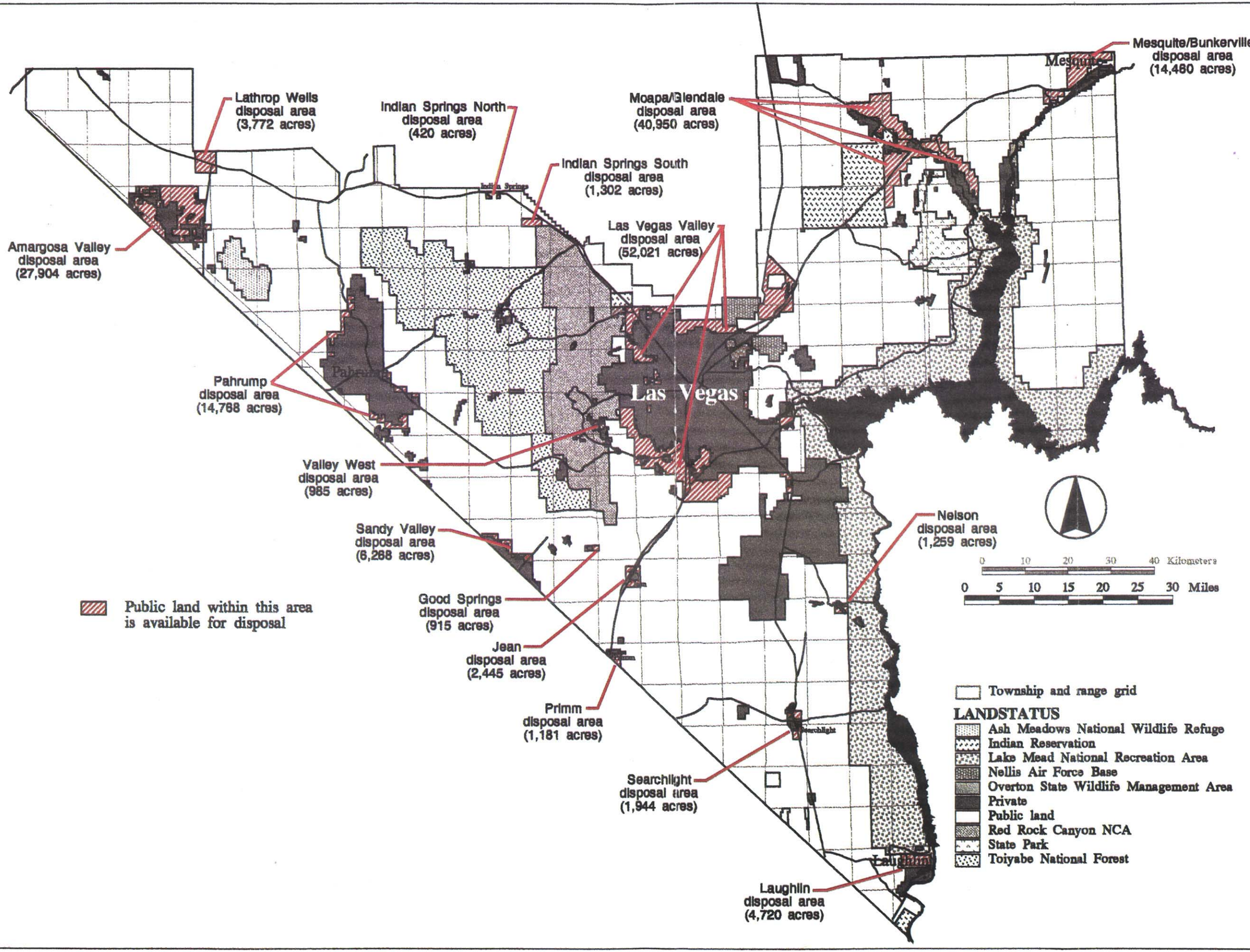
Map # 2-2

Prepared July 11, 1997



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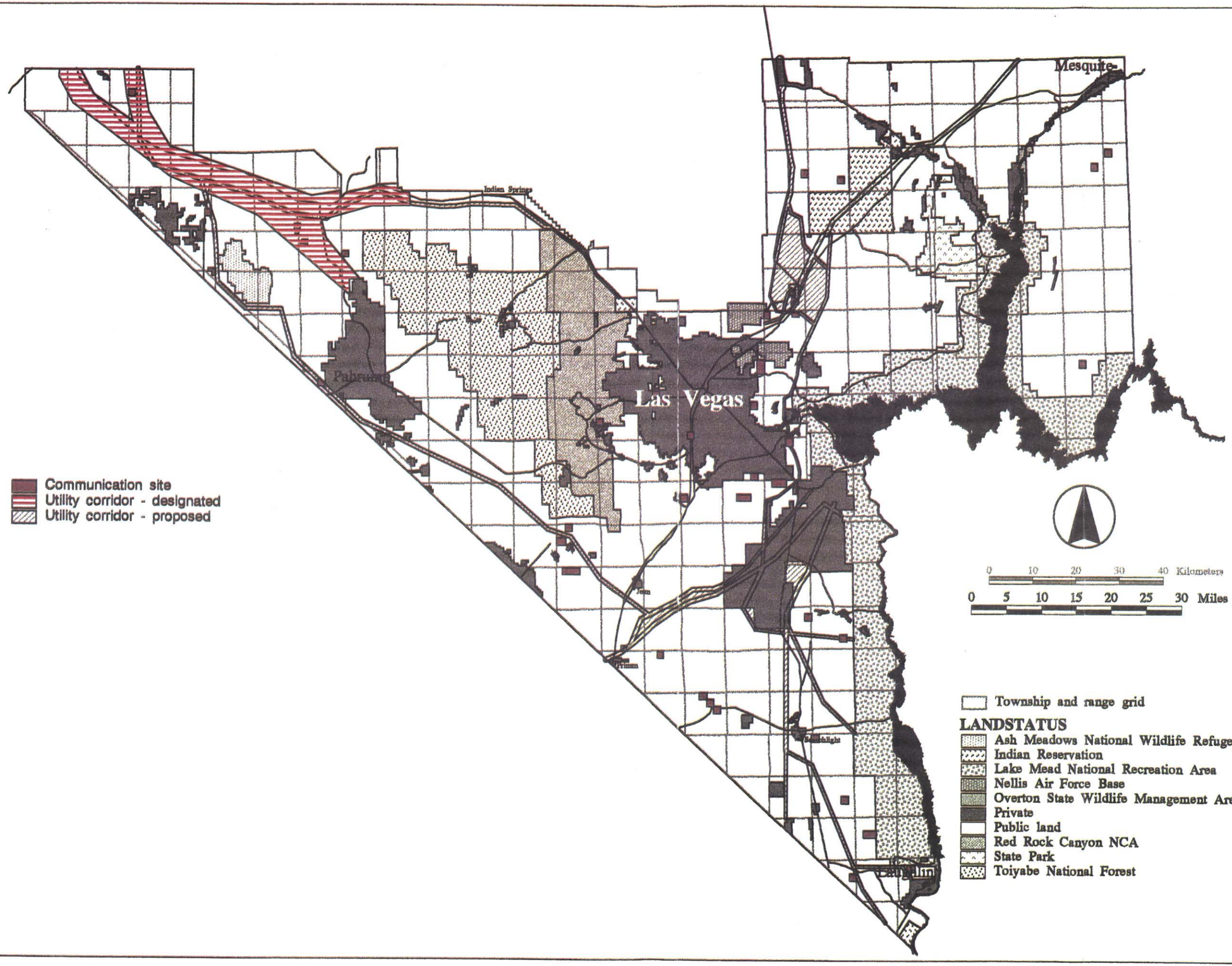
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-3

Prepared January 22, 1998



Bureau of Land Management
Las Vegas District

Resource Management Plan

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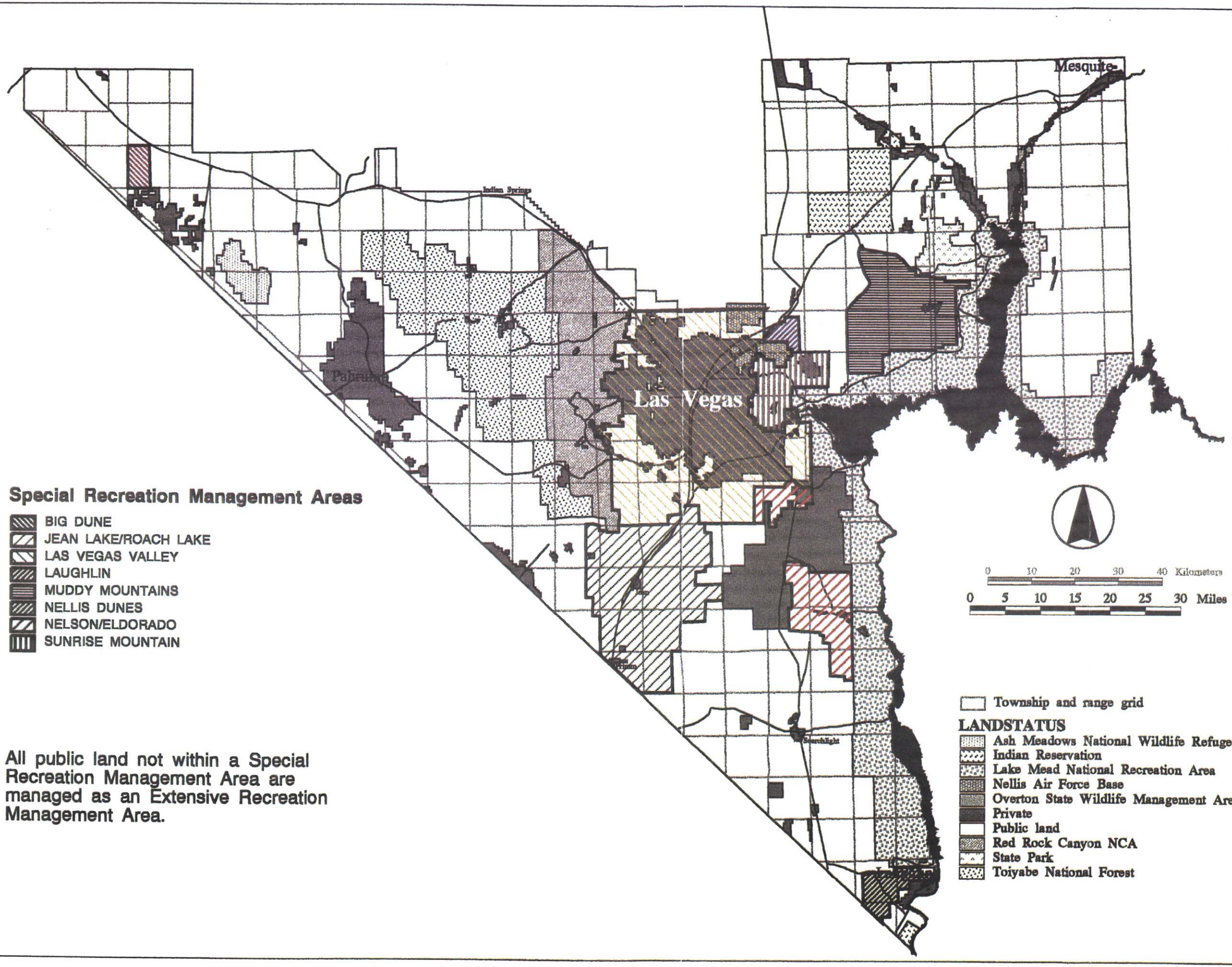
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-4

Prepared July 11, 1997



Special Recreation Management Areas

- BIG DUNE
- JEAN LAKE/ROACH LAKE
- LAS VEGAS VALLEY
- LAUGHLIN
- MUDDY MOUNTAINS
- NELLIS DUNES
- NELSON/ELDORADO
- SUNRISE MOUNTAIN

All public land not within a Special Recreation Management Area are managed as an Extensive Recreation Management Area.

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Las Vegas District

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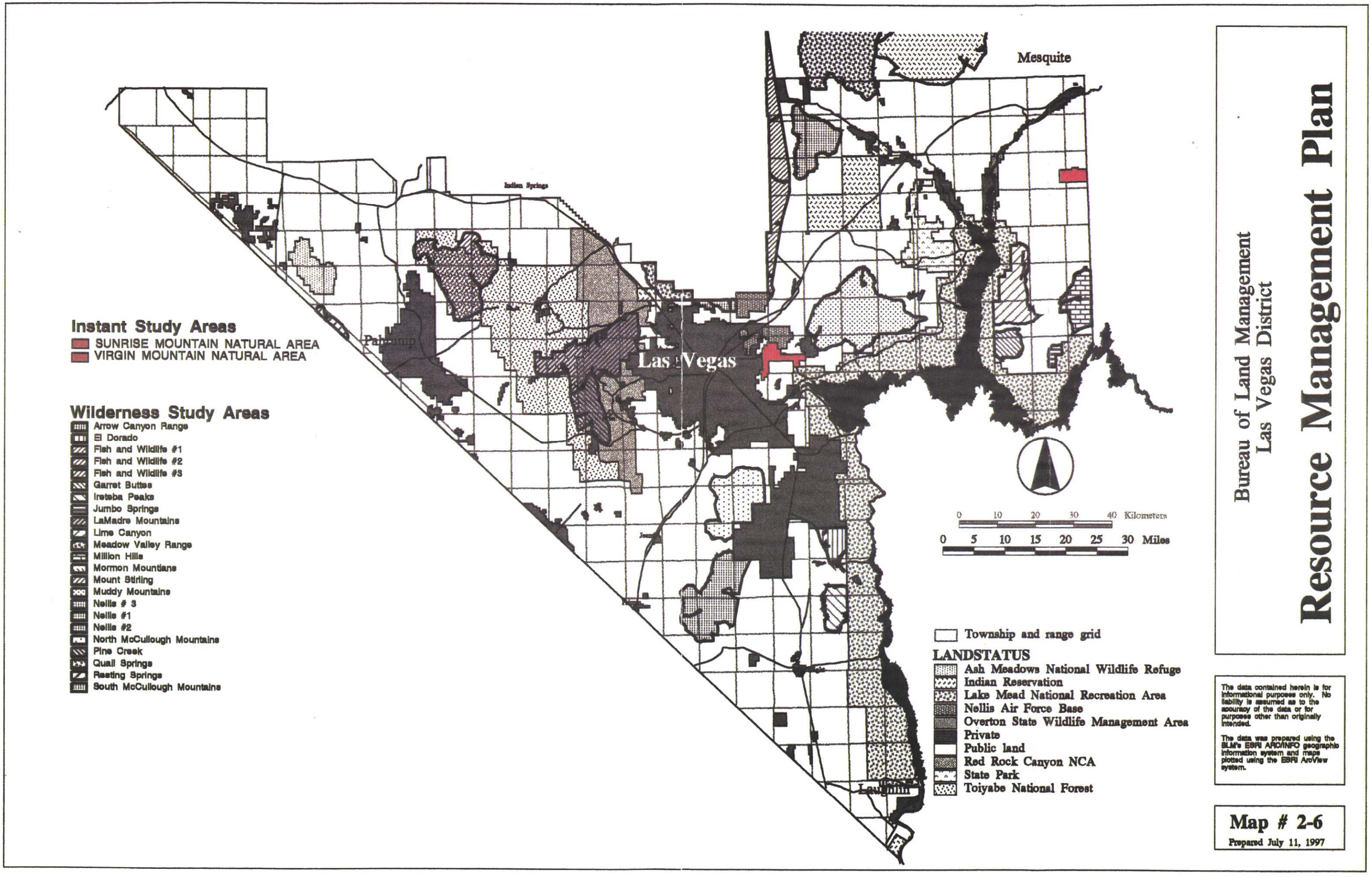
Map # 2-5

Prepared July 11, 1997


Mesquite
Indian Springs
Pahrump
Las Vegas
Laughlin
Instant Study Areas
SUNRISE MOUNTAIN NATURAL AREA
VIRGIN MOUNTAIN NATURAL AREA
Wilderness Study Areas
Arrow Canyon Range
El Dorado
Fish and Wildlife #1
Fish and Wildlife #2
Fish and Wildlife #3
Garret Buttes
Ireteba Peaks
Jumbo Springs
LaMadre Mountains
Lime Canyon
Meadow Valley Range
Million Hills
Mormon Mountains
Mount Stirling
Muddy Mountains
Nellis # 3
Nellis #1
Nellis #2
North McCullough Mountains
Pine Creek
Quail Springs
Resting Springs
South McCullough Mountains
0 10 20 30 40 Kilometers
0 5 10 15 20 25 30 Miles
Township and range grid
LANDSTATUS
Ash Meadows National Wildlife Refuge
Indian Reservation
Lake Mead National Recreation Area
Nellis Air Force Base
Overton State Wildlife Management Area
Private
Public land
Red Rock Canyon NCA
State Park
Toiyabe National Forest
Bureau of Land Management
Las Vegas District
Resource Management Plan
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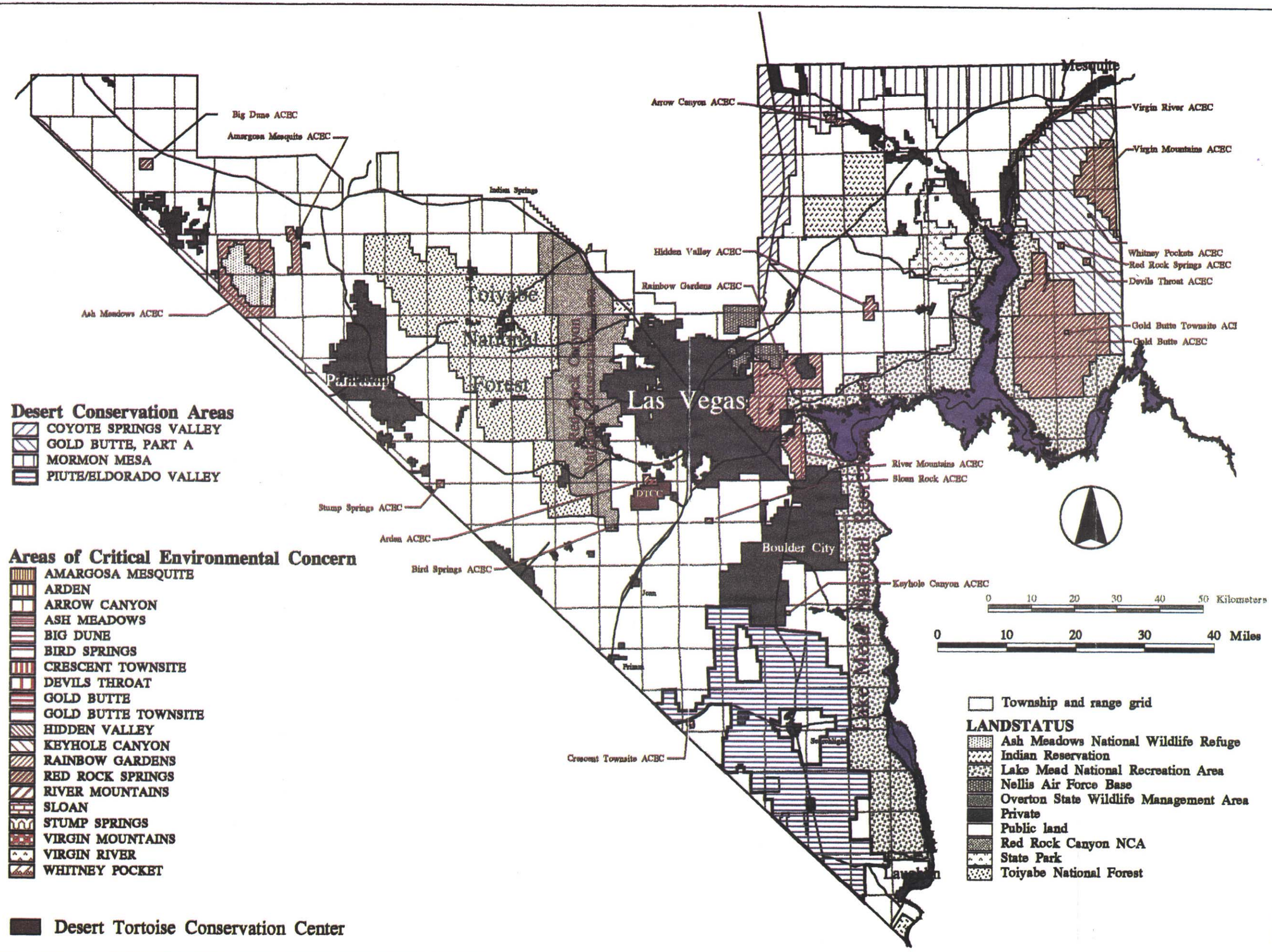
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.
Map # 2-6
Prepared July 11, 1997



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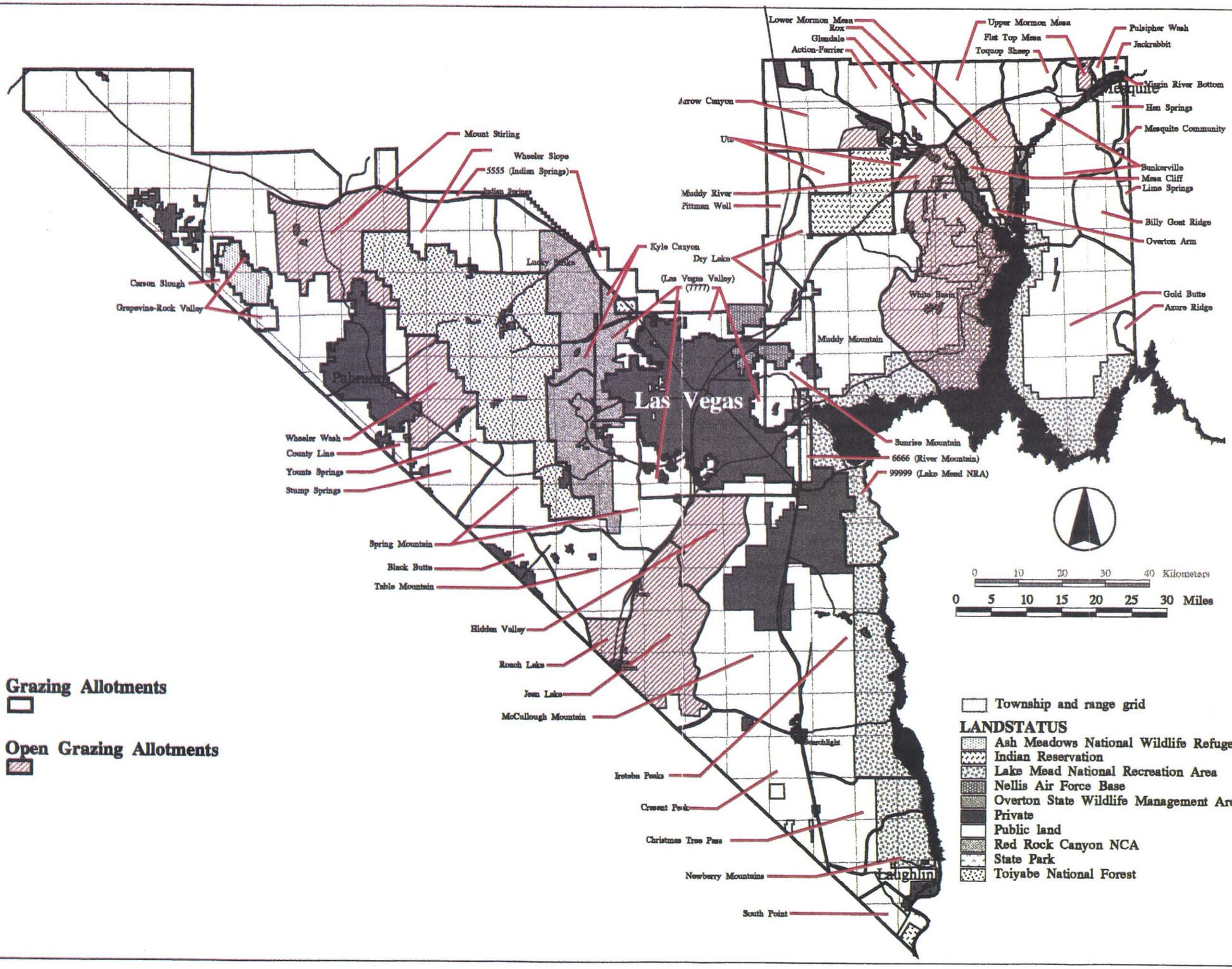
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-7

Prepared May 10, 1997



Resource Management Plan

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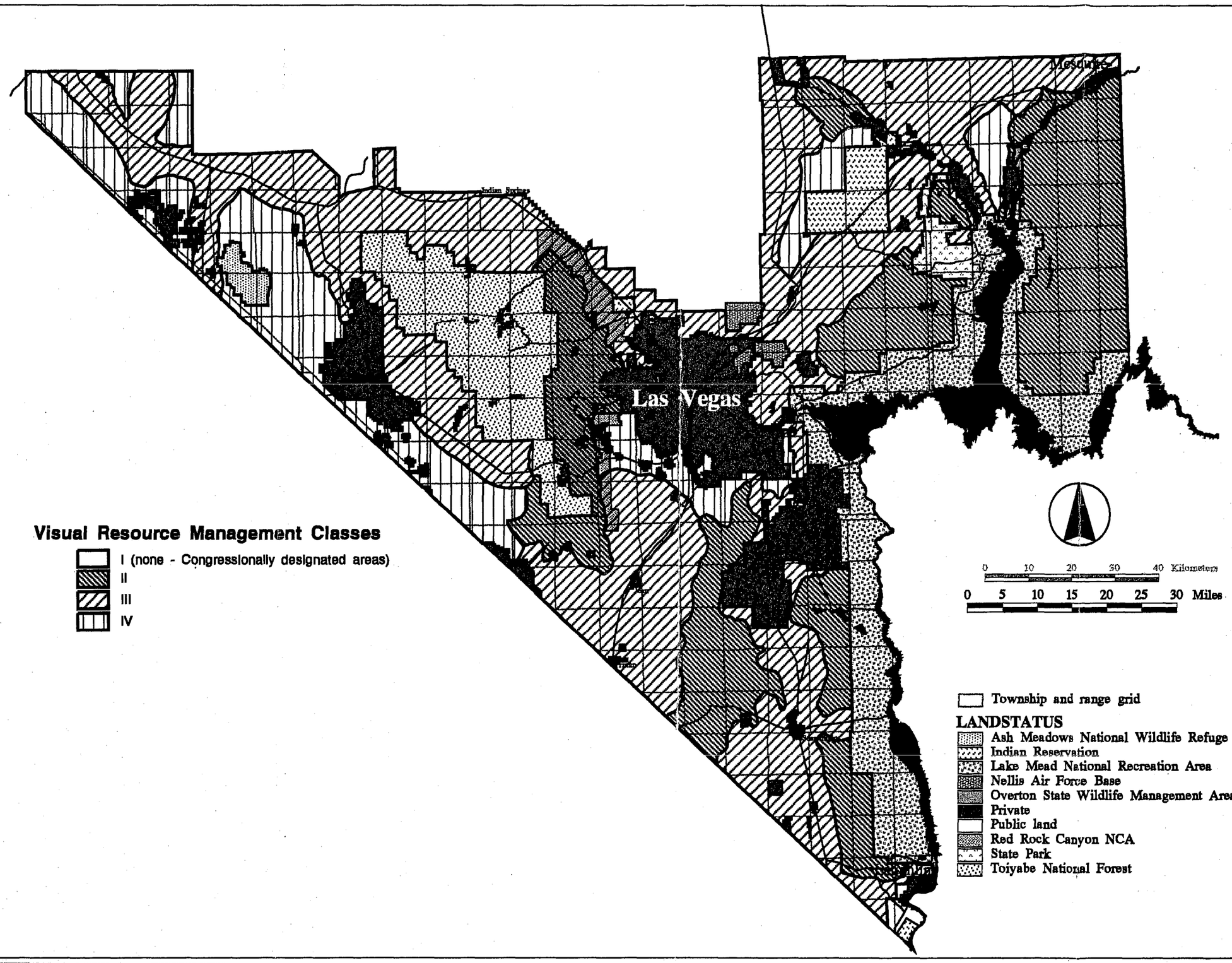
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-8

Prepared July 11, 1997



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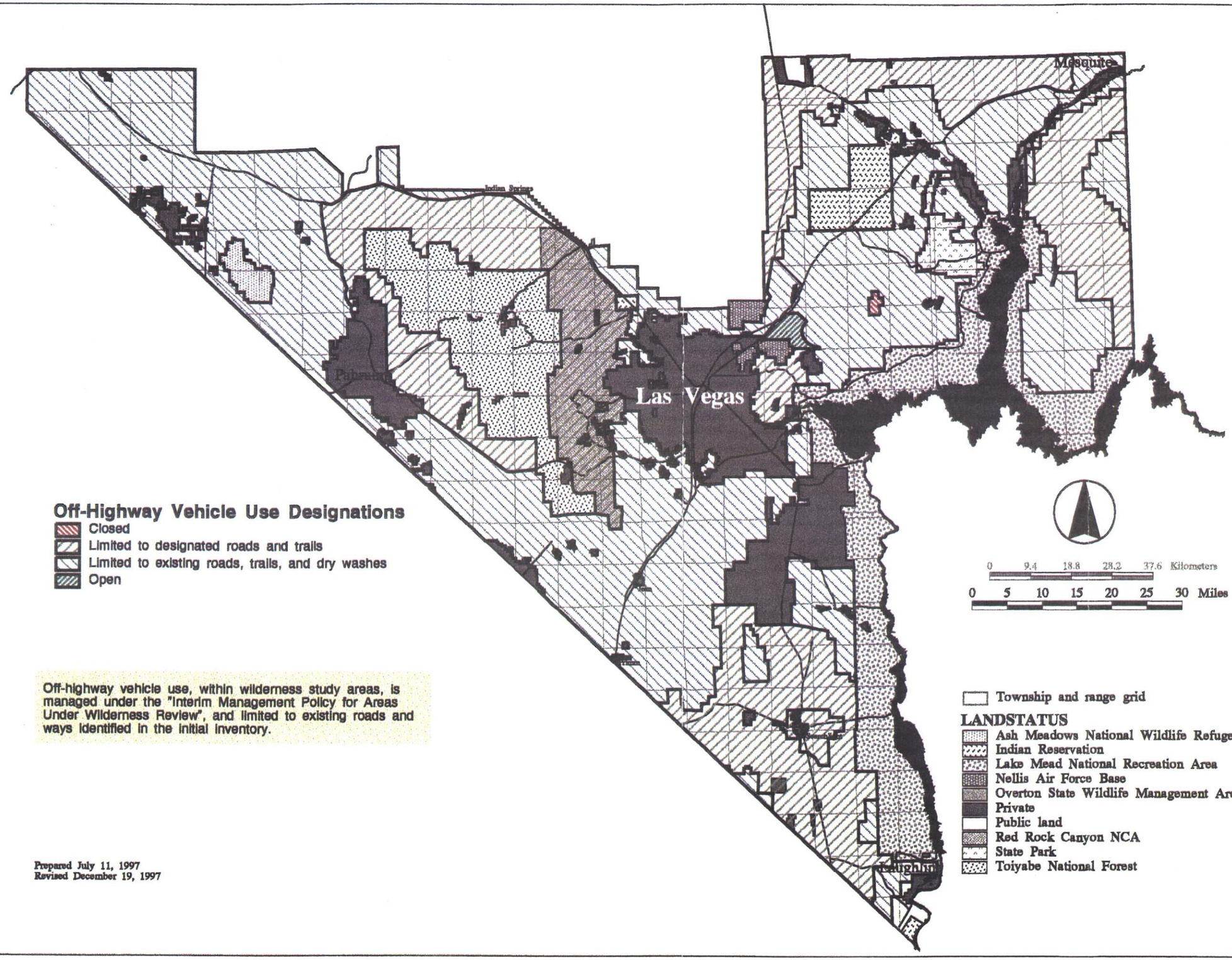
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-9

Prepared July 11, 1997



Off-Highway Vehicle Use Designations

- Closed
- Limited to designated roads and trails
- Limited to existing roads, trails, and dry washes
- Open

Off-highway vehicle use, within wilderness study areas, is managed under the "Interim Management Policy for Areas Under Wilderness Review", and limited to existing roads and ways identified in the initial inventory.

Prepared July 11, 1997
Revised December 19, 1997

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Las Vegas District

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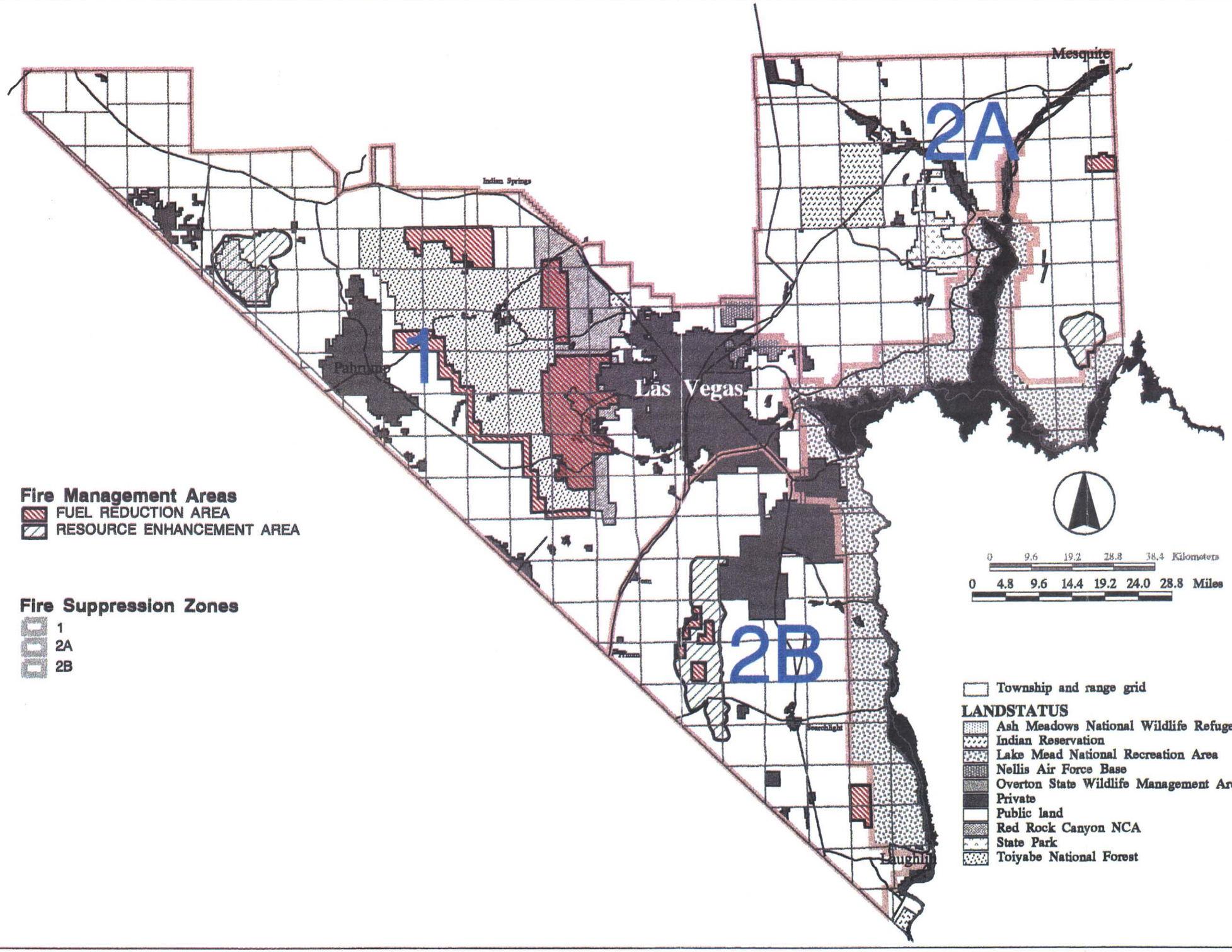
Map # 2-10



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Map # 2-11

Prepared July 11, 1997

Material Site Rights-of-Way and Free Use Permits in the Northern Tortoise Areas of Critical Environmental Concern

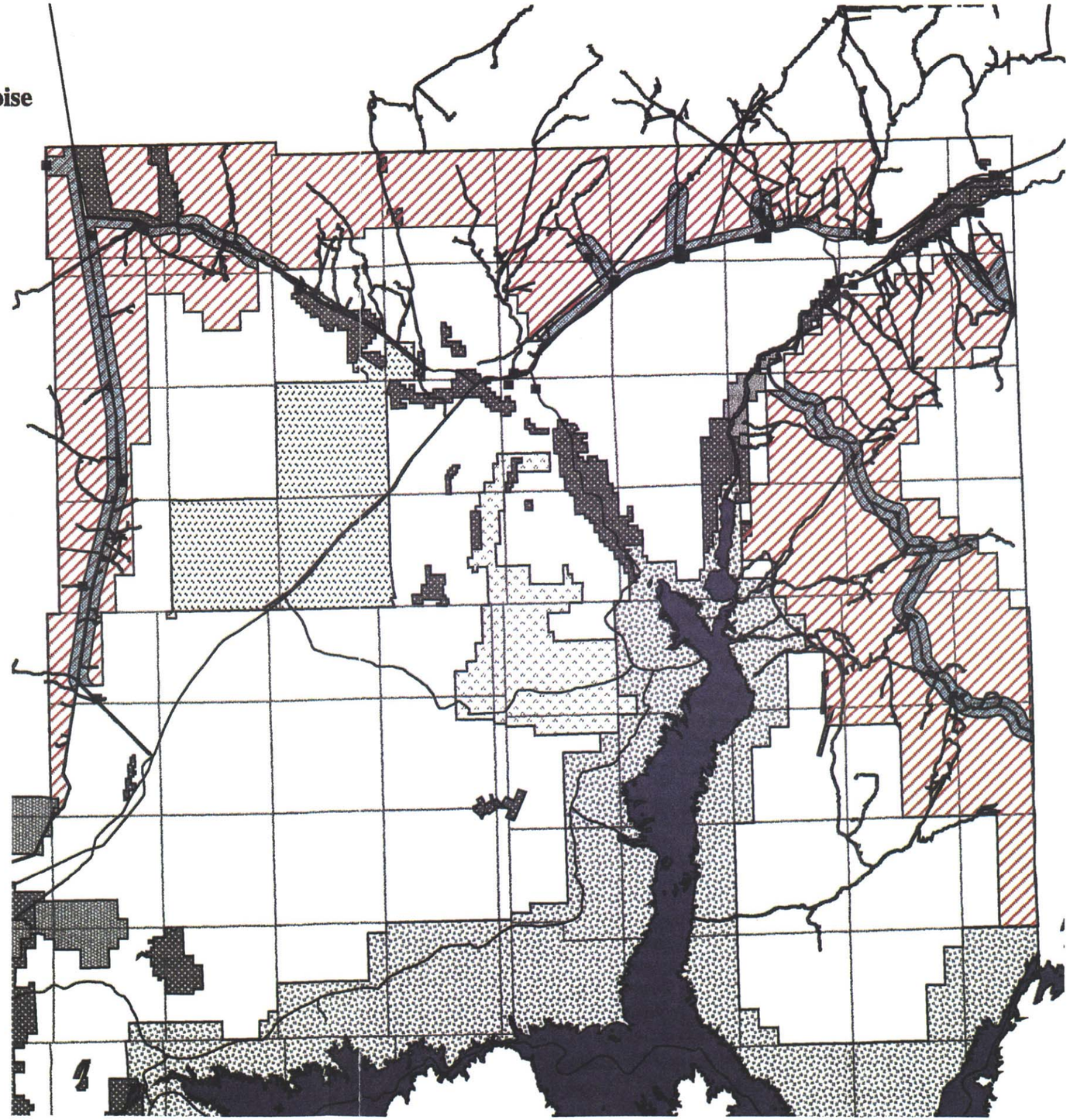
Landstatus

- Indian Reservation
- Lake Mead National Recreation Area
- Nellis Air Force Base
- Overton State Wildlife Mgmt Area
- Private
- Public land
- State Park

- Township and Range Grid
- Major Roads and Highways
- Roads and trails in and around tortoise ACECs (Source: GPS data)
- Tortoise ACEC
- Area open to material site ROWs and free use permits
- Material site ROW or free use permit

0 4.9 9.8 14.7 19.6 24.5 Kilometers

0 5 10 15 20 Miles



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The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-12

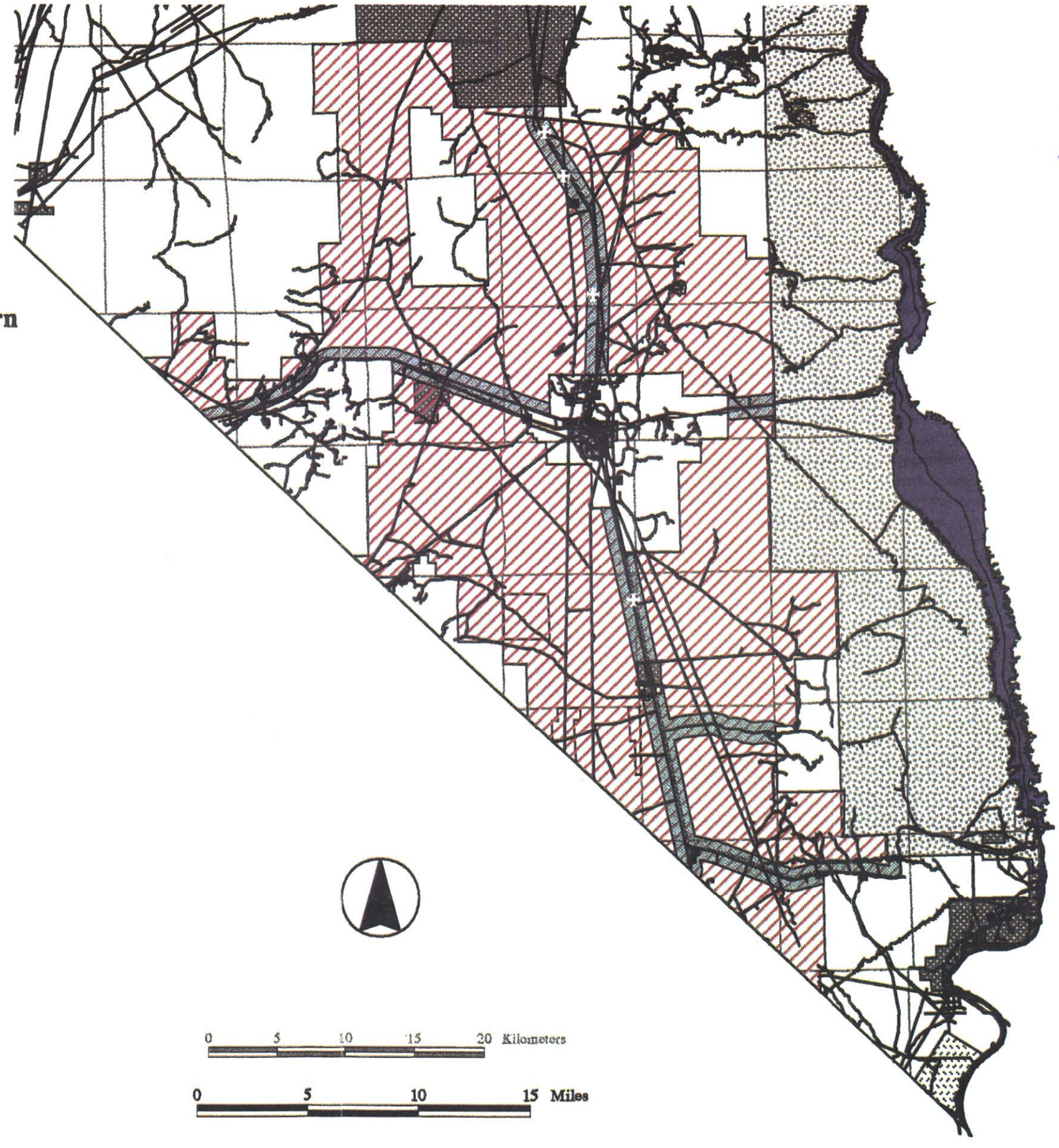
Prepared January 12,1998

Material Site Rights-of-Way and Free Use Permits in Piute/Eldorado Tortoise Area of Critical Environmental Concern

Landstatus

- Indian Reservation
- Lake Mead National Recreation Area
- Private
- Public land

- Township and Range Grid
- Roads and trails (Source: USGS DLGs)
- Piute/Eldorado Tortoise Area of Critical Environmental Concern
- Area open to material site ROWs and free use permits
- Material site right-of-way or free use permit
- Material site ROW to be relinquished per Clark County Habitat Management Plan



Bureau of Land Management
Las Vegas District

Resource Management Plan

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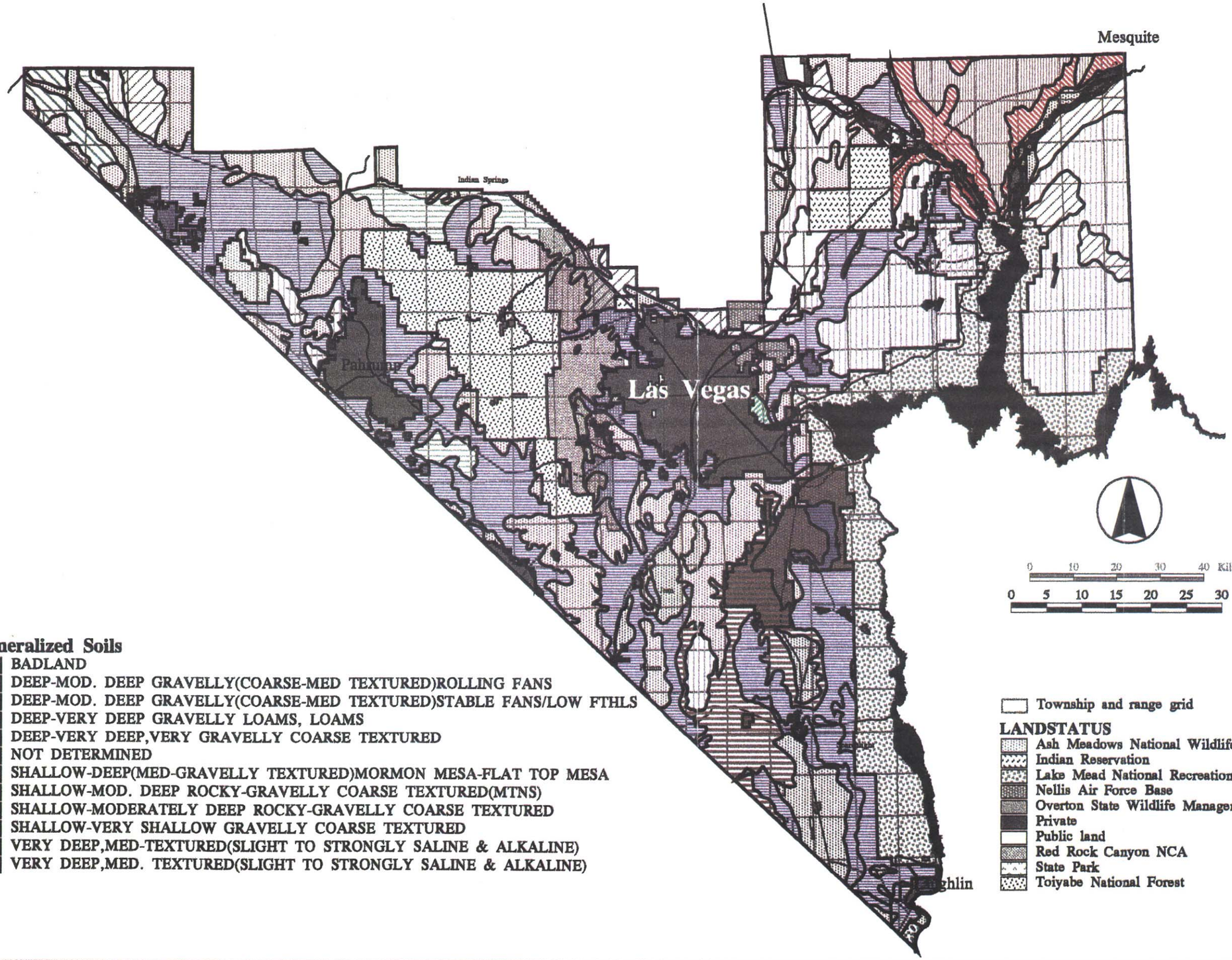
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 2-13

Prepared January 12, 1998



Bureau of Land Management
Las Vegas District

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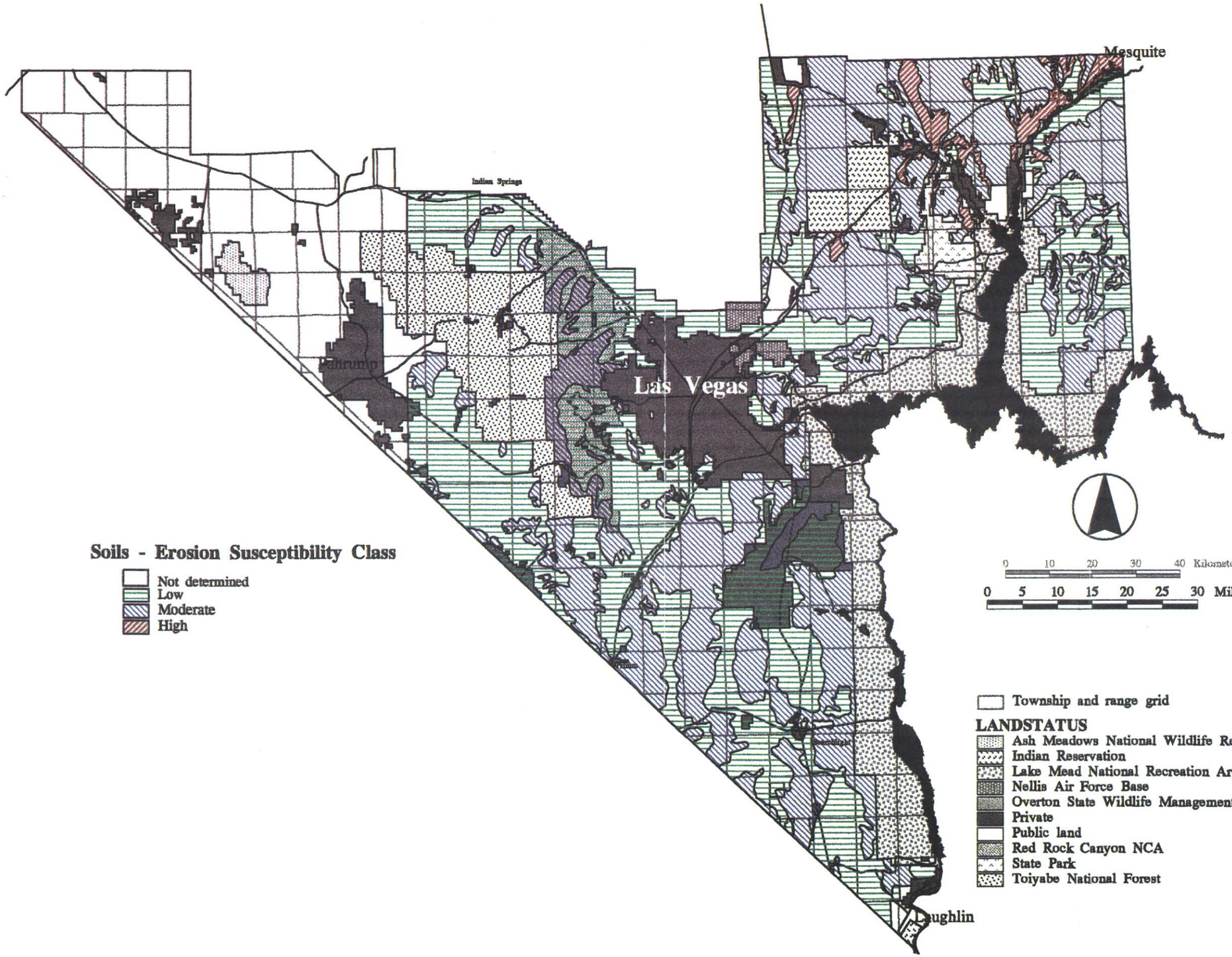
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 3-1

Prepared March 24, 1998



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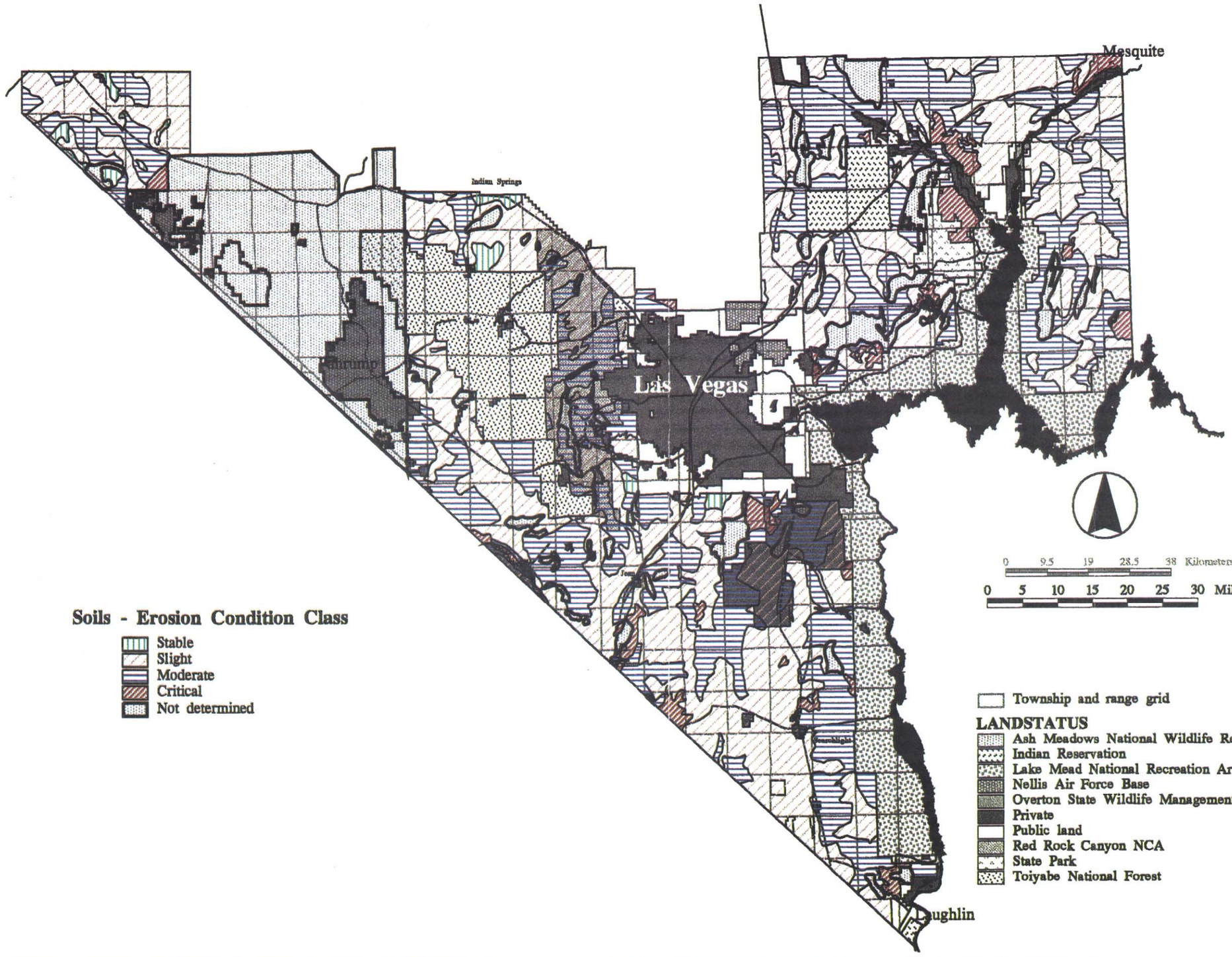
Map # 3-2

Prepared March 24, 1998



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Las Vegas District

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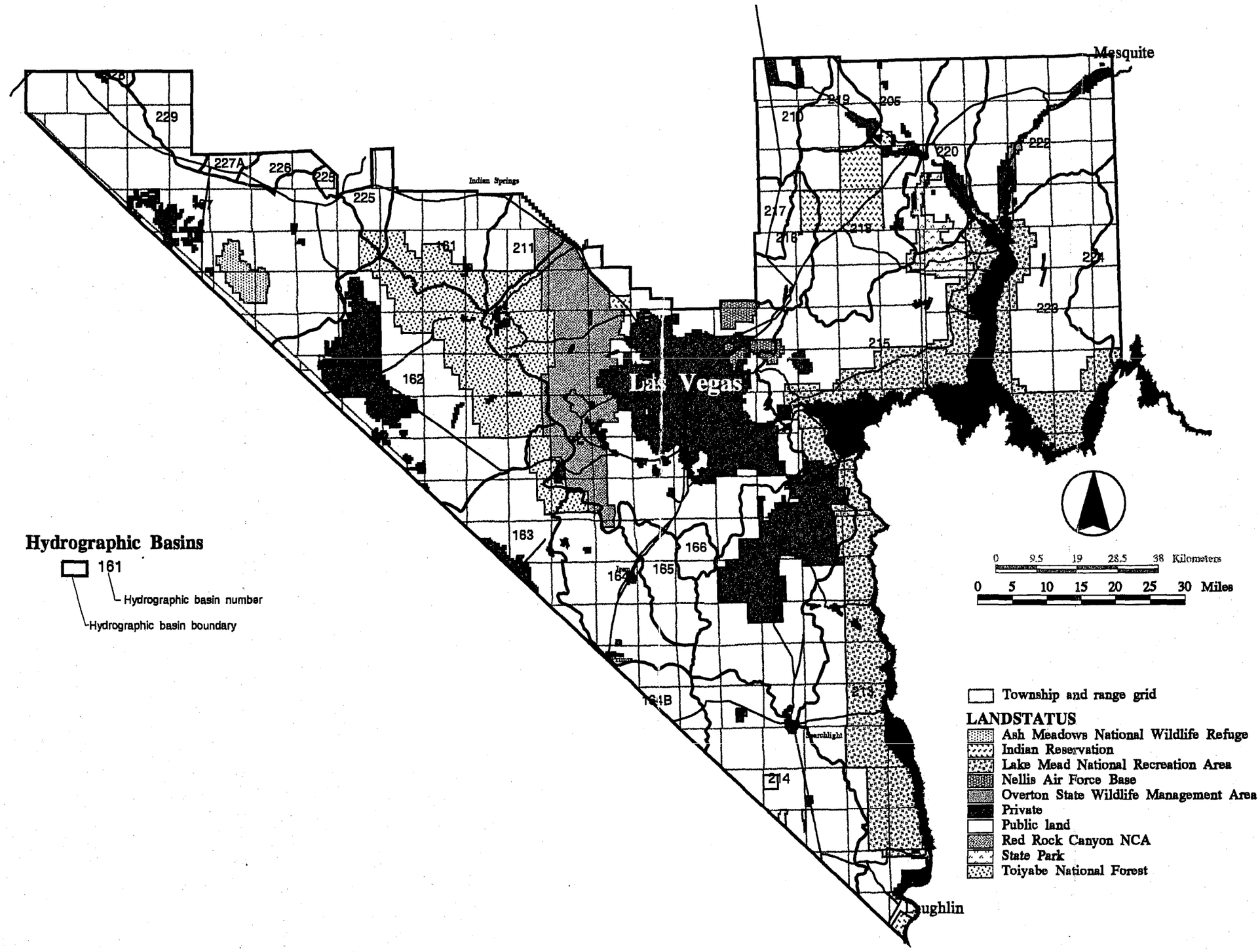
Map # 3-3

Prepared March 24, 1998



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Las Vegas District

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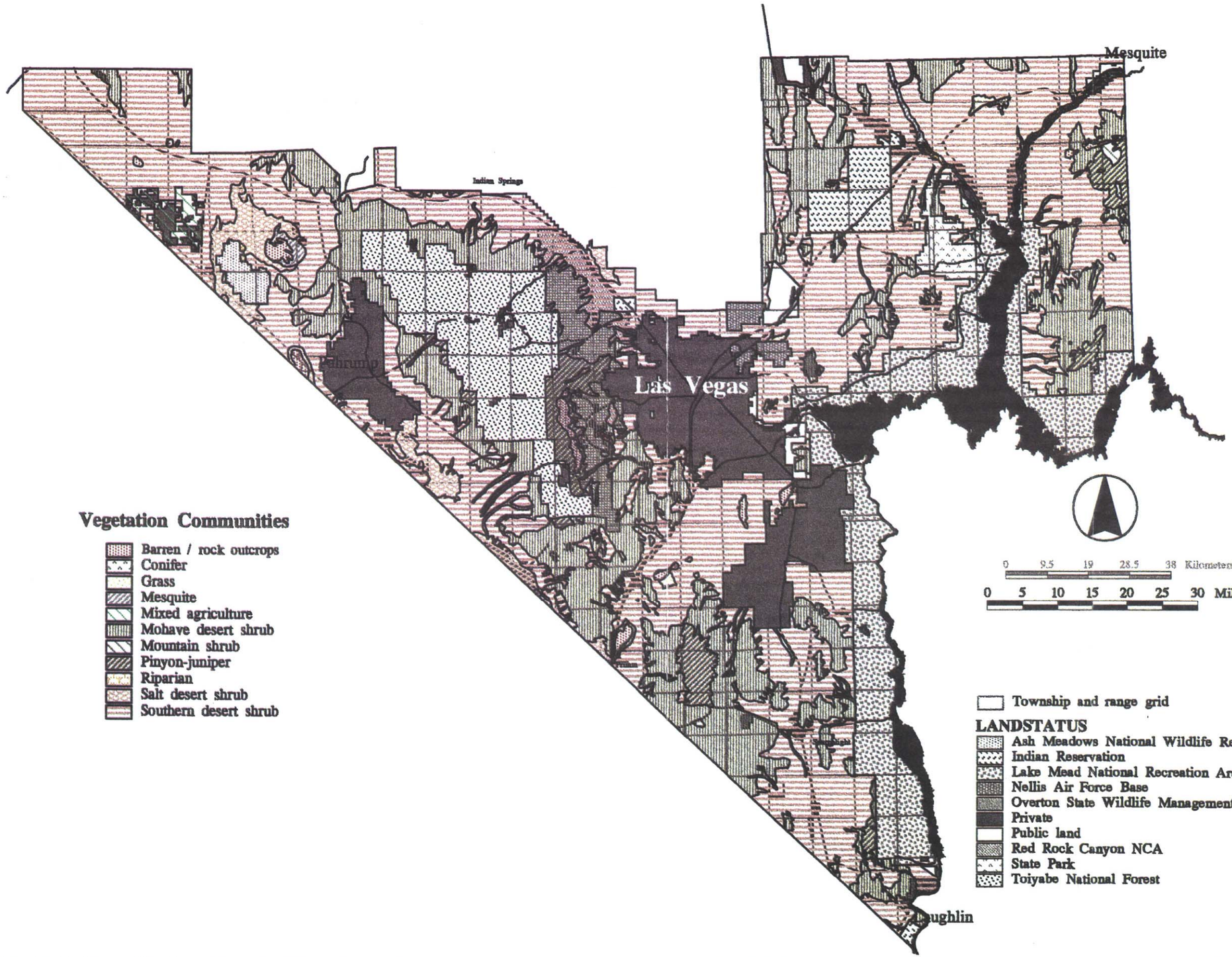
Map # 3-4

Prepared March 24, 1998



Vegetation Communities

- Barren / rock outcrops
- Conifer
- Grass
- Mesquite
- Mixed agriculture
- Mohave desert shrub
- Mountain shrub
- Pinyon-juniper
- Riparian
- Salt desert shrub
- Southern desert shrub

- Township and range grid

LANDSTATUS

- Ash Meadows National Wildlife Refuge
- Indian Reservation
- Lake Mead National Recreation Area
- Nellis Air Force Base
- Overton State Wildlife Management Area
- Private
- Public land
- Red Rock Canyon NCA
- State Park
- Toiyabe National Forest

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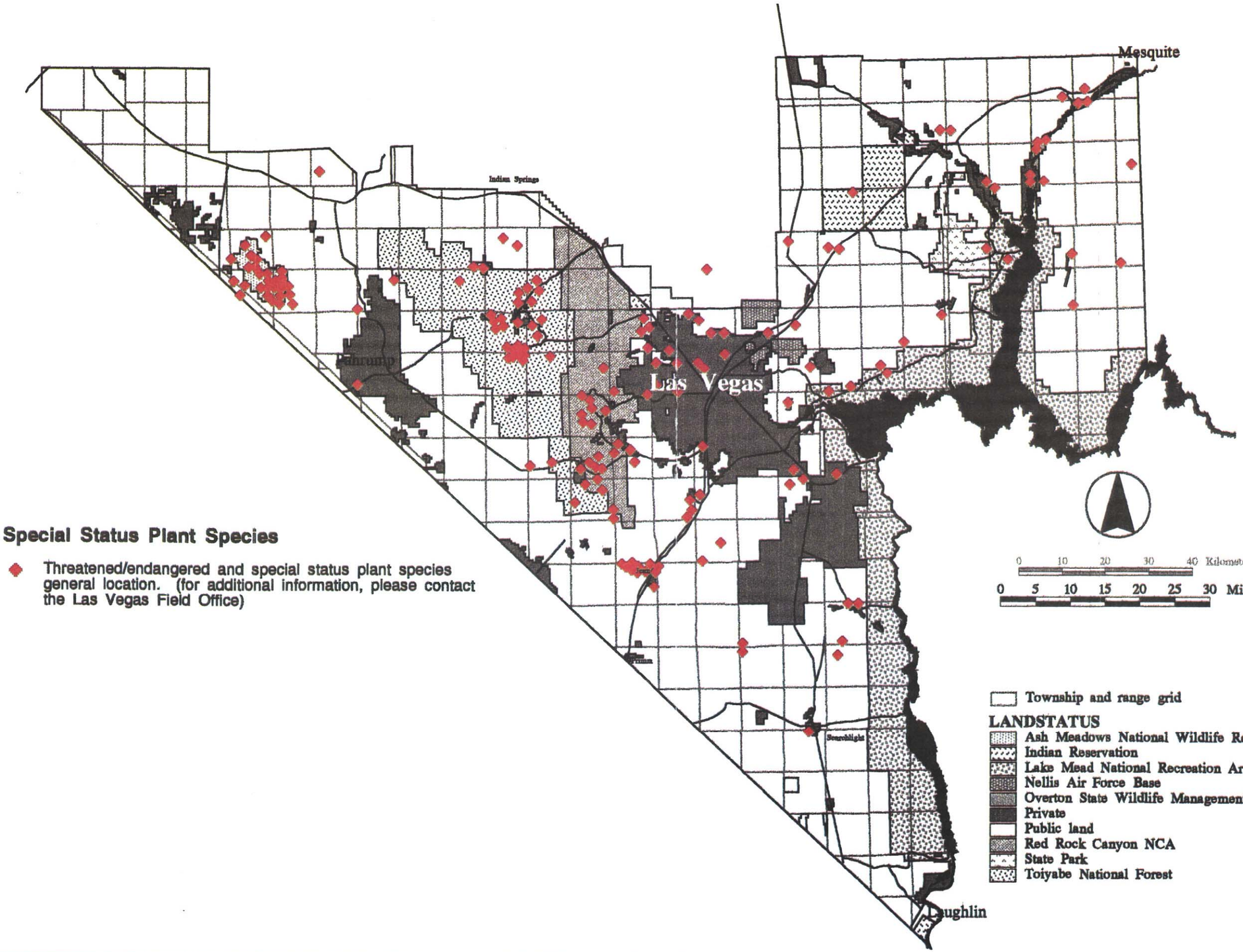
Map # 3-5

Prepared March 24, 1998



Special Status Plant Species

◆ Threatened/endangered and special status plant species general location. (for additional information, please contact the Las Vegas Field Office)

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Las Vegas District

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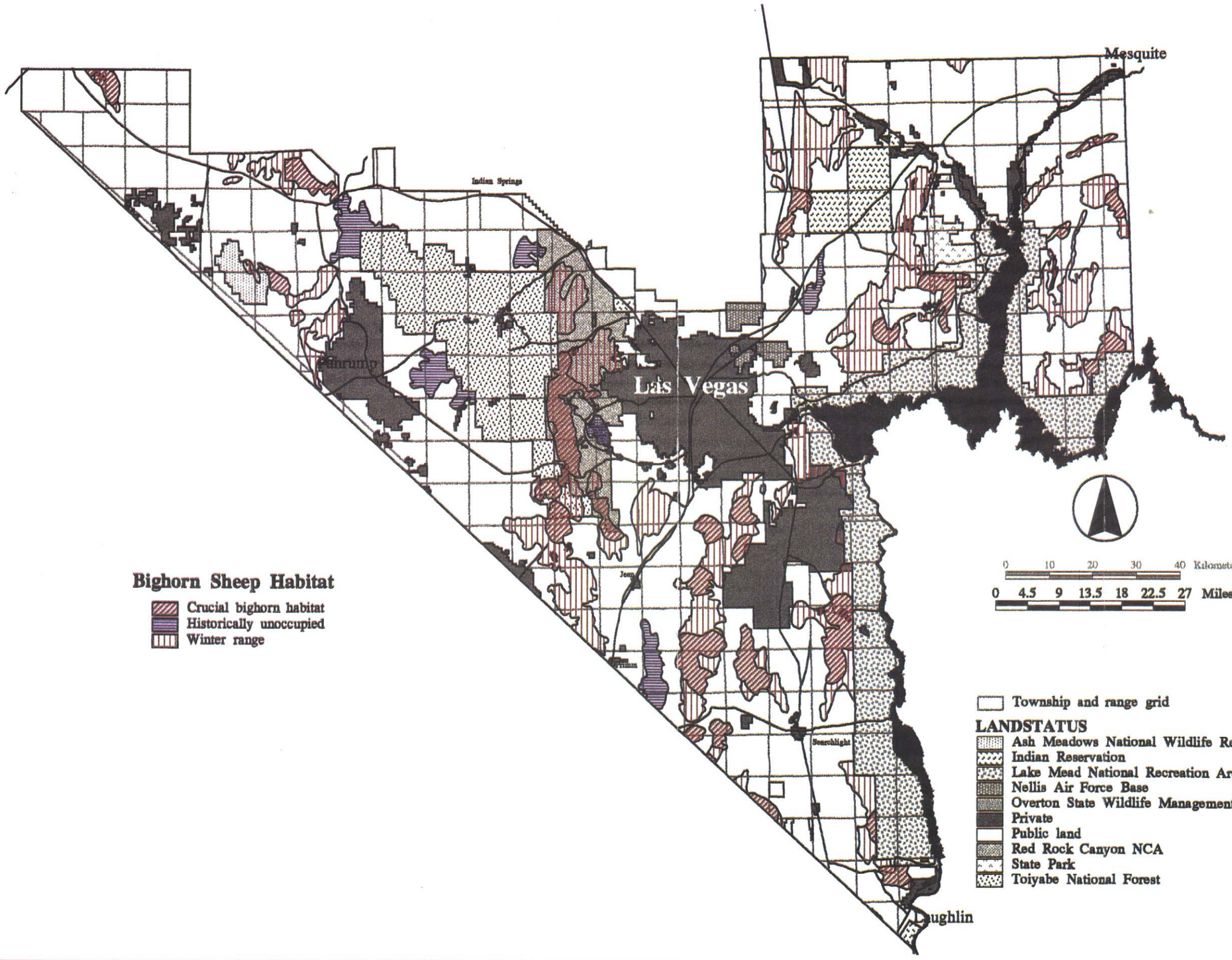
Map # 3-6

Prepared May 13, 1998



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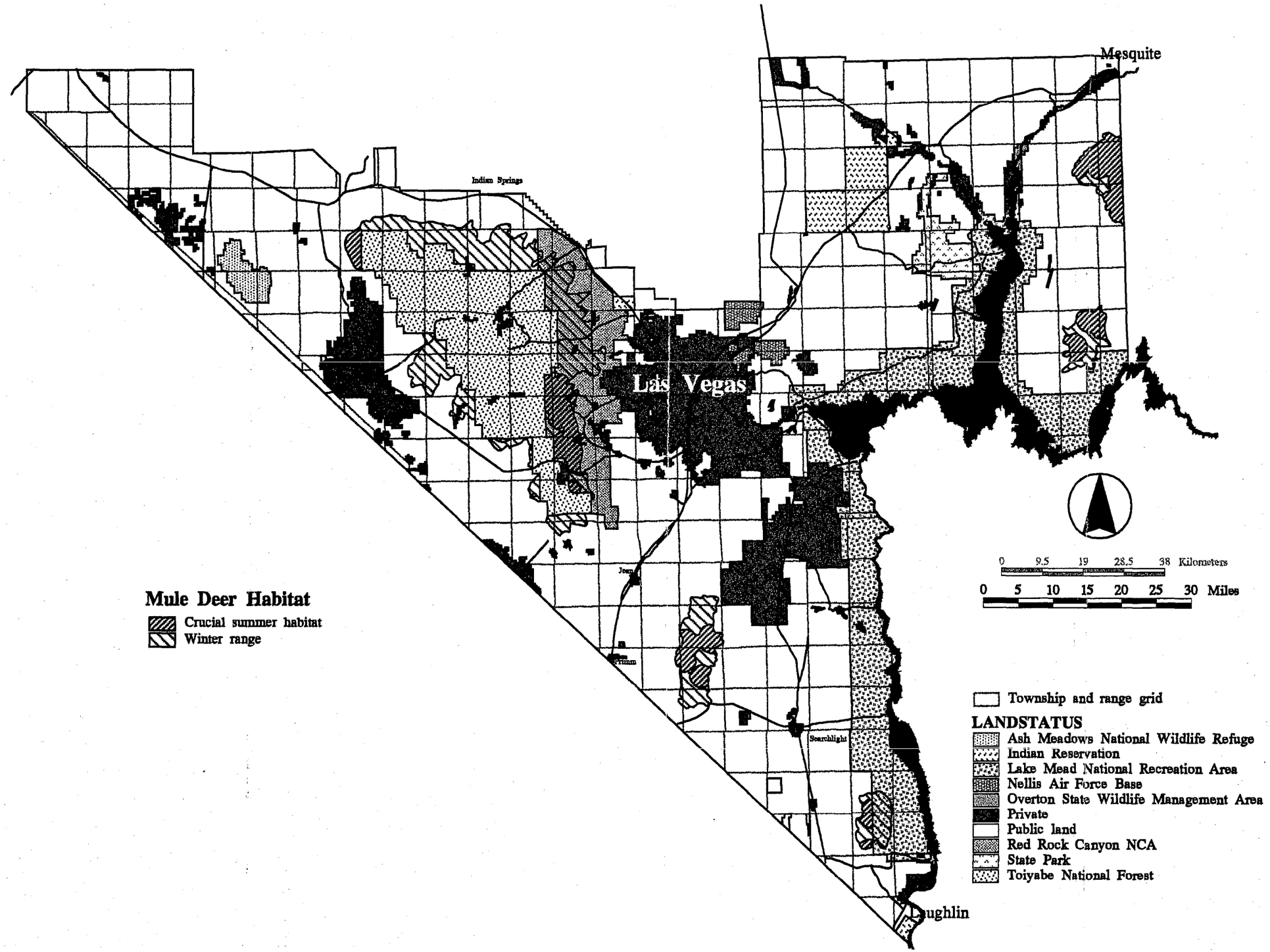
Map # 3-7

Prepared March 24, 1998



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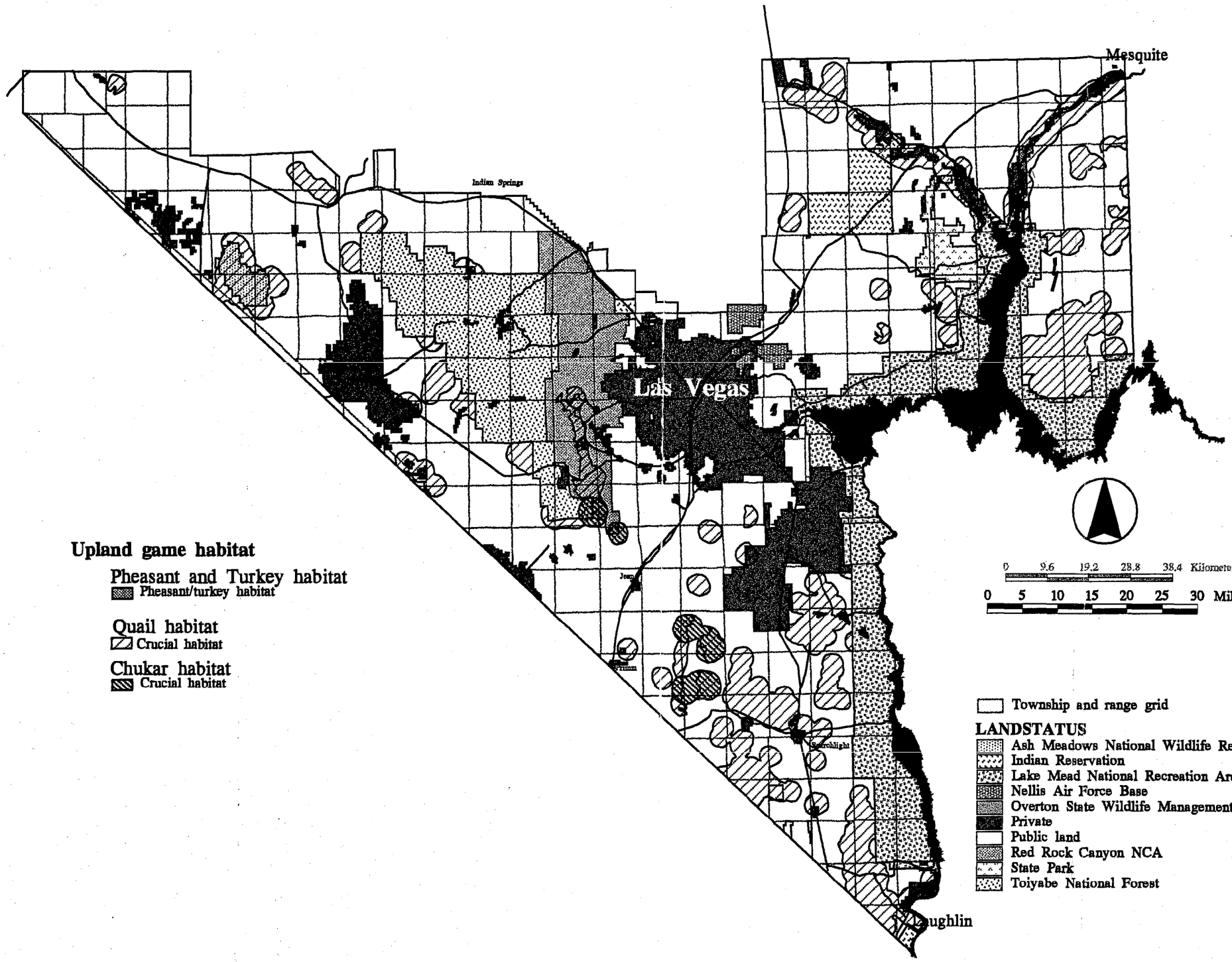
Map # 3-8

Prepared March 24, 1998



Resource Management Plan

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Las Vegas District

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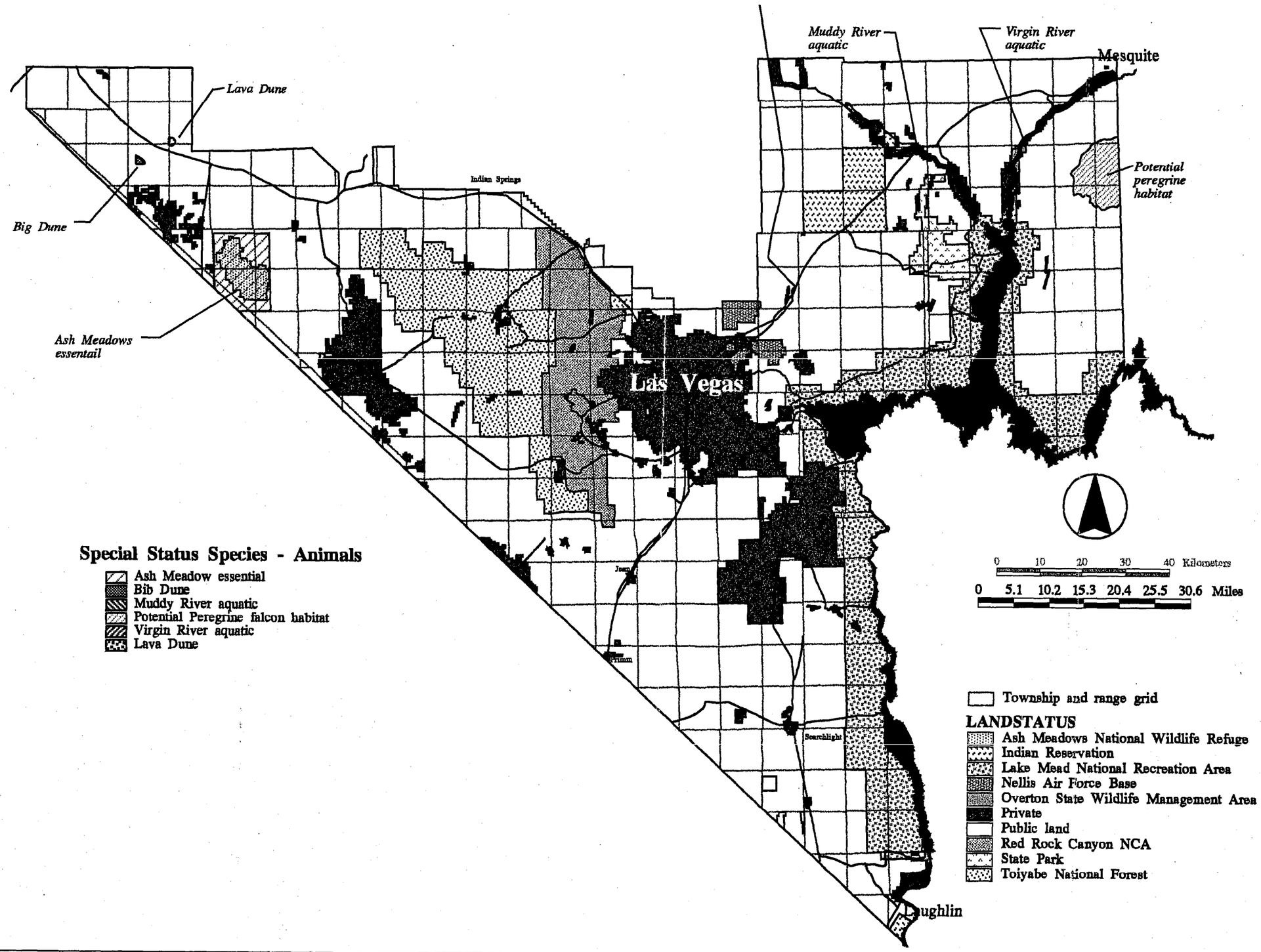
Map # 3-9

Prepared March 24, 1998



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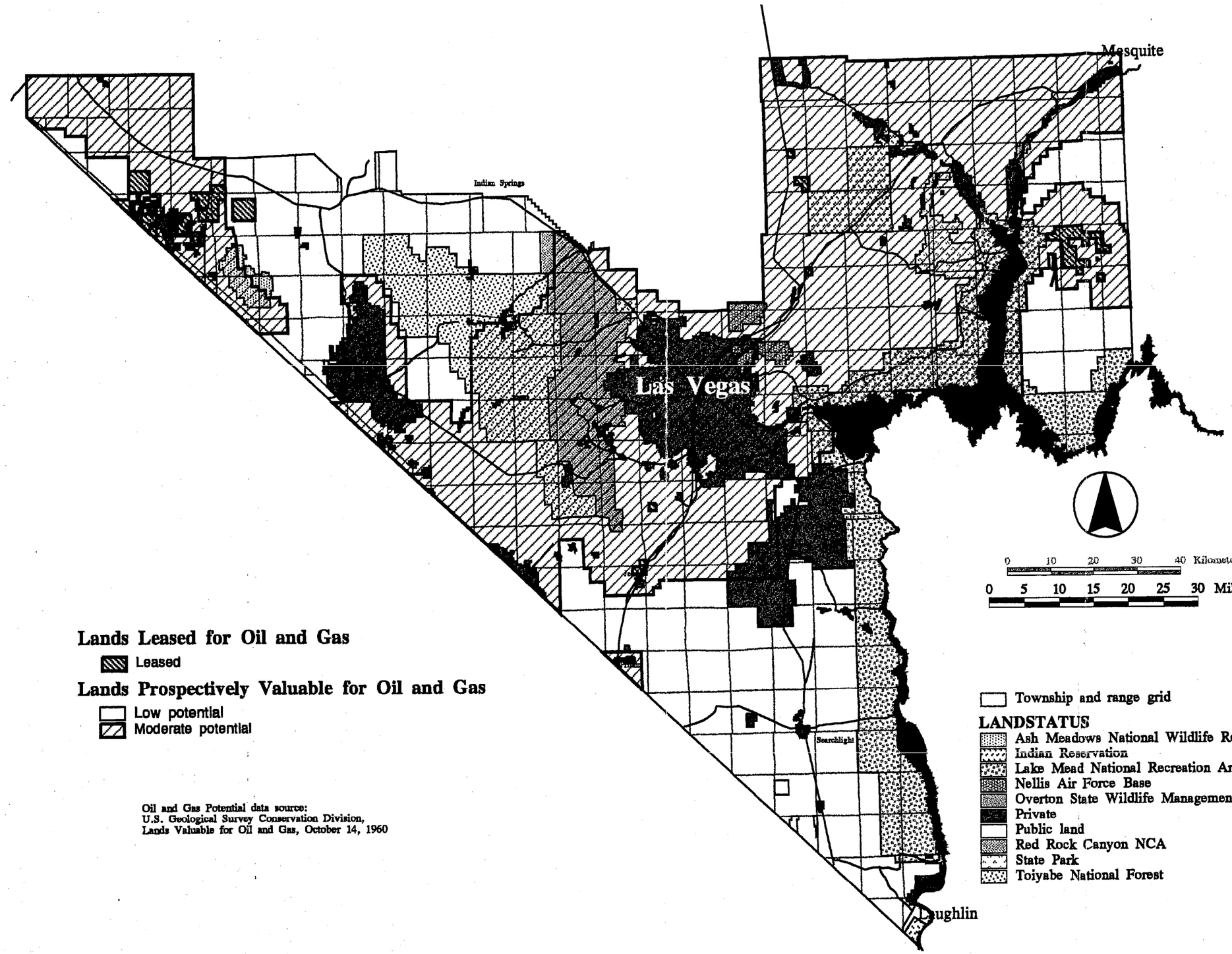
Map # 3-10

Prepared March 24, 1998



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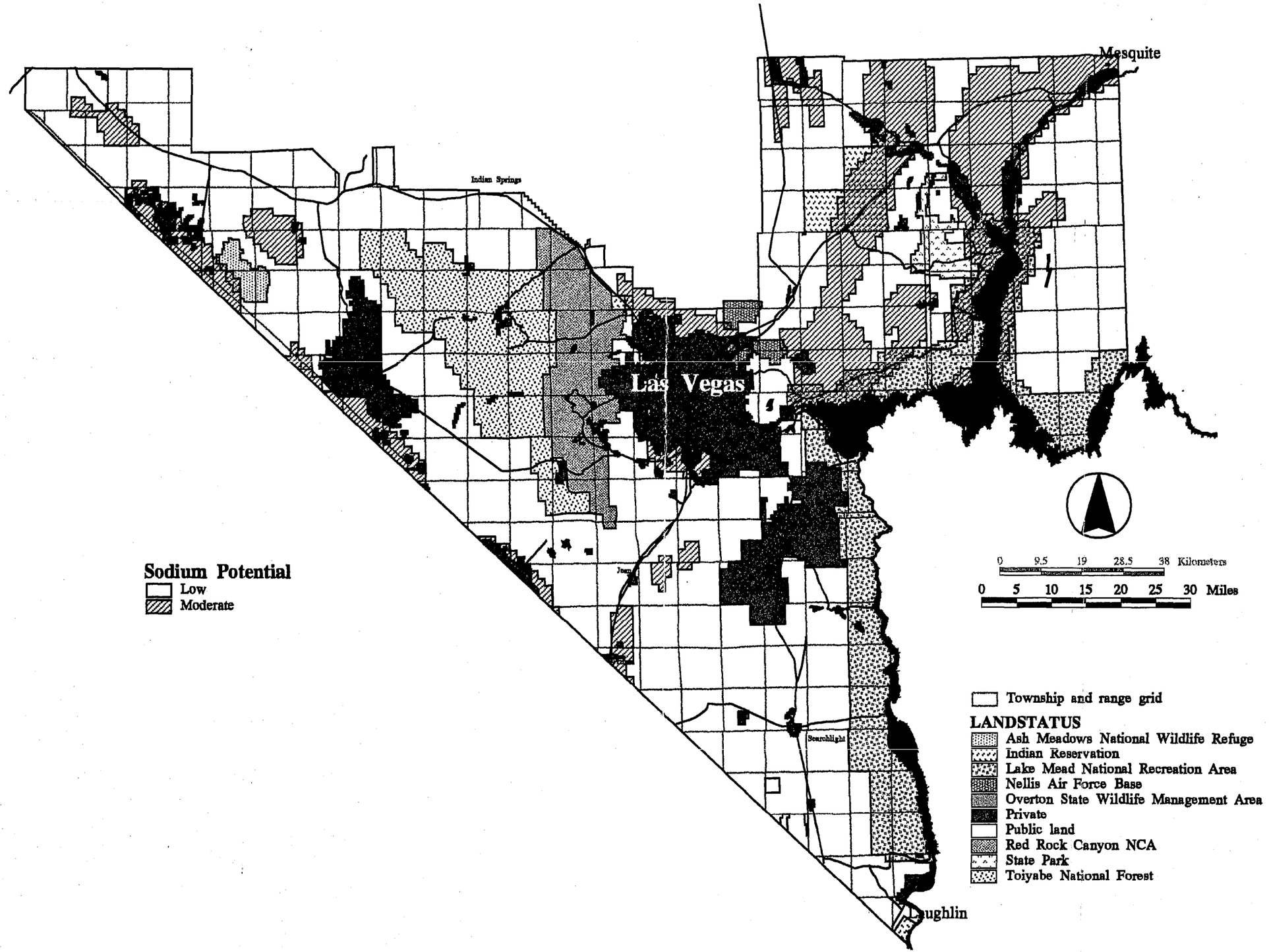
Map # 3-11

Prepared March 24, 1998



Resource Management Plan

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Las Vegas District

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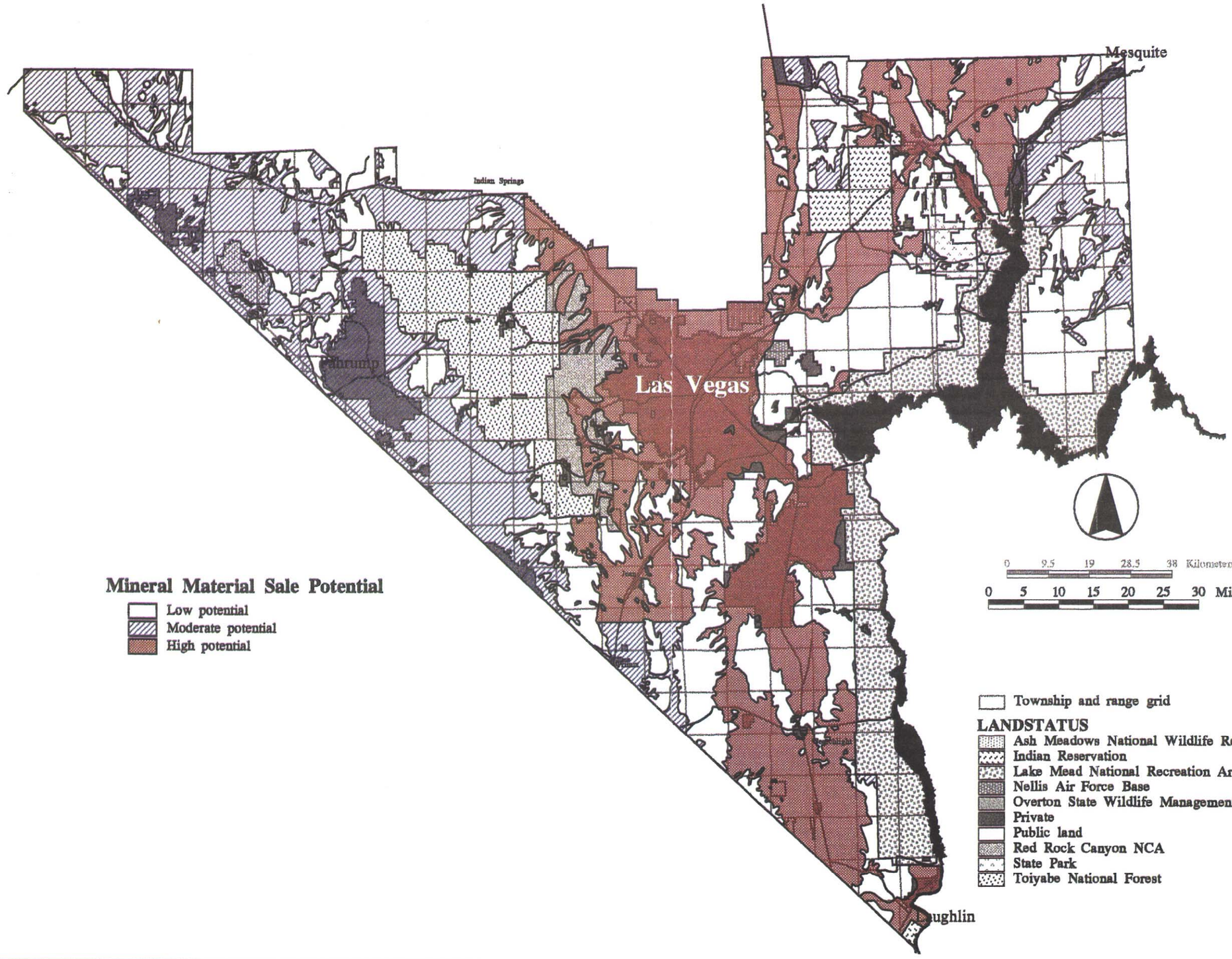
Map # 3-12

Prepared March 24, 1998



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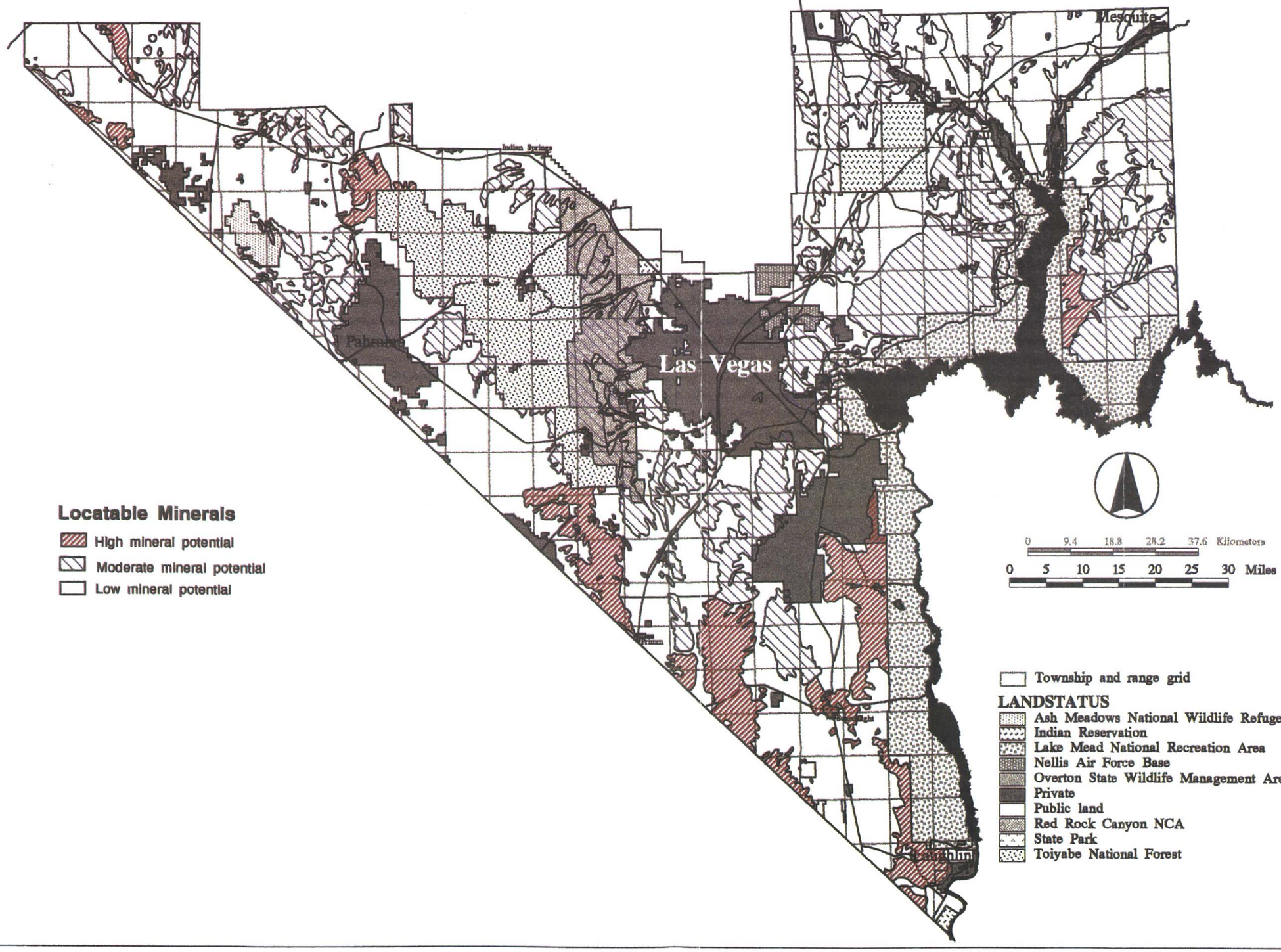
Map # 3-13

Prepared March 24, 1998



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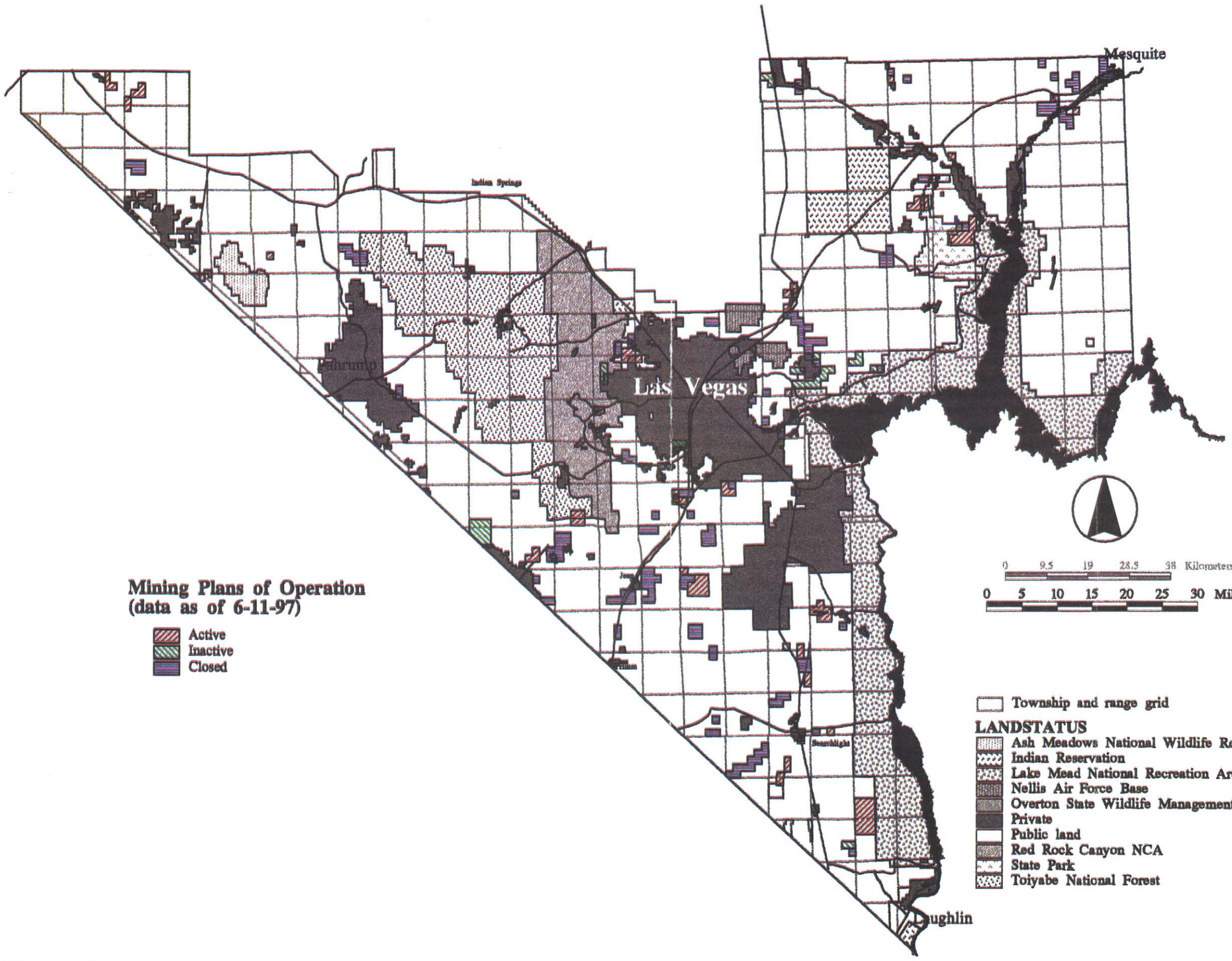
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 3-14

Prepared August 1, 1997



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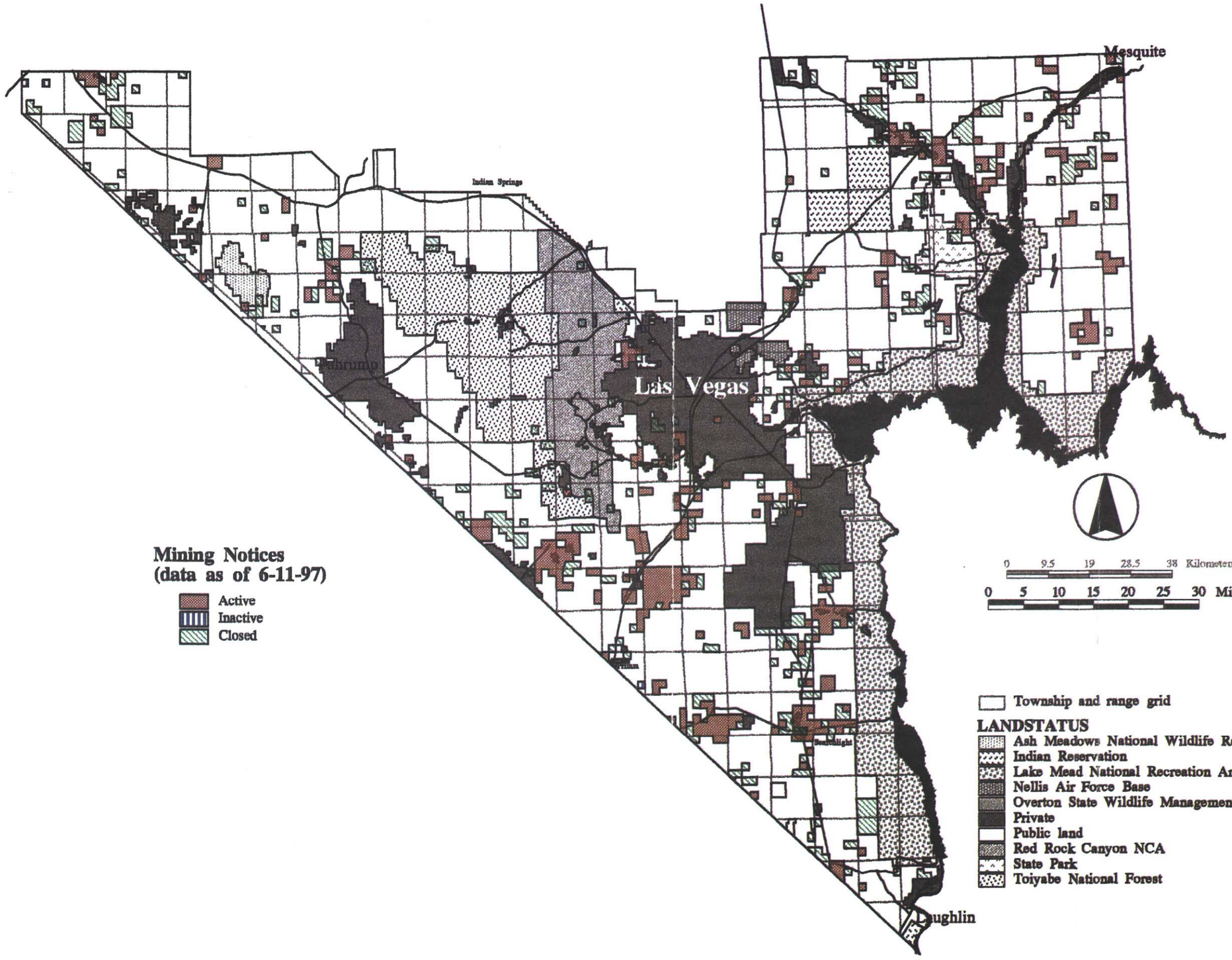
Map # 3-15

Prepared March 24, 1998



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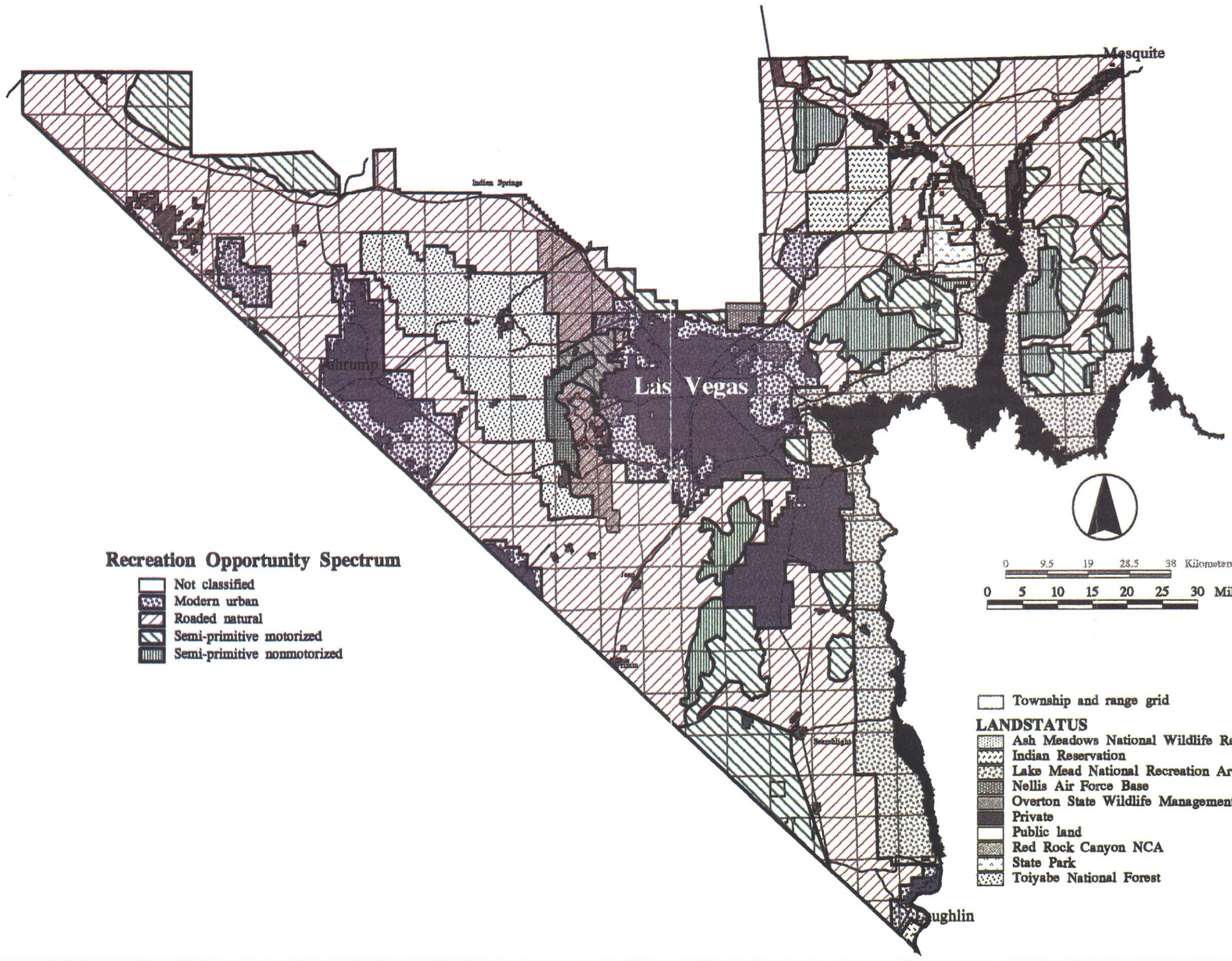
The data was prepared using the BLM's ESRI ARC/INFO geographic information system and maps plotted using the ESRI ArcView system.

Map # 3-16

Prepared March 24, 1998



Resource Management Plan

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Map # 3-17

Prepared March 24, 1998