APPENDIX L

APPENDIX L

Responses to Comments on the Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement

Seven letters of comment were received during the public comment period for the Clark County MSHCP/EIS. Letters were received from:

- David J. Farrel, Chief, Federal Activities Office, United States Environmental Protection Agency
- Col. Robert C. Lynn, USAF, Vice Commander, Nellis Air Force Base
- Kay Brothers, Director, Resources, Southern Nevada Water Authority
- Daryl N. James, Chief, P.E., Environmental Services Division, Nevada Department of Transportation
- Jane Feldman, Co-Chair, Conservation Committee, Southern Nevada Group, Sierra Club
- Kenneth M. Reim, P.E., Mining Engineer
- Steven C. Ferrand

Responses to the comments in each of these letters are detailed below in the order that they appear in the letter. Specific responses are numbered to correspond to the number assigned in the attached copies of the letters (Attachment A). Where text changes were made to the document in response to comments, the page or pages on which the change was made are attached (Attachment B).

David J. Farrel, Chief, Federal Activities Office, United States Environmental Protection Agency

1. The MSHCP/EIS provides or incorporates several significant specific conservation measures on non-Federal lands (lands otherwise subject to the take provisions of the permit). These include acquisition and management of the Boulder City Conservation Easement (for conservation and management of 89,000 acres of desert tortoise habitat), contributions to assist in the acquisition of land located within the Las Vegas Wash Wetlands Park (for wetland and riparian habitat creation and enhancement, public education), contribution to assist in the acquisition and management of the Las Vegas Springs Preserve (for upland and riparian habitat restoration and enhancement, public

education), acquisition of a conservation easement at the North Las Vegas Airport (for conservation of Las Vegas bearpoppy habitat), and acquisitions of property and conservation easements through the Upper Muddy River Riparian Acquisition Plan. In addition, a Virgin River acquisition program is under development and will begin to be implemented within the first few years of permit issuance.

Although the MSHCP provides substantial funding for conservation actions on Federal lands, these are to "augment (but not replace) their budgets to allow them to more fully or quickly implement conservation measures either contained within their current plans or policies agreed to as set forth in Section 2.8.4 through 2.8.9 or developed by them or as a result of the measures suggested by the AMP" (Section 2.8.3.2). This is consistent with the recognition of the additional burden on biological resources on Federal lands resulting from urbanization on non-Federal lands. Many of the future management activities on Federal lands will respond to priorities not currently in their plans and policies, but as a result of the AMP.

2. Clark County has demonstrated its commitment to a program of planned growth. Founded on the principles of Smart Growth, the Southern Nevada Strategic Planning Authority (Authority) was established by Nevada Senate Bill No. 383. As mandated, the Authority has developed and adopted "A Strategic Plan to Address Growth in Southern Nevada" (1999). The Strategic Plan identifies and evaluates the needs of Clark County relating to its growth, prioritizes the objectives and strategies relating to the growth of the county, and recommends strategies for meeting the County's growth needs and objectives. The Strategic Plan includes recommendations with respect to the issues of transportation, education, governance, parks and recreation, public safety, the environment, the economy, and health care and is consistent with the provisions of the MSHCP. As a result of its commitment to planned growth, Clark County's Regional Planning Coalition was awarded a $200,000 EPA Sustainable Community Grant for integrated planning. The ultimate objective of these efforts will be the planned growth of the region into a "town-centered, transit and pedestrian oriented community, with a greater mix of housing, commercial and retail uses."

3. Both the Desert Conservation Plan and the MSHCP/EIS focus on facilitating planning and were adapted to the planning context of Clark County. Different from many urban areas, the Las Vegas Valley has developed within relatively well defined urban growth limits as the result of the fact that private land in the valley (which represents less than eight percent of the land area of Clark County) is surrounded by Federal lands. Early in the development of the DCP, all of the participants recognized that this historic pattern of intensive urban uses within the valley significantly limited the value of conservation of biological resources on private lands within Las Vegas Valley. The value of establishing a north-south wildlife corridor on the west side of the valley was specifically reviewed in the DCP and determined to be of limited value. From the planning perspective, this focuses and limits new development in Clark County

primarily to the urban core of the Las Vegas Valley and the rural/urban areas around Mesquite and Laughlin.

A significant focus of the MSHCP is mitigation measures to address the effects of projected population growth on adjacent conservation areas, specifically through the funding of an extensive set of specific management activities in the Spring Mountains (Section 2.8.4) and Red Rock Canyon (Section 2.8.6) areas. These include public information and education, research, inventory, monitoring, protection, restoration, and land use policies and actions.

4. The explosive growth in the Las Vegas Valley was specifically anticipated in the population projections used as the basis for the development and analysis of the 20-, 30-, and 50-year term alternatives in the MSHCP/EIS. The proposal in the MSHCP for a 30-year permit term represents the County's approach to providing a balance between the biological, political, and economic factors involved in plan development and implementation. The emphasis in the MSHCP on the development of a scientifically defensible AMP arose specifically from the recognition of the rate of population growth and the number of sensitive resources. The biennial reporting process includes an analysis of the land disturbance, impact fee, and budgetary projections during the biennium. Based on the first three years of records since the MSHCP projections were developed, the actual number of acres disturbed per year tracks the projections closely:

Year	Projected Acres Disturbed	Actual Acres Disturbed
1997/1998	7,418	6,374
1998/1999	8,092	8,192
1999/2000	7,724	7,624

Furthermore, the Adaptive Management Process and the provisions of the plan dealing with changed circumstances should adequately address issues that may arise as a result of incorrect projections.

The USFWS will consider the uncertainties associated with the alternative permit durations when completing the Record of Decision, findings, and Biological Opinion and may ultimately decide to permit an alternative term rather than the 30-year term requested by the Applicants.

5. For a long-lived species such as the desert tortoise it is difficult to evaluate trends over the brief period of time that conservation efforts have been in place. The efforts to support conservation on the part of Clark County via the expenditure of funds have been significant. Overviews of what the DCP has accomplished since issuance of its permit

in 1995 are detailed in the documents entitled Progress Report, Implementation Plans, and Budget, July 1, 1995 to June 30, 1997, and July1, 1997 to June 30, 1999. Some of the significant conservation actions accomplished during this period include supporting BLM in establishing Desert Wildlife Management Areas, which ultimately were designated as BLM Areas of Critical Environmental Concern; purchasing the Boulder City Conservation Easement; assisting BLM in acquisition through exchange of 1,120 acres of private land in the Piute-Eldorado ACEC; acquiring grazing allotments from willing sellers and protected water rights acquired with the allotments; assisting BLM and NPS in reducing wild horse and burro herds in the ACECs; assisting in negotiating restrictions on OHV use in the ACECs; providing funding for road rehabilitation and signs in the ACECs; increasing BLM and NPS law enforcement capabilities in ACECs; and installing desert tortoise fencing.

The conservation effort in the Piute-Eldorado Valley is substantial and provides an example of the comprehensive effects of the DCP in contributing to the recovery of desert tortoise. The DCP funded the development and evaluation of tortoise monitoring sampling techniques and the initiation of long-term monitoring transects in Piute-Eldorado Valley. In addition, Clark County has purchased grazing allotments from willing sellers to complete the acquisition of habitat within the Piute-Eldorado DWMA in southern Clark County coupled with Federal lands which now comprise a 400,000-acre tortoise preserve. During 2000 the installation of tortoise-proof fencing along U.S. Highway 95 in Piute Valley was initiated and much of the segment between Searchlight and State Route 160 has been fenced. This large block of Mojave Desert habitat not only protects the desert tortoise but also insures that all of the habitat and species contained within it will be conserved. With the removal of cattle grazing, the habitat has been visually changed by the presence of perennial grasses in regions where they were scarce before. Intuitively, these conservation measures should enhance populations, but the results are difficult to measure on a short-term basis.

6. Aquatic-related ecosystems were identified as having very high priority for conservation from the initial stages of development of the MSHCP. However, the consensus among the Federal agencies and the biological community was that the data available at the time of development of the MSHCP were inadequate to deal with the complexity of issues associated with these resources within the plan. This in large part was the reason for implementing the MSHCP as a multiphased plan. Aquatic resources will be a primary focus of Phase 2 and will likely require a supplemental NEPA analysis to aquatic systems at the time of permit application for Phase 2.

   Nonetheless, a number of actions are being pursued in anticipation of the Phase 2 effort. These include the AMP focus on the Muddy River; activities of the Muddy River Regional Environmental Impact Alleviation Committee; Southern Nevada Restoration Team actions on the Virgin River; the Upper Muddy River Riparian Acquisition Plan; and other efforts on these rivers in collaboration with state and Federal agencies.

Watershed-based planning is in its initial stages for both the Muddy and Virgin River systems. These planning efforts will fully document baseline conditions and threats and will form the basis for Phase 2 coverage of fish and other aquatic-dependent species and facilitate integrated land use planning for these areas. Aquatic resources in high elevation systems have been evaluated in detail (Sada and Nachlinger 1996). Priorities established for spring habitat restoration and monitoring are being carried out in accordance with the Conservation Agreement for the Spring Mountains National Recreation Area. In addition, development of a specific monitoring program for springsnails is being developed under contract to Clark County.

7. A discussion of these resources is included in the MSHCP (beginning on p. 2-148). There is a limited extent of these habitats on private lands as described in the plan (p. 2-144). The detailed discussions of these habitats are in Appendixes A and B of the MSHCP/EIS. These unique habitats include rock outcrops, cliffs, boulder fields, and lava flows; sand dunes; gypsum soils; dry lake beds and playas; and boreal islands. Each of these has limited occurrences on private lands and is well represented on public lands. Therefore, conservation actions for these resources have been focused on public lands where they can be more effectively and efficiently implemented. Spatial analyses conducted in the initial stages of the MSHCP Adaptive Management Process will identify and map areas of unique habitat and high biodiversity and recommend priorities for conservation of these areas.

8. A detailed evaluation of threats and stressors to the ecosystems and species within Clark County is presented in Appendixes A and B to the MSHCP EIS, which were identified as Volumes II and III in earlier drafts of the document.

   The Implementation and Monitoring Committee established the initial priorities of the plan as set forth in Section 2.8 of the plan. The AMP will include additional actions that may be taken over time, depending upon the needs of species and the availability of funds. The establishment of priorities has been the subject of over 50 meetings that have been open to the public and reflect input from a broad cross section of the community as well as biological and scientific experts. The process for defining and implementing priorities and recommendations for future management and conservation measures is outlined in the description of the AMP (Section 2.8.2) and the I & M Committee's Biennial Budget Process (pp. 2-177 through 2-178).

9. The removal of the prohibition of take within Las Vegas Valley was one of the key features of the DCP and would apply to the MSHCP as well. Without the permit, the patchy remnant distribution of biological resources within the valley would have resulted in development leapfrogging over these resources, ultimately further fragmenting and isolating them. This is uneconomical and inefficient from a development perspective (additional infrastructure costs, increased trip lengths, increased transportation-related impacts) and would not address the conservation goal of

the MSHCP of providing a set of interconnecting and manageable reserve areas. The Southern Nevada Public Lands Management Act provides for the disposal of over 25,000 acres of Federal land within the Las Vegas Valley. Proceeds from the disposition of those lands have been earmarked for the acquisition of environmentally sensitive lands, the acquisition and development of parks and open spaces, and the development of the Multiple Species Habitat Conservation Plan. The PLMA is consistent with the goals of the MSHCP and facilitates and encourages growth within the urban core as opposed to dispersed growth throughout the county.

10. The EIS compares the MSHCP to the No Action Alternative, that is, without the implementation of an MSHCP. The more orderly development of the Las Vegas Valley consistent with the MSHCP should ultimately result in less air quality degradation than No Action (as a consequence of shorter trip lengths and increased infill development, as examples). The MSHCP was specifically developed to anticipate and accommodate the projected rate of population growth in the county during the next 30 years. The permit is limited to the amount of land disturbance that is anticipated to occur during this period regardless of the issuance of a Section 10(a) Permit and does not cover any potentially induced growth beyond that amount (145,000 acres of land disturbance). As discussed above, the County has already embarked on a regional planning process through the adoption of the "Strategic Plan to Address Growth in Southern Nevada" (1999).

11. We agree with this comment and have already taken steps to address these extremely sensitive areas. The County has initiated a number of specific programs to deal with riparian, aquatic, and mesquite ecosystems prior to any coverage through the MSHCP program. These include activities of MRREIAC, conservation actions identified in the BLM's Mesquite Woodland Habitat Management Plan (Appendix D of the MSHCP/EIS), and watershed planning, acquisition, and management activities on the Upper Muddy River, Virgin River, and Las Vegas Valley Wash, areas which cover the majority of riparian habitat in the county.

12. We agree with this comment. The conservation effort within the Mojave Desert has been a formidable undertaking. The recovery of the desert tortoise population within the Mojave Desert has been a team effort involving numerous participants within Federal (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Department of Defense, and Department of Energy) and state (Nevada Division of Wildlife, California Department of Fish and Game) agencies, and conservation organizations (e.g., The Nature Conservancy, Sierra Club), as well as numerous individual volunteers. The Federal agencies formed the Desert Tortoise Management Oversight Group (MOG) comprised of Federal and state resource managers of the four states where the Mojave population of the desert tortoise occurs (Arizona, Nevada, California, and Utah). This MOG meets annually and acts upon the recommendations of their technical advisory committee (TAC). The TAC is made up of numerous desert tortoise researchers and has been assisted by the USGS Biological Resources Division in

evaluating tortoise population needs on a prioritized basis. These suggestions are evaluated and acted upon by the MOG, whose recommendations should then be implemented by the participating agencies.

For the past two years the MOG, along with the USGS BRD and Colorado Fish & Wildlife Research Unit in Fort Collins, Colorado, has been sponsoring workshops and providing expertise in evaluating desert tortoise population sampling techniques. The USFWS has determined that the line distance technique using a computer program called "Distance" will be used to enumerate desert tortoise populations rangewide. As of August 2000 the USFWS has employed a Desert Tortoise Recovery Coordinator who will implement the distance sampling technique on a rangewide basis. Implementation will be subject to the availability of funding through agencies and other sources.

In addition to the MOG, there is another group called the Desert Managers Group (DMG). The DMG consists of numerous individuals from both Federal, state, and local governmental entities and is active in recommending conservation efforts (mainly within the state of California). The role of the DMG is to oversee, suggest, and recommend policies to be initiated within the southern California desert to address the environmental health of natural resources. This DMG meets bimonthly.

Finally, the USGS BRD and the University of Nevada, Reno have been collaborating on a number of studies designed to assist in rangewide monitoring and recovery of the tortoise. Their studies include distance sampling, translocation, reproduction, behavior, survivorship, and carrying capacity of desert tortoises. The majority of these studies are being conducted in Nevada with DCP funding, but the results are applicable rangewide.

The desert tortoise coordinator for the USFWS is a member of the Implementation and Monitoring Committee, and Clark County has continued and will continue to coordinate its efforts with those programs within the region, which are proving to be effective.

13. The only Covered Species associated with dry lake beds and playas is the Parish's phacelia (*Phacelia parishii*), which in Clark County occurs primarily on Federal land (Nellis AFR), where recreational activities are not a concern. A key element in the development of the AMP by the UNR is a GIS spatial analysis program. This spatial analysis program will focus on identifying sensitive resources within the county; identifying distribution, rarity, and threats; and establishing priorities for management of those sensitive resources in Clark County in the context of their distribution, threats, and rarity.

14. Although the population projections in the DCP underestimated the rate of growth in Clark County, the REMI projections in the Draft MSHCP/EIS are consistent with actual rates over the past three years (see response 4 above). Also, as noted in response 9 above, the MSHCP would only allow the amount of land disturbance associated with

projected population growth rates (145,000 acres) during the term of the permit. Fee-based land development is being monitored through quarterly land disturbance reports, and any additional development would require amendment of the plan and additional mitigation measures. The 15,000 acres of non-fee-based land disturbance will be estimated using the GIS spatial analysis in the AMP.

15. Appendixes A and B are summarized in Sections 2.6 and 2.7. Both hard copies and CD-ROM copies of the appendixes were circulated to the public and are available on the Clark County website:

    http://www.co.clark.nv.us/compplan/Environ/Desnet/desert1.htm

    As noted in response 8 above, Appendixes A and B were referred to as Volumes II and III in earlier drafts of the MSHCP/EIS. References to these volumes have been removed from the final document. The CD-ROM including these appendixes has been sent to the EPA.

Col. Robert C. Lynn, USAF, Vice Commander, Nellis Air Force Base

1. As requested, Section 2.8.8 and other references to the USAF participation in the plan have been deleted from the document. However, references to acreages and descriptions of the resources located upon land managed by the USAF were left in the documents. It should be noted that a large proportion of Nellis Air Force Range is managed by the USFWS on the Desert National Wildlife Range. The USFWS will continue to coordinate with the Air Force on species conservation issues under Section 7 of the Endangered Species Act and through participation in the Five-Party Cooperative Agreement for management of natural resources on Nellis Air Force Range.

Kay Brothers, Director, Resources, Southern Nevada Water Authority

1. This activity would be covered by the MSHCP. However, in the event that there is a Federal nexus, a Section 7 consultation would be required as set forth in Section 2.10.9.2 of the MSHCP.

2. We agree that the Yuma clapper rail should be addressed and considered for inclusion in Phase 2 of the MSHCP.

3. All of the suggested editorial changes have been made to the document, except for Section 2.12.3, which has been modified to read: "Each entity which has committed to participate in and contribute to the implementation of the plan in obligations set forth in Section 2.8 of the MSHCP will enter into an agreement with the USFWS."

Daryl N. James, Chief, P.E., Environmental Services Division, Nevada Department of Transportation

1. All of the suggested editorial changes have been made to the document, except for the suggested change in Section 5.2. The Biological Advisory Committee, or BAC as it was known, was not referred to as a subcommittee.

Jane Feldman, Co-Chair, Conservation Committee, Southern Nevada Group, Sierra Club

1. The $550-per-acre fee in the DCP provided more funds than necessary to implement the DCP. This extra money will be used to fund Phase 1 of the MSHCP; in addition, current funding levels will provide an additional $1 million per year for conservation measures associated with future phases of the MSHCP. Furthermore, mitigation fee funding will be augmented by substantial additional funding from the Southern Nevada Public Lands Management Act. While the $550 fee is set, the COLA (cost of living adjustment) applies to the expenditure of funds and will provide the additional funds necessary to implement the MSHCP as proposed. Because the rate of fee collection has provided an endowment, the interest earned on the funds held in the endowment provide an additional source of income for the program, especially as the result of the longer investment term available.

2. Scientists at UNR are developing the Adaptive Management Process for the MSHCP. An important component of the AMP is the evaluation of means to enhance effectiveness in existing species and habitat management actions. Specifically, the efficacy of the MSHCP will be evaluated by analyzing the effects of management in light of hypothesized responses to such management. In the first biennium of the MSHCP, the AMP will focus on a demonstration project evaluating conservation efforts on the Muddy River. Over time, this component of the AMP will be expanded to cover all of the mitigation activities. The UNR group has committed to an independent peer review of the implementation of the program.

3. As set forth in the MSHCP, the overall goal and measurable objective of the MSHCP is no net unmitigated loss of habitat within Clark County. The spatial analysis portion of the Adaptive Management Process will monitor progress in connection with this measurable standard. In addition, the MSHCP includes initial goals and objectives for each proposed Covered Species (Table 2-5 of the MSHCP). These will be modified by more specific goals and objectives developed through the implementation of the AMP.

4. The USFWS is responsible for evaluation of the MSHCP through its review and certification of the biennial reports provided by the applicant (Sections 2.12.1.6 and 2.12.1.7). In addition, the implementation measures reported in these documents will have undergone review by the County's Implementation and Monitoring Committee, which is a forum open to the public. The AMP will inform the USFWS and the I & M

Committee on whether or not the plan as implemented is ensuring species survival and recovery. Spatial analysis conducted for the AMP will evaluate on a regular basis how much habitat has been conserved and how much biodiversity has been protected. The Adaptive Management Process is currently implementing a web-based computer program that will define all of the obligations of the MSHCP and will allow anyone to review the progress of those programs over time. Finally, the AMP process also includes reporting on a biennial basis.

5. See responses 2 and 4 above. The ultimate responsibility for independent review of the plan as a whole resides with the USFWS, with input from the public through the public review process. The public was involved extensively in the development of the DCP and the subsequent development of the MSHCP and will have a continued opportunity for input through the open meetings of the Implementation and Monitoring Committee. The evaluation of the implementation of the AMP will come through both the commitment for independent peer review and the required biennial review by the USFWS and the I & M Committee.

6. As noted in the comment, a project tracking system is a component of the implementation program. This database will function as the quarterly reporting tool for contracted entities and will also serve as the accountability mechanism of the MSHCP.

Kenneth M. Reim, P.E., Mining Engineer

1. The USFWS considered, but rejected, the extension of the public review period for the MSHCP/EIS because of the extensive public involvement in the development of the document. This lengthy, inclusive public process included participation by Federal, state, and local agencies and many other potentially affected parties in Clark County, as documented in Chapter 5 of the EIS.

2. This document represents a complex and comprehensive analysis of detailed information including 240 species, 13 ecosystems, Federal, state, and local agencies, and various private interests. The document was prepared at the direction of a broad-based steering committee and exhaustively reviewed by the participants and their professional consultants, as well as independent biologists.

3. A large proportion of the references listed in Chapter 9, References Cited, are called out in Appendixes A and B, bound separately.

4. Information on the range of species in North America was specifically requested for inclusion in the analysis, in order to provide reviewers with the regional context for evaluation of the conservation measures within Clark County. In making a determination on whether or not to issue a permit for the MSHCP, the USFWS must

evaluate the rangewide population trends of a species as the basis for evaluating the specific effects of the MSHCP on that species.

5. See responses 2 and 4 above.

6. Many more programs were proposed that were not funded. The priorities were developed through a broad-based committee, representing the full spectrum of interests in Clark County (Federal and state agencies, Clark County, the Cities, environmental groups, miners, OHV enthusiasts, biologists, grazers, and others). In addition, in making the determination on whether or not to issue a permit for the MSHCP, the USFWS must evaluate projects funded under the MSHCP to ensure that the effects of the MSHCP are minimized and mitigated to the maximum extent practicable. This evaluation will ensure that only necessary projects are approved for funding.

7. Our plan discusses ACECs, assuming that they will be approved by Congress.

8. The closing of IMAs and LIMAs to mineral exploration will not be implemented by the MSHCP; it must be implemented through the appropriate BLM process.

9. Based on the Las Vegas RMP, as summarized in Chapter 4 of the EIS, an estimated 2.1 million acres of BLM lands in Clark County are open to locatable minerals.

10. Since the MSHCP only incorporates actions on Federal lands included in approved management plans, this would be a conflict between this law and the Las Vegas RMP, not the MSHCP.

11. Since the MSHCP only incorporates actions on Federal lands included in approved management plans, this would be a conflict between this law and the Las Vegas RMP, not the MSHCP.

12. The Clark County Board of County Commissioners, which has jurisdiction over R.S. 2477 roads and is the primary applicant for the MSHCP, has determined that there is not a conflict between the two.

13. A detailed analysis of the economics of the MSHCP is presented in Section 2.9. The benefits of the plan are detailed in Section 2.8. The County, in developing the MSHCP in support of an application for a 10(a) permit, made the implicit decision that the costs of the $550-per-acre fee program (continued from the DCP) were sufficiently compensated by the benefits of coverage under the proposed permit. The comparison of the relative benefits and costs of the MSHCP and alternatives, including the No Action Alternative, is summarized in Section 4.5 of the MSHCP/EIS.

14. Comment noted.

Steven C. Ferrand

1. The in-depth analysis of individual species data provided by Mr. Ferrand has been taken into consideration in the evaluation of the MSHCP and will be considered in the USFWS's determination on whether or not to issue a take permit under Section 10(a)(1)(B) for each of the reptile species for which the County has requested coverage.

ATTACHMENTS

ATTACHMENT A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

JUL 2 1 2000

RECEIVED
JUL 26 2000
Reno FWS

Mr. Bob Williams
Field Supervisor
US Fish and Wildlife Service
Nevada Fish and Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502

Dear Mr. Williams:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (EIS) for the project entitled **Clark County Multiple Species Habitat Conservation Plan, Clark County, Nevada** (MSHCP)(CEQ# 000174). Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

Clark County, Nevada; the Cities of Las Vegas, North Las Vegas, Henderson, Boulder City, and Mesquite; and the Nevada Department of Transportation (Applicants) have applied to the US Fish and Wildlife Service (Service) for an incidental take permit (ITP) pursuant to Section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (Act). The proposed 30-year permit would authorize the incidental take of 2 federally threatened and endangered species, and 77 non-listed species of concern (Covered species) in the event that these species become listed under the Act during the term of the permit, in connection with economic growth and development of up to 145,000 acres of non-Federal lands in Clark County. The Multiple Species Habitat Conservation Plan (MSHCP) is the direct outgrowth of the 1995 Desert Tortoise Desert Conservation Plan and will supercede this plan if approved by the Service.

To minimize and mitigate the impacts of take, the Applicants propose to impose a $550.00 per-acre development fee and maintain an endowment fund that will provide up to $4.1 million per biennial period to fund conservation measures on primarily public lands for Covered species and to administer the MSHCP. The plan includes measures to implement a public information and education program; purchase grazing allotments; construct barriers to wildlife movement along linear features such as roads; translocate displaced desert tortoises; participate in and fund local habitat rehabilitation and enhancement programs; and develop and implement an adaptive management process. Alternatives evaluated include the No Action alternative, the

proposed MSHCP, a Low-Elevation Ecosystems MSHCP, a Permit only for Threatened or Endangered and Candidate Species, and Alternative Permit Durations (20 years or 50 years).

EPA strongly supports the multi-species/multi-habitat approach, use of adaptive management, and the inclusive process used in developing the MSHCP. Of note is the comprehensive evaluation of regional conservation needs, threats, and stresses; and the conservation actions responding to these threats and stressors as identified in Section 2.4.2.6 (pg. 2-62 to 2-74). While we strongly support the proposed MSHCP and urge implementation of all the conservation actions identified above, we note that the MSHCP does not appear to provide for specific conservation measures or nonmonetary "take" mitigation measures on the land to be developed. The FEIS should clearly and persuasively demonstrate that the MSHCP would result in improved on-the-ground conditions which would not otherwise be achieved through existing resource management plans. 1

We remain very concerned with the long-term implications of mitigating the impacts of take through increased funding and coordination for conservation measures primarily on existing public lands. We observe that many of these conservation measures appear to be actions already planned or implemented by Federal resource managers. We acknowledge that the MSHCP may greatly enhance the implementation rate and scope of conservation measures and improve species viability on public lands, however, we also believe a commitment to planned growth which is town-centered, transit and pedestrian oriented, and has a greater mix of housing, commercial and retail uses would significantly enhance the benefits of the regional conservation planning effort. Furthermore, such growth could provide for development while minimizing local tax increases, traffic congestion, and degradation to the environment. 2

We strongly urge the Applicants and Service to integrate the above principles of planned growth into the proposed MSHCP as part of the proposed mitigation measures on non-Federal land (see enclosures). Integration of these principles could provide for habitat corridors, open space, and reduced air and water pollution which would result in significant benefits for both the community and Covered species. We also suggest a focus on infill opportunities and development near existing infrastructure which would be less costly and would reduce the need to utilize undeveloped lands for new development. A lot of the future growth could occur on the western edge of Las Vegas Valley (figure 2-16, pg. 2-149) where the majority of Federal lands that would be transferred to private use are located (pg. 2-151). This urban boundary abuts the Spring Mountains and Red Rock Canyon areas which have the highest biodiversity, highest density of species and the highest level of current conservation management (pg. 2-148). Future development on this western boundary could significantly influence the biodiversity and sustainability of these unique conservation areas. 3

Given the explosive growth in the area, the highly sensitive desert ecosystems, and the large number of sensitive species; we urge adoption of the 20-year permit duration versus 30 years. A shorter permit duration would reduce potential irreversible adverse impacts to habitats and species, if growth projections, development rates, and species conservation assumptions prove to be significantly incorrect. We note that growth projections for the Las Vegas Valley and Clark County have been historically underestimated. 4

Our other concerns include the description of existing conditions, cumulative impacts, and long-term species viability. Detailed comments are enclosed. Because of these and the above concerns, we have classified this DEIS as category EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). Please send two copies of the Final EIS (FEIS) to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please call me at (415) 744-1584, or Laura Fujii, of my staff, at (415) 744-1601.

Sincerely,

David J. Farrel, Chief
Federal Activities Office

Enclosures: Detailed comments
EPA Rating System Summary
Why Smart Growth: A Primer
Best Development Practices: A Primer for Smart Growth

MI002824
Filename: clarkcomshcp.wpd

cc: Cynthia Truelove, Clark County
Ben Harrison, USFWS, Portland
Paul Fromer, RECON

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

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

"EC" (Environmental Concerns)

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

"EO" (Environmental Objections)

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

"EU" (Environmentally Unsatisfactory)

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

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

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

"Category 2" (Insufficient Information)

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

"Category 3" (Inadequate)

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

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

DETAILED COMMENTS

Existing Conditions

1. Although a summary of the Desert Conservation Plan is provided, there is no description of its effectiveness in assuring the long-term viability of the desert tortoise or its critical habitat. We strongly recommend that the Final EIS (FEIS) provide a detailed description of what has actually been achieved in regards to species conservation through the Desert Conservation Plan and associated conservation measures (e.g., construction of barriers, Las Vegas RMP). For instance, describe desert tortoise population trends, species and habitat conditions, and scientifically valid data that demonstrate that conservation measures are achieving conservation goals. 5

2. Aquatic related ecosystems, such as desert riparian, mesquite/catclaw, and springs; are critical habitat components in arid regions such as Clark County. While the DEIS provides descriptions of these ecosystems, it does not describe their existing conditions. Aquatic ecosystems are highly susceptible to reduced groundwater levels, water quality, and water quantity. The FEIS should provide a description of whether these critical ecosystems have been adversely affected by groundwater pumping or declining water quantity and quality. Indicate if any are currently considered degraded and at high risk due to potential future actions and development. If these systems are degraded or at high risk, we urge the Applicants and Service to increase the focus of proposed conservation measures on ensuring the preservation and enhancement of these ecosystems. 6

3. We also encourage inclusion in the FEIS of more information regarding critical, unique or valuable habitats which may be lost on non-Federal land if the Service approves the incidental take permit. Describe the significance of these habitats, if any, for conservation of Covered species. If any of these habitats are of significant importance to the continued viability of a Covered species, either provide conservation measures to preserve this habitat or provide a scientifically supportable rationale for allowing the habitat to be lost. 7

4. We recommend the FEIS provide additional information regarding the level of risk to each ecosystem and Covered species, the level of urgency for implementing conservation measures for these ecosystems and species, and a recommended priority order for implementation of all proposed conservation measures. We recognize there is some indication in the DEIS of the priority for implementation of conservation measures. However, it is not always clear what the supporting rationale is for this priority order nor is there an apparent priority order provided for all conservation measures or for the conservation commitments of each Applicant and MSHCP participant. For example, Section 2.8 Measures to Minimize, Mitigate, and Monitor Impacts of Take, appears to list mainly measures already in existing Federal land management 8

plans. However, it is not clear what measures have been implemented, what their effectiveness has been, the priority for their implementation and what are new measures added as part of the MSHCP.

Cumulative Impacts

1. The DEIS implies that the MSHCP would reduce leapfrog growth and minimize potential adverse impacts to air quality, water quality, and other indirect and cumulative impacts related to growth (e.g., pgs. 2-278, 4-42, 4-115). The DEIS does not provide persuasive evidence that there would, in fact, be a reduction in leapfrog growth nor does it support the contention that approval of the MSHCP and incidental take permit would not result in induced growth. The FEIS should provide information and data to support the above assumptions regarding leapfrog and induced growth. 9

2. We are concerned with potential indirect and cumulative impacts to sensitive species and critical habitat that may result from increased air pollution, decreased water quality and reduced water quantity which may result from growth in Clark County. For example, it is well known that air pollution can adversely affect sensitive vegetation (e.g., moss and lichen) in areas far removed from development. Poor water quality and quantity caused by increased nonpoint source pollution and increased upstream diversions or groundwater pumping can also result in adverse ecosystem effects. The FEIS should evaluate whether such indirect and cumulative effects are likely for critical habitat and Covered species. 10

Biological Resources

1. The ecosystems with the greatest proportion potentially subject to land disturbance are desert riparian/aquatic (35.5%) and mesquite/catclaw (23.0%)(pg. 4-35). These ecosystems are already scarce and are essential for ensuring the viability of many unique species. Furthermore, implementation of existing management actions and the MSHCP would only adequately address ecosystem level threats to Covered species within mesquite/catclaw habitat for the short term (pg. 2-128). The MSHCP proposes to resolve the conservation needs of these habitats during Phase 2 of the MSHCP through the development of watershed-based management plans for the Muddy and Virgin Rivers, as well as integration of the Las Vegas Wash habitat restoration activities (pg. 2-134).

Given the importance of these ecosystems and their vulnerability, we urge a more aggressive approach in addressing their conservation needs. For instance, consider developing and implementing the above watershed-based management plans during Phase 1 rather than Phase 2 of the MSHCP. Additional conservation measures should also be considered. The FEIS 11

should clearly describe whether existing and new management efforts will be sufficient to assure the long-term viability of desert riparian/aquatic and mesquite/catclaw ecosystems.

General Comments

1. A permit to include the entire Mojave Desert Ecosystem was considered and rejected due to the complexities in dealing with differences in state and local laws, land ownership patterns and potential levels of conflicts between participants (pg. 3-2). Such a permit would combine conservation efforts taking place in California, Utah, Arizona, and Nevada; and provide a more comprehensive approach based upon species range and distribution rather than jurisdictional boundaries. Although this alternative was rejected, we urge the Applicants and Service to work closely with the other Mojave Desert conservation efforts, regardless of jurisdiction, in order to maximize benefits. For instance, opportunities should be sought for joint research projects and the exchange of data and management ideas. 12

2. The DEIS states that impacts of recreational activities on dry lake beds and playas are unknown (pg. 2-145). It also states that these habitat areas are critically important to the biological diversity and ecology of the region. Given the unknown impacts and importance of these habitats, we recommend the Applicants and Service consider highlighting research needs for these habitats and giving them a high priority. 13

3. Given the historical underestimation of growth projections for the Las Vegas Valley and Clark County, we recommend the Adaptive Management Plan include periodic evaluations of MSHCP assumptions for growth and development projections. The FEIS should describe what would happen if the maximum allowable take of 145,000 acres is developed well before the end of the 30 year permit period. If growth projections are found to be significantly underestimated, we urge the Applicants and Service to seriously reconsider the ability of the MSHCP to adequately minimize and mitigate for incidental take of the Covered species. It is possible additional conservation measures and mitigation would be necessary. 14

4. The DEIS refers to Appendices A and B (e.g., in Section 2.5.3) which are not included with the DEIS. The reference implies Appendix A provides a detailed description of measures to address ecosystem level threats while Appendix B describes measures to address species-specific threats. Other sections of the DEIS also refer to Volumes II and III (pg. 4-23) of the MSHCP which, again, are not included with the DEIS, nor are they listed in the DEIS Table of Contents. Furthermore, it is not clear whether the description of conservation measures provided in Section 2.4.2.6 and Section 2.8 are summaries of Appendices A and B or whether these appendices include conservation measures not described in the MSHCP and DEIS. The FEIS should resolve this confusion by identifying what Volumes II and III contain and by providing summaries of Appendices A and B in the appropriate sections of the FEIS. 15

DEPARTMENT OF THE AIR FORCE
HQ 99th AIR BASE WING (ACC)
NELLIS AIR FORCE BASE, NEVADA 89191-6520

24 July 2000

Vice Commander, 99th Air Base Wing
4430 Grissom Avenue, Suite 120
Nellis AFB NV 89191-6520

Clark County Department of Comprehensive Planning
500 S. Grand Central Parkway, Suite 3012
Las Vegas, NV 89155-1741

U.S. Fish and Wildlife Service
1340 Financial Blvd., Suite 234
Reno, Nevada 89502-5093

RECON
1927 Fifth Avenue, Suite 200
San Diego, California 92101-2358

To Whom It May Concern:

Please delete the section 2.8.8 from your Draft Environmental Impact Statement for the Multiple Species Habitat Conservation Plan (MSHCP) as being redundant. The U.S. Air Force does not need to be a signatory to the MSHCP, since Nellis AFB already has an existing plan, its Integrated Natural Resource Management Plan, that concurs with the spirit and intent of the MSHCP.

This request does not diminish our stewardship of the environment and our close working relationship with Clark County, Fish & Wildlife, and all the other agencies in our efforts to identify species of concern. For example, we are attempting to survey the extent of the sage grouse habitat into our Range, even though the sage grouse is not a listed species. Furthermore, we are working with the Fish & Wildlife and Clark County to attempt to develop a water retention facility with fencing that would in essence protect the Las Vegas bearpoppy in Area III of Nellis AFB.

Thank you for all the efforts that have been made in preparing and working toward the MSHCP. These efforts are greatly appreciated by members of your community, including Nellis AFB.

ROBERT C. LYNN
Colonel, USAF
Vice Commander

Administrative Office
1001 S. Valley View Blvd.
Las Vegas, Nevada 89153
Telephone: (702) 258-3939
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Southern Nevada Water System
243 Lakeshore Road
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July 24, 2000

SOUTHERN NEVADA
WATER AUTHORITY

Mr. Bob Williams, Field Supervisor
U.S. Fish & Wildlife Service
1340 Financial Boulevard, Suite 234
Reno, Nevada 89502-7147

SUBJECT: COMMENTS ON DRAFT CLARK COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT (File No. DES 00-19)

Dear Mr. Williams,

The following comments are herein submitted in response to the U.S. Fish & Wildlife Service's request for comments on the Draft Clark County Multiple Species Habitat Conservation Plan (MSHCP) and Environmental Impact Statement. The Authority is a seven member quasi-municipal agency -- including the Cities of Las Vegas, North Las Vegas, Henderson, and Boulder City, the Big Bend Water District, the Clark County Sanitation District, and the Las Vegas Valley Water District -- formed in 1991 to cooperatively manage water resources for Southern Nevada.

The Authority fully supports implementation of the MSHCP and issuance of a Section 10 permit to Clark County by the U.S. Fish & Wildlife Service (Service). The Authority has had extensive involvement in development of the Clark County Desert Conservation Plan (DCP) and ensuing MSHCP since 1990. In particular, Authority members recognize that without a MSHSP in Clark County, it is uncertain how many and to what extent coordinated, community-based conservation programs could be funded under the DCP in future years, programs that are important to the continued operations of the Authority and will allow for sound planning for future water delivery and conservation of species.

As you are aware, the Authority has been designated the agency responsible for implementing the January 2000 Las Vegas Wash Comprehensive Adaptive Management Plan (LVWCAMP) and associated April 2000 Action Plan. One goal of the LVWCAMP is to enhance native wetland and riparian communities in the Las Vegas Wash by decreasing erosion, planting native vegetation, and managing tamarisk. Additionally, the MSHCP identifies Threat 1501 on page B-48 of the document as, "Exotic plant encroachment (tamarisk)", and as, "habitat degradation and population decreases resulting from introductions, competition, and encroachment of exotic species (such as tamarisk)" on page A-31. With this, it is the Authority's understanding that by the Service's approval of the MSHCP as written, that when tamarisk eradication activities are 1

conducted in the Las Vegas Wash that the Authority will have "coverage" to conduct these activities.

Furthermore, a Yuma clapper rail was recorded as occurring in Clark County in May 1998, during bird surveys being conducted by SWCA Environmental, Inc., in the Las Vegas Wash. Due to the paucity of local data on this species, and because the exact status and abundance of Yuma clapper rails in the Las Vegas Wash is unknown, it was not included as either a "covered" or "evaluation" species in the MSHCP, but instead was categorized as a "watch list" species. Although the rail was not recorded in the Wash during 1999 or 2000 bird surveys, given that the Wash is near this species' northern limit, it is likely that individuals may at times be utilizing the Wash. Also, the San Bernadino County Museum recorded this species along the Virgin and Muddy Rivers during bird surveys this year. Thus, with the work the Authority will be conducting in the Las Vegas Wash over the next several years, we would recommend that this species be addressed and included in Phase II of the MSHCP, as more species are added to the Section 10 Permit. 2

In addition to these general points, the Authority offers the following specific comments:

Page	Section	Comment
2-46	2.3.2.2 (l)	Insert ", unless a surplus is declared by the Secretary of Interior, in which case Nevada would be able to consumptively use more than 300,000 acre-feet per year." after "... limited to 300,000 acre-feet per year" in the second sentence. 3
2-46	2.3.2.2 (l)	Change the third sentence to read, "The Las Vegas Valley relies on water resources available to the Southern Nevada Water Authority and groundwater from wells. Current forecasts indicate that the Southern Nevada Water Authority can meet projected demands with its existing resources through the year 2030." This will reflect the most recent water resource forecasts as described in the Southern Nevada Water Authority's October 1999 Water Resource Plan.
2-51	2.4.1.1	Change "Aerojet" to "Coyote Springs Investment Corporation". This will reflect the change of ownership of this property that occurred in the early 1990s.
2-199	2.8.3.9 (b)	Change "less than 1,500 acres" to "less than 200 acres" in the second sentence of the first paragraph. This will reflect the most recent vegetation acreage figures for the Las Vegas Wash, estimated by the Las Vegas Wash Project Coordination Team.
2-199	2.8.3.9 (b)	Insert ", as well as through various grant opportunities." after "among several others." in the fourth sentence of the second paragraph. Various

		federal and local grant monies have already and will continue to be used to assist in development of the Clark County Wetlands Park.
2-306	2.12.3	Clarify whether "Each of the participating agencies will enter into an agreement with USFWS regarding implementation of the MSHCP." (first sentence of the second paragraph) means each of the 15 participants or only the seven applicants. It was the Authority's initial understanding that the applicants would enter into a formal agreement with the Service.
4-42	4.3.2.1	Insert ", unless a surplus is declared by the Secretary of Interior, in which case Nevada would be able to consumptively use more than 300,000 acre-feet per year." after "... limited to 300,000 acre-feet per year", in the second sentence of the seventh paragraph.
4-42	4.3.2.2 (a)	Delete the second and third sentences in the first paragraph which read, "Development of water resources for the expanding population of Clark County ... City of Mesquite, may adversely affect riparian and aquatic resources, such as the Virgin and Muddy rivers. The Las Vegas Wash would also be affected by increases in subsurface runoff and effluent outflow with growth of the urbanized Las Vegas Valley." Replace with, "If the No Action Alternative is selected, then Federal agencies would not receive targeted funding needed to implement specific agency actions that would benefit both species and water resources in Clark County, such as funding for conservation actions to protect riparian areas from grazing, reduce sediment flows, decrease stormwater runoff, and more effectively retain floodwaters."
5-10	5.2	Change "Las Vegas Valley Water District" to "Southern Nevada Water Authority" at the top of the page.
B-46	2.1.4	Change "Las Vegas Valley Wash", to "Las Vegas Wash" in the fourth sentence under Clark County Distribution.
B-46	2.1.4	Change "Habitat occurs along the Virgin and Muddy Rivers as well as Las Vegas Wash." to read, "Habitat occurs along the Virgin and Muddy Rivers, and there is potentially suitable habitat along the Las Vegas Wash." This will reflect the results of southwestern willow flycatcher surveys conducted in 1998, 1999, and 2000 along the Las Vegas Wash, which detected no resident, breeding southwestern willow flycatchers. The references for those surveys should be incorporated into the document and are listed below.
9-41	9	Please reference the 1998, 1999, and 2000 southwestern willow flycatcher survey reports as follows:

- Southwest Wetlands Consortium (1998). A survey for Southwestern Willow Flycatchers along Las Vegas Wash, Clark County Wetlands Park, Nevada. Draft Report to the Clark County Department of Parks and Recreation, Las Vegas, Nevada, prepared by Steve W. Carothers & Associates, Inc., Salt Lake City, Utah.
- Steve W. Carothers & Associates, Inc. (2000). In print. A survey for southwestern willow flycatchers along Las Vegas Wash, Clark County, Nevada. Final Report to the Southern Nevada Water Authority, Las Vegas, Nevada, prepared by SWCA, Inc., Environmental Consultants, Salt Lake City, Utah.
- Steve W. Carothers & Associates, Inc. (1999). A survey for southwestern willow flycatchers along Las Vegas Wash, Clark County, Nevada. Final Report to the Southern Nevada Water Authority, Las Vegas, Nevada, prepared by SWCA, Inc., Environmental Consultants, Salt Lake City, Utah.

Thank you for the opportunity to review and comment on the MSHCP. If you have any questions or comments, please call Holly Williams of my staff at (702) 258-7196.

Sincerely,

Janet Monaco for

Kay Brothers
Director, SNWA Resources

KB:HW:sh

Janet

STATE OF NEVADA

DEPARTMENT OF TRANSPORTATION

1263 S. Stewart Street
Carson City, Nevada 89712

KENNY C. GUINN
Governor

July 11, 2000

TOM STEPHENS, P.E., *Director*

In Reply Refer to:

Robert Williams
State Supervisor
U.S. Fish & Wildlife Service
1340 Financial Blvd. Suite 234
Reno, NV. 89502

Clark County
MSHCP EIS
Comments:
(WO 20738-9)

Dear Mr. Williams:

The Nevada Department of Transportation (NDOT) has reviewed the Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement dated June 2000 (file # DES 00-19) and has the attached comments. Any changes made to the EIS must also be incorporated into the MSHCP. For this reason, a copy of these comments has also been sent to Paul Fromer with RECON and Cindy Truelove with Clark County.

If you have any questions or concerns regarding this information, please do not hesitate to contact Division Biologist Matt Lorne at (775)888-7889. As always, we greatly appreciate your continued assistance.

Sincerely,

Daryl N. James, P.E., Chief
Environmental Services Division

DNJ:mal
enclosure
cc: Paul Fromer, RECON
Cindy Truelove, Clark County

CHAPTER 2 COMMENTS

ultimate outcome, habitat perpetuation, species conservation and recovery, and addition of new species as Covered Species.

2.1.8.2 Clark County Measures to Minimize and Mitigate the Impacts of Take

The mitigation and conservation measures discussed in this section include the continuation and augmentation of many measures proposed and implemented during the DCP for the desert tortoise, many of which, subject to future decisions made pursuant to the AMP, may be funded during the entire 30-year term of the proposed permit. However, because the DCP and the MSHCP have been integrated into one plan, the mitigation measures proposed in this MSHCP are intended to supersede and replace those set forth in the DCP. The mitigation measures that will be implemented, subject to future modifications, during the term of the MSHCP include the following.

- Imposition of $550-per-acre development fee and implementation of an endowment fund
- Funding of conservation measures
- Administration of the MSHCP
- Public information and education program
- Purchase of grazing allotments and interest in real property and water
- Maintenance and management of allotments, land, and water rights which have been acquired
- Construction of barriers along linear features
- Translocation of desert tortoises
- Participation in and funding of local rehabilitation and enhancement programs (Muddy River Regional Environmental Impact Alleviation Committee, Las Vegas Wash Wetlands Park, rural roads, and development and implementation of an Adaptive Management Process)
- Develop and administer the AMP

2.1.8.3 Federal and State Land Managers

In addition to the agreement to participate in the Adaptive Management Process, Federal and state land managers will implement a total of approximately 650 specific conservation measures. The conservation measures include

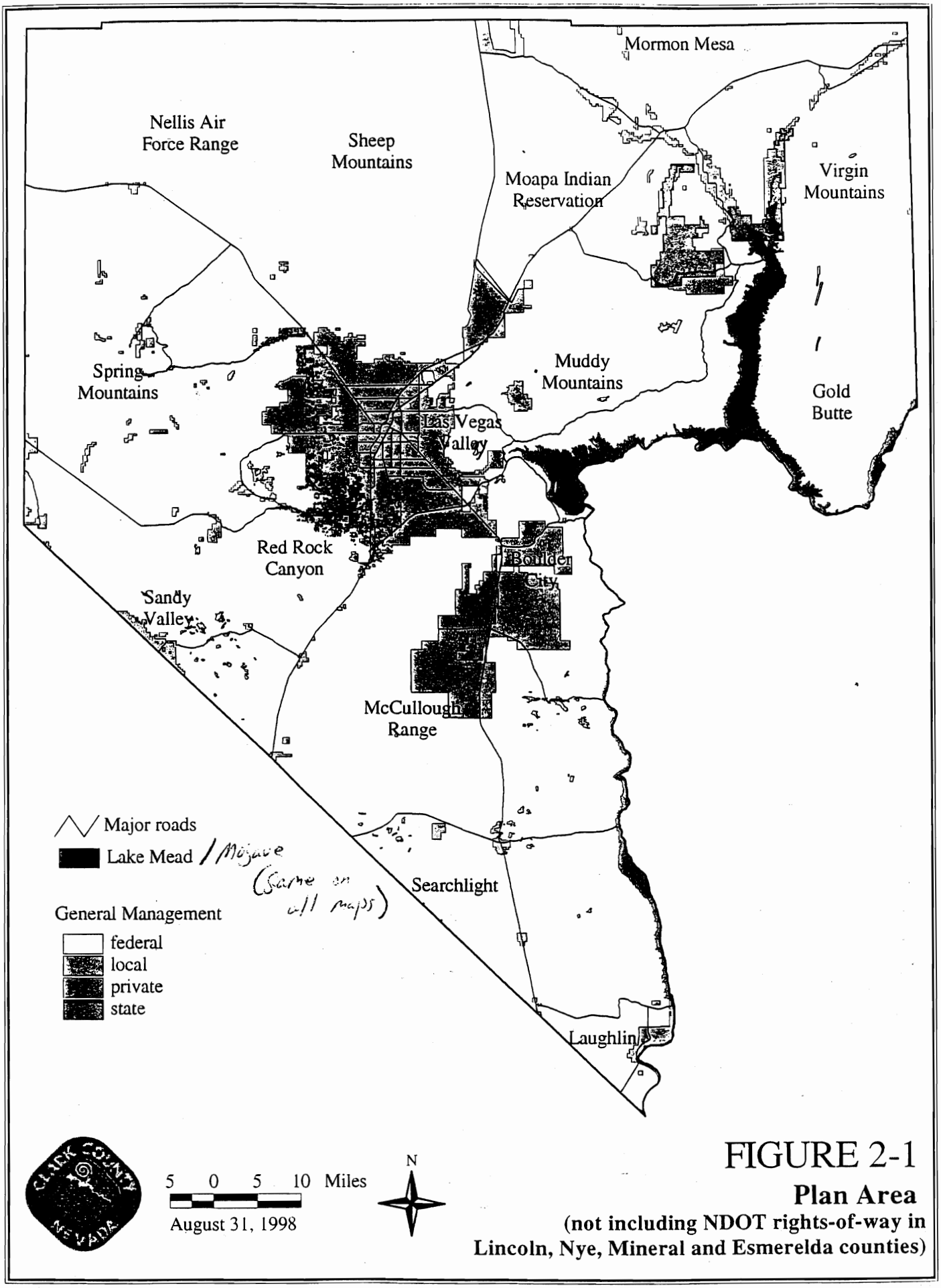

FIGURE 2-1

Plan Area

(not including NDOT rights-of-way in Lincoln, Nye, Mineral and Esmerelda counties)

Red Rock Canyon aster	*Ionactis caelestis*
Jaeger ivesia	*Ivesia jaegeri*
Hitchcock bladderpod	*Lesquerella hitchcockii*
Charleston pinewood lousewort	*Pedicularis semibarbata* var. *charlestonensis*
Jaeger beardtongue	*Penstemon thompsoneae* var. *jaegeri*
Clokey mountain sage	*Salvia dorrii* var. *clokeyi*
Charleston kittentails	*Synthyris ranunculina*
Charleston grounddaisy	*Townsendia jonesii* var. *tumulosa*
Limestone (Charleston) violet	*Viola purpurea* var. *charlestonensis*
Dicranoweisia crispula	*Dicranoweisia crispula*

c. Potential Threats and Stressors

The primary ecosystem level threats and stressors in mixed conifer are:

- Commercial collection (reduction of populations **Threat 201,** habitat degradation **Threat 202**)
- Fires and fire management (habitat degradation **Threat 301,** vegetation community conversion **Threat 302**)
- Recreation activities and development (dispersed recreational activities **Threat 401,** concentrated recreation **Threat 402,** casual use OHV activities **Threat 404,** rock climbing **Threat 405,** spelunking **Threat 407**)
- Highways, roads, and trails (highway mortality **Threat 501,** habitat fragmentation **Threat 503,** road construction and maintenance **Threat 504**)
- Pest control (pesticides and herbicides **Threat 602**)
- Grazing (wild horse and burro grazing and trampling **Threat 701**)
- Mining (**Threat 901,** extraction of minerals **Threat 902**)
- Woodcutting, (wood removal, snag collection **Threat 1001**)
- Urban and agricultural development (urban and rural development **Threat 1101,** fragmentation by urban/rural development **Threat 1102**)
- Utilities (collisions and electrocution with power lines **Threat 1201**)
- Water development, use and flood control at springs (spring diversion and modification **Threat 1401,** spring outflow diversion **Threat 1402,** groundwater pumping **Threat 1403,** grazing and agriculture **Threat 1404,** overutilization by animals **Threat 1405**)
- Exotic and introduced species (introductions, competition, and encroachment of exotic species **Threat 1501,** increased risk of fire due to exotic plants **Threat 1503**)
- Feral animals (feral animals and uncontrolled pets **Threat 1601**)

d. Existing and Proposed Conservation Actions

Of the total of 56,400 acres of mixed conifer habitat, 63.1 percent is managed by USFS (Wilderness, WSA, and Spring Mountains NRA) and 34.3 percent by USFWS (DNWR). Within the forest, private inholdings total 2.6 percent.

In addition, Clark County shall also make funds available to acquire or facilitate acquisition of conservation easements or other interest in real property or water by purchase, exchange, or donation to meet conservation goals and objectives, including, without limitation, acquisition necessary or appropriate for riparian birds as well as implementation of the Upper Muddy River Site Conservation Plan attached as Appendix E and completion and implementation of the Virgin River Site Conservation Plan.

2.8.3.6 Maintenance and Management of Allotments, Land, and Water Rights Which Have Been Acquired

As part of the program instituted by the DCP, Clark County, in cooperation with The Nature Conservancy and The Conservation Fund, has and will continue to acquire allotments and interests in real property and water rights on a willing-seller/willing-buyer basis. In order to assure viability of habitats and species located upon those lands and waters, Clark County will continue to fund actions to maintain and defend its rights to the allotments and to assure that those allotments continue to be accorded non-use status by the BLM. In addition, the County will work with the City of Boulder City to ensure the enforcement of the terms of the conservation easement and will provide funds to maintain, operate, and manage lands and water rights which it has or will acquire to conserve and protect habitats and species located thereon.

monitoring, and maintenance

2.8.3.7 Construction of Barriers along Linear Features

As part of the initial goals of the long-term DCP, Clark County has placed a high priority on the installation of barriers to protect the desert tortoise and other wildlife. In 1995, Clark Country entered into a contract with Enviroplus Consulting to determine effective and economically feasible road barriers to decrease tortoise mortality along roadways. Enviroplus completed the latter study and it was determined that one-inch-by-two-inch galvanized steel mesh was the most feasible material to use for the purpose of constructing tortoise barriers along roadways. In April 1996 Clark County entered into a contract with the Nevada Division of Forestry and Nevada Department of Transportation to conduct the field testing phase of the road barrier study. The I & M Committee decided to use the translocation site as the fencing field testing site, as the translocation site needed to be fenced. Using this site would accomplish both the Phase I field testing and translocation site fencing goals. While the Interstate 15 retrofitting and southern boundary fence construction were being completed, it was found that the prison-based honor camps were less efficient in the installation of new versus retrofitted fencing materials. Therefore, the County contracted with an Idaho-based licensed fence contractor to complete the second phase of barrier construction on the northern border of the translocation area, which was completed in 1998. Based on that experience and the Road Barrier Prioritization Study completed by UNR, the I & M Fencing Subcommittee and Clark County decided to rely upon the use of prison-based honor camp labor for all

future retrofitting projects and professional fence installers for all new fence installation as described below.

The DCP Road Barrier Construction Program initiated in 1999 is comprised of three phases including (a) the Phase One retrofitting of existing highway right-of-way fence with tortoise fencing material on U.S. 95 from approximately the California-Nevada border north to a point several miles south of State Route 165 where the highway fence ends; (b) the Phase Two construction of new tortoise fencing on relatively flat terrain along U.S. 95 north and south of State Route 165, along State Route 165, and along State Route 164; and (c) the Phase Three construction of new tortoise fencing along U.S. 95 in relatively steep and rocky terrain.

NDOT will continue to monitor tortoise fencing along NDOT rights-of-way at specific sites designated as field testing areas for the tortoise barrier program, budget permitting. This is in addition to any biennial funding for tortoise fencing. ~~NDOT will provide assistance in the construction, maintenance, and monitoring of barriers within NDOT rights-of-way, within budgetary constraints, and retains the right to request additional funding during the biennial budget review process.~~ replace w/ new word.rtf (see attachment)

2.8.3.8 Translocation of Desert Tortoises

In February of 1996, Clark County contracted with BRD and UNR to develop and implement an experimental desert tortoise translocation program. The five- to six-year program was to examine the feasibility of large-scale translocations into different habitats and the release conditions that maximized success and the long-term efficacy of translocation. The first programmatic group of tortoises was released on April 23, 1997. The translocation program has proceeded much more quickly and efficiently than was anticipated. The 1,200 tortoises being held at the Desert Tortoise Conservation Center were translocated during the first year of the program, and by November 1, 1998 over 1,500 tortoises had been translocated into the Large-scale Translocation Study Site adjacent to Interstate 15, south of Jean, Nevada.

The translocation program has been controversial and expensive. The controversy has resulted from an overwhelming public sentiment opposed to euthanasia of displaced and surplus tortoises and a lack of options for disposition of those tortoises. The expense has resulted from the necessity of properly and humanely housing these tortoises and the cost of conducting credible research into translocation. Many experts throughout the country voiced the opinion that large-scale translocations would be unsuccessful. Many biologists and conservation experts pointed out that lack of evaluation through credible research made translocation an experimental option for disposition of displaced tortoises and a conservation benefit only if scientifically validated. The USFWS allowed the programmatic translocation of tortoises by Clark County only as part of a credible scientific study.

NDOT will assist in the construction, maintenance, and monitoring of barriers along federal and state roadways, within budgetary and personnel constraints, and retains the right to request additional funding from the MSHCP during the biennial budget review process. It will be the responsibility of Clark County to monitor such barriers and report maintenance needs to NDOT's District 1 office. Since the location of fencing, (which barriers attach to) weaves on and off roadway rights-of-ways and no detailed inventory of fencing locations exists, it will be at the discretion of NDOT maintenance personnel to determine what barriers NDOT will assist with. Nevertheless, Clark County is ultimately responsible for all required MSHCP mitigation barriers installed along roadways in Clark County. Clark County will not be responsible for non-MSHCP barriers installed along roadways, such as the proposed barriers along SR 163, as this was a requirement of a biological opinion issued to the FHWA.

Existing roadway fencing that is retrofitted will require the applicant to receive a temporary permit for access from NDOT's District 1 office if access will occur from the highway side. However, all new fencing located on NDOT rights-of way will require an encroachment permit. NDOT encroachment permit conditions will be consistent with the responsibilities mentioned above.

Replace wording on 2-19-7

CHAPTER 3 COMMENTS

b. U.S. Forest Service

The Spring Mountains National Recreation Area includes three WSAs: La Madre Mountain, Mount Stirling, and Pine Creek, which comprise 63,200 acres, or 38.8 percent of the NRA (see Figure 3-2; Table 3-2).

TABLE 3-2
USFS WILDERNESS STUDY AREAS

WSA	Acres	Acres Recommended for Wilderness
La Madre Mountain	20,300	19,300
Pine Creek	4,700	4,600
Mount Stirling	38,200	29,700
Total	63,200	53,600

USFS management policies identify three types of management areas: Wilderness, WSAs, and the NRA. Wilderness areas are more intensively managed and restricted in uses, with primitive or semi-primitive, roadless, non-motorized recreation opportunities, lack of developed facilities, and public access restrictions. Management policies are generally more restrictive in WSAs than in the rest of the NRA but are not as restrictive as areas designated Wilderness. For example, existing roads, trails, and recreational use areas are maintained, but new facilities will not be developed unless the WSA designation has been removed. The remainder of the NRA is managed for a broader spectrum of uses and includes intensive public recreational use areas. However, the underlying management policies and actions for WSAs and the NRA are not substantially different, especially with the additional measures provided for in the SMNRA Conservation Agreement. Therefore, reversion from WSA to NRA management should not have a significant effect upon conservation management.

USFS recommendations within the SMNRA for wilderness designations cover 63,200 acres (84.8 percent) of the current WSAs. If adopted, the newly designated wilderness areas would probably have a decrease in public use and access levels, which would enhance their value as conservation lands. Areas not designated as wilderness would not experience any significant decrease in conservation-related management actions, although some additional dispersed recreational use and facilities could result.

c. National Park Service

In 1979 the National Park Service conducted a wilderness suitability inventory for Lake Mead National Recreation Area. That inventory identified 418,655 acres within the recreation area as meeting qualifications for classification as wilderness. It also identified an additional 262,125 acres as meeting standards to be classified as potential wilderness. This includes 208,330 acres meeting the wilderness standards and an additional 85,950 acres of potential wilderness within Clark County. These areas include designated

year term of the MSHCP in the year 2028. The applicant is requesting an incidental take permit that would cover 79 species on 145,000 acres of land disturbance on non-Federal lands in Clark County and desert tortoise on NDOT rights-of-way below 5,000 feet, south of the 38th parallel in Nye, Lincoln, Mineral, and Esmeralda Counties.

The MSHCP analysis considered over 225 species for possible coverage under the MSHCP. The 79 species that are currently proposed are those for which sufficient information on status, threats, and conservation needs are available to support issuance of an incidental take permit or prelisting agreement (Section 2.6). The remainder of the species will remain under evaluation, and future phases of the MSHCP may include permit requests for incidental take of additional species as the appropriate level of information becomes available on minimizing and mitigating the effects of take.

3.2.2.2 Funding and Coordination

Mitigation fees of $550 per acre for take on private lands and for NDOT activities including road widening, new construction, and material sites outside of the DWMAs ~~of $550 per acre~~ were established under the DCP. Multiple species inventory and protective measures were included in the DCP. The MSHCP integrates the provisions of the DCP and broadens the scope of the activities to be funded with the mitigation fees. The USFWS reviews, evaluates, and prepares a report concerning each biennial management plan and budget review and provides a written report concerning the proposed management plans and budgets which evaluate the consistency of the proposed management plans with the ESA, recovery plans, and this plan, after approval of the proposed management plans and budgets by the I & M Committee. In the event that the management plan and budget is not consistent with the ESA, recovery plans, and this plan, the matter shall be referred back to the I & M Committee for further review and approval.

The MSHCP includes the following funding and coordination measures:

- Implementation of an endowment fund from the collection of a $550-per-acre development fee, as described in Section 2.8.3.1 of the MSHCP.

- Management and administration of the MSHCP by the Plan Administrator and through the I & M Committee, as described in Section 2.8.3.3 of the MSHCP.

- Implementation of the Public Information and Education Program by the PIE subcommittee, appointed by the I & M Committee, as described in Section 2.8.3.4 of the MSHCP.

- Purchase of grazing allotments and interest in real property and water rights, as described in Section 2.8.3.5 of the MSHCP.

of biological diversity. These analyses will provide the scientific basis for management decisions based on objective criteria. Such decisions might include repositioning, reconsideration, or reconfiguring of IMAs and LIMAs to provide for the maximum level of conservation for individual or suites of species. Other management decisions that may be facilitated by the SADG include opening or closing areas to recreation, mining, utility corridors, land disposals, or other multiple-use activities; emphasizing or deemphasizing law enforcement activities; and prioritizing habitat restoration projects.

The **Indicator Species** component of the AMP will identify "shortcuts" for monitoring many species and ecosystems without monitoring every individual species. This will involve stratifying the covered species into three groups: disturbance dependent (species that require disturbance to thrive and reproduce), disturbance tolerant (species that neither require nor are negatively affected by disturbance of habitat), and disturbance averse (species that require no disturbance to thrive and reproduce). The indicators project will use sampling arrays to sample presence, absence, and abundance of species at numerous sites differing in amount (or absence) of disturbance. The data will be subjected to multivariate analysis to determine the most appropriate indicators of individual species and ecosystem health for gauging management effectiveness in the IMAs, LIMAs, and MUMAs.

Various anthropogenic disturbances are ongoing in the IMAs, LIMAs, and MUMAs, some of which may ultimately have an adverse effect on the covered species. The AMP will assure an appropriate level of monitoring through the use of the SADG and indicator species components of the AMP. Over the life of the permit, monitoring through the AMP will be focused on threats perceived to be having damaging effects on the covered species and their habitats. Initially, use of rural roads in the IMAs and LIMAs is perceived as the single greatest impediment to effective conservation management of the covered species and their habitats. The **Rural Roads Project** will evaluate the effects of rural road use on the covered species. The Rural Roads Project overlaps with indicator species activities in scope and approach.

Finally, management of the MSHCP will entail constant assessment of the effectiveness of management actions. The AMP will, over time, focus on the various management activities being funded through the MSHCP to gauge effectiveness and provide scientifically based to determine the need for modifying management direction. Initially, this component of the AMP will be focused on evaluating the conservation activities, in particular, tamarisk control, being undertaken on the Muddy River. The **Muddy River Efficacy Monitoring** component of the AMP will initially define the desired future condition of the Muddy River ecosystem. The existing tamarisk removal effort provides the experimental framework for collecting data in areas not yet modified, areas recently modified, and areas modified in recent years. An inventory of species using these areas is clearly needed before initiating monitoring. Results derived from efforts along the

managed lands. The National Park Service has been managing the recreation area since 1964, with identified resource protection and conservation strategies. Capability in resource management has increased over the last 10 years. Many projects have been undertaken already, many in concert with the Clark County ~~Desert Tortoise Habitat Conservation Plan~~, which protect and monitor species and their habitats. A primary focus over the next five years is to develop strategic programs for resource protection, to restore damaged habitats, and through education, to enhance public awareness of the natural resources within the recreation area. Under the No Action Alternative, conservation-oriented management of the recreation area would continue, but not at the level that can be achieved by enhanced funding and coordination that are afforded under various MSHCP Alternatives.

d. U.S. Fish and Wildlife Service

Regardless of which alternative is selected, the USFWS will continue to manage the DNWR for bighorn sheep, other wildlife species, and other biological resources. However, under the No Action Alternative, resource management on the DNWR would not be enhanced by the funding and coordination that would be derived from multispecies planning efforts included in the other alternatives. Further urbanization of the Las Vegas Valley will negatively affect the DNWR, particularly in the southern portions of the range. Under the No Action Alternative, it will become increasingly more difficult, over time, to maintain the undisturbed character of the range.

3.3.1.2 Potential Redesignation of Proposed Wilderness and Wilderness Study Areas

If wilderness and WSAs were not designated, these areas would revert to some level of multiple use management rather than intensive management to maintain wilderness values of the land. This may increase the level of land use intensity and range of uses from current management. Changes in land use on BLM lands could include opening areas to new mining claims, opening areas to new grazing activities, increases in use of motorized and off-highway vehicles, increased recreational uses, and opening of areas to rights-of-way for roads or utilities. There could also be changes in land use on USFS, NPS, and USFWS lands.

Regardless of which alternative is selected, measures to minimize these potential impacts include requirements for permit review of new mining claims or grazing rights, road, and utility crossings. Management of desert tortoise habitat under the provisions of the DCP, as well as conservation provisions of other existing management plans, would remain in effect after redesignation. Thus, no significant deterioration of habitat quality or direct or indirect unmitigated impacts to sensitive species should result. The cumulative area of habitat that would be affected (approximately 450,000 acres) is limited in area and

comprised primarily of blackbrush and Mojave desert scrub, which are the most ~~areally~~ extensive ecosystems in Clark County.

Under any alternative, newly proposed uses in redesignated WSAs would require consideration of their potential impacts to conservation on a case-by-case basis, however, under the No Action Alternative, protective and adaptive management measures may not always be adequate, given limitations in funding.

3.3.2 Proposed MSHCP Alternative

The MSHCP has been developed from extensive research, coordination, and review of available information about habitats and sensitive species occurring in Clark County. Over 225 species were initially considered for coverage under the plan. Taxonomic specialists reviewed the available information regarding each species and developed priority lists for species based upon known information regarding the species, range, distribution, population, and potential threats and stressors. Information was also compiled on ecosystems and habitat distributions, species occurrences within habitats, and existing and potential land uses. Current Federal, state, and local agency land management policies and actions were compiled and evaluated with respect to conservation needs. These data were used to identify potential threats and stressors to habitats and sensitive species and management gaps and needs. From review of these data and input from taxonomic specialists, agencies, and interested organizations and individuals, a determination of species that could be covered under the permit and a conservation program addressing management needs, funding sources, oversight and coordination, and implementation was developed.

From a conservation perspective, the advantages of the MSHCP Alternative include:

- It is organized by ecosystems rather than geographical or jurisdictional boundaries and evaluates all the lands within the county within each ecosystem.

- It is based upon comprehensive review and analysis of available data on species, habitats, land use, and land management.

- It has been subject to extensive review by technical specialists, agencies, organizations, affected jurisdictions, and interested individuals.

- It is focused not only on protective conservation measures for currently listed species but provides means to monitor and conserve habitats and species that may become eligible for listing in the future, thereby enhancing long-term conservation and reducing the need for future regulatory action.

- Through the $550/acre development fees and endowment structure, it provides assurances for funding of conservation measures identified in the MSHCP.

- It provides an administrative structure for coordination and implementation of the program with participating agencies and organizations which reports to the USFWS on a regular basis with respect to actions taken, priorities for future action, expenditures, and budget.

- It provides a formalized organizational and review structure for adaptive management, including inventory, monitoring, technical review of data, data management, status review, and prioritization of activities.

- The MSHCP under the WSA redesignation condition would still function to provide assurances of habitat quality and other conservation benefits to Covered Species.

Benefits of the MSHCP Alternative to Clark County and other participating agencies include the following:

- It provides a surety of process for the orderly development of Clark County under existing local land use plans and policies.

- It does not preclude economic or public uses of Federal and non-Federal lands.

- It is organized around and builds upon existing management objectives and conservation programs on Federal and state lands rather than the acquisition and specialized management of large blocks of habitat under non-Federal jurisdiction.

- ~~Clark County, NDOT, NDOW, and others~~ Applicants covered under the Section 10(a) Permit would receive assurance that incidental take of listed, candidate, or sensitive species from otherwise lawful activities would not result in additional USFWS review or imposition of measures for the conservation of species or habitat under the ESA.

3.3.3 Low Elevation Ecosystems MSHCP Alternative

This alternative would cover future take of species that primarily occur on approximately 96 percent of the habitat subject to impact from otherwise lawful activities in Clark County. It would prioritize coordination, monitoring, and conservation management to MUMAs under Federal and state jurisdictions that receive higher levels of public use. Higher elevation ecosystems and species not covered under the alternative are predominantly within Federal lands that are designated for low-impact public use and have conservation management policies and programs established or adopted but awaiting implementation. These use designations and existing conservation management

CHAPTER 4 COMMENTS

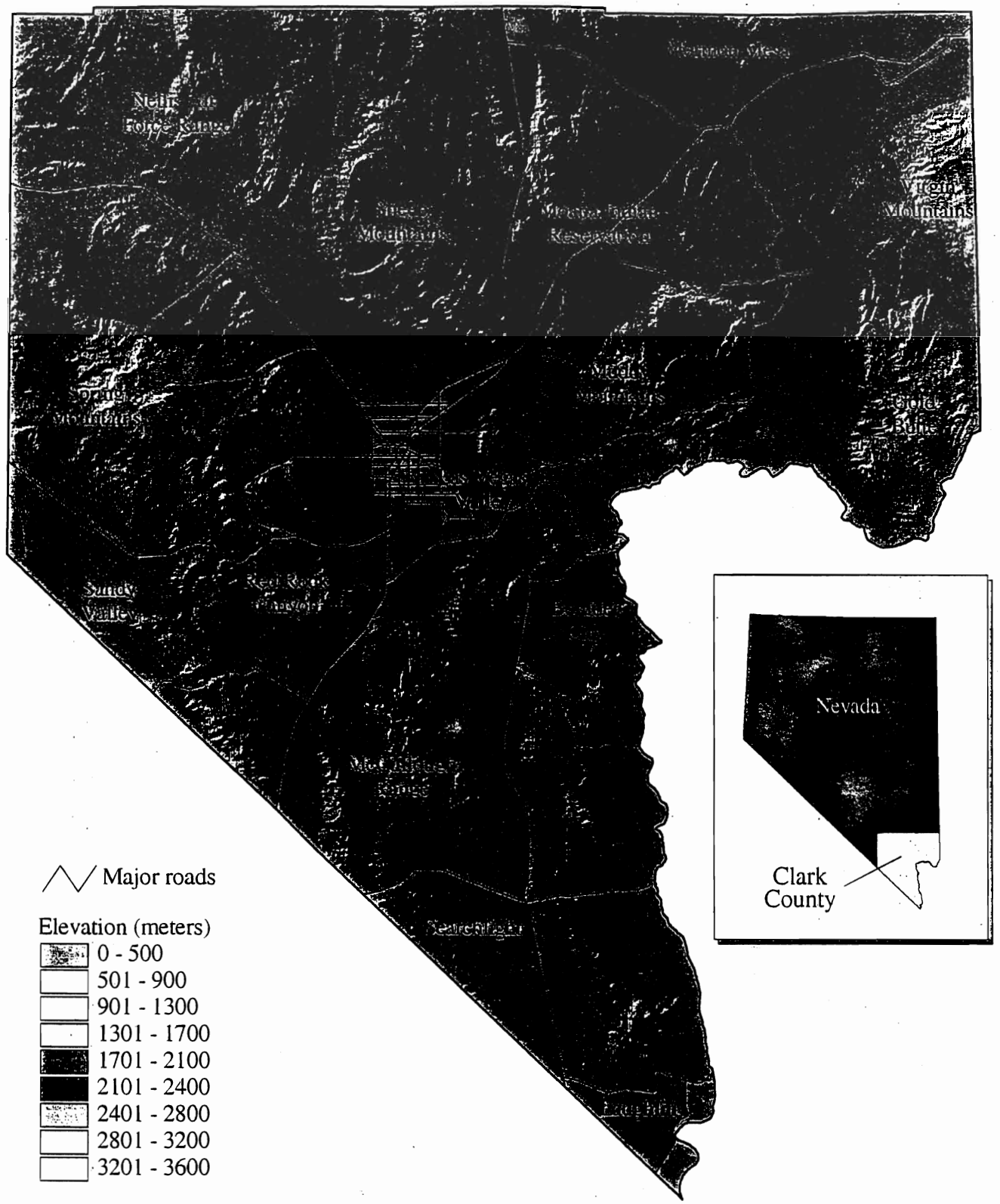

FIGURE 4-1

Project Setting

(not including most rights-of-way in Lincoln, Nye, Mineral & Esmeralda Counties)

Over three million acres of desert tortoise habitat occur within the Las Vegas RMP. To comply with the ESA, the BLM must consult with the USFWS on all Federal actions (including the RMP/EIS) and take positive actions to aid in the recovery of all listed species. (1) of the RMP compares the provisions of Alternatives A, B, C, D, and the Supplemental Alternative E as set forth in the 1992 draft Stateline Resource Area RMP/EIS and 1994 Supplemental RMP/EIS with respect to grazing, the number of acres proposed to be contained within ACECs, the number of acres proposed to be disposed of by the BLM, the number of acres proposed to be withdrawn for the Desert Tortoise Conservation Center, wild horse and burro policy, recreation and OHV use, and mining.

(3) Habitat Management Plans

The designation of DWMA/ACECs and the maintenance of their integrity require management actions and changes in land uses not currently provided for by the two existing land use plans. Decisions about specific range, wildlife, and watershed improvements are not made in the RMP/EIS, but rather in subsequent activity level plans (i.e., habitat management plans, allotment management plans, etc.) designed to implement the Las Vegas RMP/EIS decisions. In June 1992, a Piute-Eldorado Habitat Management Plan (HMP) was prepared by the BLM with cooperation of the NPS and NDOW. However, the HMP has not yet been finalized and approved by those agencies. This BLM planning document outlines management prescriptions for high-density tortoise populations within three tortoise management areas: Piute Valley, Cottonwood Valley, and Eldorado Valley. The three habitat management areas of this HMP were established through the Clark County Short-Term HCP. The BLM and the NPS (on NPS lands) are responsible for identifying and implementing land use controls through the Piute-Eldorado HMP and the Las Vegas RMP. The establishment of other DWMAs/ACECs in the county will require the development of one or more activity plans.

b. Lands Managed Pursuant to the Provisions of the DCP

As part of the implementation of the DCP, BLM has designated 290,300 acres of the critical habitat in the Piute-Eldorado area as conserved habitat for desert tortoise. Additional areas totaling 397,700 acres within critical habitat (Arrow Canyon/Coyote Springs, Mormon Mesa, and Gold Butte-Pakoon) are also focused upon protection of desert tortoise and have been designated as ACECs under the Las Vegas RMP.

c. Special Status Plant Management

The BLM has also developed a strategy plan for special status plants that was adopted in October 1992. It is the policy of the BLM that special status plants and their essential habitat be conserved and that their continued existence be assured. The special status plants strategy plan focuses on four objectives: (1) land use planning for resource

protection; (2) plant inventory and studies; (3) special status plants monitoring; and (4) interagency/groups coordination.

d. Wilderness Study Area

In compliance with the Federal Land Policy and Management Act, BLM evaluated all its lands for the presence of wilderness characteristics. Recommendations as to which areas should be designated as Wilderness were forwarded to Congress, which has not yet acted upon the recommendations. Until a formal determination is made, the study areas are to be managed under an interim management plan for WSAs so as not to degrade existing wilderness values. Once a determination is made, current management prescriptions to maintain wilderness values may be modified or removed on those areas not designated.

There are 21 WSAs in Clark County. Seven WSAs, totaling more than 120,000 acres, are within desert tortoise critical habitat areas (USFWS #1, #2, and #3; a portion of Arrow Canyon, Garret Buttes, Jumbo Springs, Million Hills, and Lime Canyon; a small portion of North and South McCullough Range WSAs also extend into the Piute-Eldorado management area). Portions of five BLM WSAs were recommended for wilderness designation: 20,000 of 57,500 acres in the South McCullough Range; 36,900 of 87,200 acres in the Muddy Mountains; 13,900 of 35,100 acres in the Lime Canyon WSA; 23,000 of 42,100 acres in La Madre Mountain; 17,600 of 20,100 acres in Pine Creek; and 800 of 4,200 acres in Mount Stirling WSA. The USFS also has recommended portions of the Mount Stirling, Pine Creek, and La Madre Mountain WSAs as suitable for wilderness designation with adjacent wilderness in the Humboldt-Toiyabe National Forest.

Under interim management the only permitted activities are temporary uses that create no new surface disturbance or do not involve permanent placement of structures. Existing uses (i.e., grazing, mining, mineral leasing) may continue. The following activities may occur within WSAs:

Land Actions. Generally, no land disposals will be allowed; however, existing rights-of-way may be renewed or even approved for temporary uses as long as there is no impairment of wilderness values.

Mineral Uses. Existing mining activities such as drilling, use of existing rights-of-way, heavy equipment use, and so on may continue; however, they must be monitored to guarantee no impairment of wilderness values.

Watershed Rehabilitation and Vegetative Manipulation. Watershed rehabilitation work required by emergency conditions (e.g., fire, flood, storms, or landslides) are allowed. Land treatments such as trenching, ripping, pitting, terracing, and plowing are not permitted.

recreational use, although hunting by permit is allowed. There are also 1,322,900 acres that have been identified as Wilderness Study Areas. These areas are under management by the USFWS.

In January 1999 the Integrated Natural Resources Management Plan (INRMP) for Nellis Air Force Base and Range was completed by the Air Force. The INRMP includes goals, objectives, and operational component plans for natural resources surveys and inventories (e.g., bat species, desert tortoise, chuckwalla, Merriam's bearpoppy), mapping, and data integration. The INRMP also includes eradication of tamarisk, an integrated pest management plan, and a land use management plan for the NAFB.

4.2.1.6 Other Federal Jurisdictions

The Bureau of Indian Affairs, a part of the Department of the Interior, is authorized to act as trustee for the Moapa Indian Reservation (about 71,500 acres), Fort Mojave Indian Reservation (about 3,700 acres), and Las Vegas Paiute Indian Reservation (about 3,900 acres), comprising less than 2 percent of Clark County.

The Bureau of Reclamation manages 50,700 acres, or 1 percent, of Clark County (including Hoover Dam, Lake Mead, and Lake Mohave).

4.2.2 Non-Federal

Landholdings by the state, local government, and private landowners total approximately 420,500 acres, or 8.3 percent of Clark County (see Figure 4-2).

4.2.2.1 State of Nevada

Lands held by the State of Nevada include areas managed by State Parks, NDOW, NDOT, and other state agencies. Major state parks and wildlife areas include Valley of Fire, Floyd Lamb, and Spring Mountain Ranch state parks and the Overton Wildlife Management Area, comprising 46,400 acres (almost one percent of Clark County). NDOT has an additional 14,700 acres of rights-of-way for material sites and 840 miles of highway rights-of-way of various widths in Clark County.

a. Nevada Division of Wildlife

(1) Existing NDOW Regulations

The Nevada Revised Statutes require that the state's wildlife be classified as game or as either protected or unprotected and that protected species are further classified as sensitive, threatened, or endangered. This classification of protected species was

materials and sand and gravel extraction along streams and riparian areas and in the Las Vegas valley.

e. Alternative Permit Terms for the MSHCP

The effects of the alternative permit terms on mineral extraction activities would be similar to those of the proposed MSHCP. The primary differences would be that funding levels and therefore, intensity of management, would vary under shorter or longer permit terms. The AMP process would provide the necessary level of monitoring and oversight to ensure that MSHCP funding and coordination are appropriately focused.

4.3.10 Transportation

4.3.10.1 Existing Conditions

Major transportation facilities in Clark County include Interstates 15, 215, and 515; Highways 93, 95, and 166; State Routes 160, 163, 164, 168, and 169; McCarran International Airport; and the Union Pacific Railroad (Figure 4-7). In general, road construction throughout Las Vegas Valley has accelerated over the past 10 years in response to urban growth. Highway 95 and Interstate 15 were expanded over the period, using mostly public lands and, as with other local transportation projects, sand and gravel from local operations. Planned improvements include a beltway around Las Vegas from Interstate 15 to Interstate 515; continued widening of Route 160 between Las Vegas and Pahrump; a 55.5-acre expansion of McCarran Airport; a cargo airport in Ivanpah Valley, a commercial airport near Mesquite, widening of Highway 95 (including the segments between Railroad Pass and Route 163 and adjacent to the SNWA North Well Field); a Hoover Dam bypass; a Boulder City bypass; a proposed rail system within the Las Vegas Valley; and a proposed high-speed train from California to Nevada.

NDOT has the responsibility for maintaining approximately 1,000 miles of highway through desert tortoise and other habitats and for necessary improvements to these existing roads to meet the demands of increased traffic volumes in a manner consistent with public safety standards. NDOT rights-of-way are broadly defined to include lands purchased or withdrawn from public lands for the use of highways, transportation facilities, material sites and their access roads. NDOT rights-of-way also include those areas of highway facilities that extend beyond the purchased or withdrawn property. This includes drainage or V-ditches constructed and regularly maintained by NDOT.

Transportation facilities occur on both non-Federal and Federal lands in Clark County. Most major highways cross Federal lands and involve Federal highway funds.

4.3.10.2 Impacts

a. No Action

Under the No Action Alternative, incidental take of the desert tortoise would be permitted for transportation projects on ~~private~~ lands, and for maintenance and construction projects within NDOT rights-of-way. ~~Consistent with the DCP, routine~~ maintenance and construction would be allowed in NDOT rights-of-way outside ~~IMAs and LIMAs within Clark County and desert tortoise critical habitat outside Clark County. Within IMAs and LIMAs in Clark County~~ only routine and emergency maintenance would be allowed. Routine NDOT maintenance activities ~~include roadway surface repair and maintenance; chip seals; roadside maintenance; traffic safety service program; structure maintenance program and material stockpiles on previously disturbed areas.~~

Also under the No Action Alternative, the DCP Road Barrier Construction Program initiated in 1999 would continue. This program consists of (1) retrofitting of existing highways rights-of-way fence with desert tortoise proof fencing material and (2) construction of new tortoise fencing. This program minimizes mortality of desert tortoise on highways.

Without the MSHCP, incidental take of species other than the desert tortoise during development of new transportation resources on ~~private~~ lands would not be permitted. Therefore, new transportation planning on ~~private~~ lands would continue to be impacted by the presence of environmentally sensitive lands. Additionally, the reduction in development fragmentation within the County anticipated with adoption of the MSHCP would not be realized under the No Action Alternative. This could result in the indirect adverse effect of longer, more circuitous transportation routes required to serve the resulting development caused by avoiding environmentally sensitive lands. More circuitous transportation routes would result in incremental increases in automotive emissions.

Existing environmental review of proposed transportation projects on both public and private lands, as required by existing state and Federal legislation, would continue unchanged.

ACECs established under the Las Vegas RMP will include increased management prescriptions against disturbance and reduced intensity of uses in these areas. With respect to transportation resources, the ACECs can be divided into two categories: desert tortoise ACECs and other resource ACECs.

For desert tortoise ACECs, reclamation of temporary roads is required. New roads will be authorized in response to specific proposed actions where no feasible alternative exists.

- Incorporate the terms and conditions for material site rights-of-way contained in Appendix M of the RMP in all new material site rights-of-way.
- Coordinate with the NDOT and evaluate the need for existing sites.
- Encourage the NDOT to relinquish sites no longer needed.
- Receive justification by the NDOT for continued use of existing sites or need for additional sites.

The RMP EIS concludes that the impacts of these management actions would result in:

> Designation of rights-of-way exclusion areas, constituting a loss of 5,600 acres of public land available for linear rights-of-way and a loss of 1,005,000 acres of public land available for site type rights-of-way (excluding existing established communication sites).
>
> Designation of rights-of-way avoidance areas, constituting a potential loss of 1,011,100 acres of public land available for all types of rights-of-way.

(1) Potential WSA Redesignation

WSAs are currently designated as avoidance areas for new roads although existing roads are maintained. Redesignation could result in the extension of new roads, associated with a permitted and lawful activity. New right-of-way acquisition and roadway construction on public lands previously designated as WSAs would continue to be subject to additional environmental review (preparation of an EA or EIS) as required by existing state and Federal legislation. If potential impacts to listed or candidate species were identified, a Section 7 consultation would be entered into with the Service. The WSA Redesignation Sub-Alternative action would not alter the required environmental review process for transportation projects on public lands.

No adverse impacts to transportation resources are anticipated with the WSA Redesignation Sub-Alternative action.

b. MSHCP

Incidental take of Covered Species within Clark County and desert tortoise below 5,000 feet south of the 38th parallel would be allowed in connection with maintenance and construction projects within NDOT rights-of-way. ~~As stated in the~~ Consistent with the DCP, routine maintenance and construction would be allowed in NDOT rights-of way outside IMAs

and LIMAs. Within IMAs and LIMAs, only routine and emergency maintenance would be allowed.

The area covered by the MSHCP would include approximately 840 miles of roadway right-of-way of varying width; approximately 14,700 acres of material sites; and other rights-of-way as mentioned above, in Clark County. Consistent with the terms of the DCP, the MSHCP would also cover desert tortoises and their habitat (areas below 5,000 feet in elevation and south of the 38th parallel) on approximately 260 miles of NDOT rights-of-way in Nye, Lincoln, Mineral, and Esmeralda Counties that are presently maintained by NDOT. Also covered in the MSHCP would be any additional right-of-way, which may be added in the future, the routing of which would consider avoidance of areas being conserved for species. For species other than the desert tortoise, the area covered by the MSHCP for NDOT activities would be limited to Clark County.

Some of NDOT's routine maintenance activities may impact species addressed in the MSHCP. These routine maintenance activities would not disturb areas outside of NDOT's right-of-way. NDOT's maintenance activities should not significantly impact species covered by the MSHCP, although some loss of habitat and species impacts will occur as a result of road widening activities, new highway construction, and materials extraction.

The DCP Road Barrier Construction Program consisting of retrofitting of existing highways rights-of-way fence with desert tortoise proof fencing material, and construction of new tortoise fencing, would continue under the MSHCP, and would minimize mortality of desert tortoise and other species on highways.

The range of management activities addressing transportation that may be coordinated or funded over the life of the permit are listed in Sections ~~2.8.4 through~~ 2.8.9 of the MSHCP.

NDOT would agree to implementation of 35 conservation actions under the MSHCP, including worker education programs, desert tortoise fence monitoring, inventory of covered species and habitats on NDOT rights-of-way, preconstruction surveys and species relocations, on-site monitoring, minimization and avoidance of species and habitat disturbance during construction and maintenance activities, restrictions on chemical use in habitats of the covered species, and installation of movement directing devices.

No significant adverse impacts to existing transportation resources are anticipated with implementation of the MSHCP. New right-of-way acquisition and roadway construction on ~~private~~ lands within Clark County would be covered by the MSHCP. Therefore, implementation of the MSHCP could facilitate development of new transportation facilities on ~~private~~ lands within Clark County. The MSHCP could have the indirect positive effect of more direct roadways since sensitive lands would not necessarily be avoided in new roadway planning. Furthermore, implementation of the MSHCP is

anticipated to reduce "checkerboard" development in the county by facilitating more contiguous development. This also could result in the indirect positive effect of shorter, more direct roadways and transportation corridors. Implementation of the proposed MSHCP would not have significant adverse effects on maintenance of existing transportation resources since such activities would be covered under the MSHCP.

New right-of-way acquisition and roadway construction on ~~public~~ federal? lands would not be covered by the MSHCP and would continue to require additional environmental review (preparation of an EA or EIS) subject to existing state and Federal legislation. Implementation of the MSHCP would not alter the required environmental review process for transportation projects on public lands. Additionally, adoption of the MSHCP would not close any new areas to roadway development. Not true? IMA's & LIMA's would be closed to ROW construction. Only maintenance could occur. Therefore, no significant adverse impacts to transportation resources are anticipated with implementation of the proposed action. The proposed action could have an indirect positive effect on transportation resources by allowing the development of shorter, more direct roadways on private lands.

c. Low Elevation Ecosystems MSHCP

The effects of the Low Elevation Ecosystems MSHCP on transportation would be similar to those of the proposed MSHCP. Most of the County's transportation network is located at low elevations. NDOT and BLM conservation activities associated with roads would be funded and coordinated under this alternative. Conservation actions focused on roads at higher elevations (USFS activities such as coordination with NDOT, and minimization or avoidance of road impacts on species and habitats), would not be coordinated or funded under this alternative. No significant adverse impacts to transportation resources are anticipated with implementation of this alternative. As under the MSHCP alternative, implementation of the Low Elevations Ecosystem alternative could have an indirect positive effect on transportation resources by allowing the development of shorter, more direct roadways on private lands.

d. Permit Only for Threatened or Endangered and Candidate Species

The effects of a permit only for listed and candidate species on transportation would be similar to those of the No Action or MSHCP alternatives. Funding and coordination of conservation activities addressing transportation concerns under this alternative would be focused in the desert tortoise ACECs, in Las Vegas bearpoppy habitats, and in the sandy habitats of the three-corner milkvetch, and sticky buckwheat. Listed species and their habitats in riparian areas would be monitored and addressed as needed. High elevation ecosystems subject to transportation impacts, in particular the SMNRA, would not initially receive the benefits of funding and coordination of management activities under this alternative since listed species do not occur in these areas. However, if new species

provides an important venue for public involvement. The MSHCP's Public Information and Education Subcommittee is active in planning and implementing activities that inform the community on a variety of topics including species conservation. The goal of this subcommittee is to increase public understanding and awareness of the value of Clark County's natural ecosystems. The MSHCP also funds and coordinates other community interests, including the activities of the Muddy River Regional Environmental Impact Alleviation Committee, and the Rural Roads Management Subcommittee. All of these activities seek to minimize or avoid impacts on the citizens and communities of Clark County through awareness and involvement. The range of management activities accressing socioeconomic concerns that may be coordinated or funded over the life of the permit are listed in Sections 2.8.4 through 2.8.9 of the MSHCP.

c. ~~Permit Only for Threatened or Endangered and Candidate Species~~ Low Elevation Ecosystems MSHCP

The effects of the Low Elevation Ecosystems MSHCP on social and economic resources would be similar to those of the proposed MSHCP, except that funding and coordination of management activities for covered species and their habitats at higher elevations would not be available through this alternative. Management activities for species and habitats in the SMNRA and on higher elevation lands under other Federal management authority would continue under existing agency management directives. The USFS and BLM would continue to carry out public education and involvement programs to the extent possible under existing budgets. Conservation measures undertaken as part of a low elevation ecosystems MSHCP would not preclude or severely burden existing economic activities on public or private lands. Overall, the effects of this alternative on socioeconomic resources would be positive as a result of increased funding assistance and coordination in reducing and mitigating the effects of private land activities.

d. Permit Only for Threatened or Endangered and Candidate Species

The effects of a permit only for listed and candidate species on socioeconomics would be similar to those of the No Action Alternative, in that species and habitat conservation activities would be focused primarily in the desert tortoise ACECs. Additional activities would be funded and coordinated to benefit the Las Vegas bearpoppy, threecorner milkvetch, sticky buckwheat, Blue Diamond cholla, and in riparian areas, the southwestern willow flycatcher and yellow billed cuckoo. Species and habitats occurring at high elevations and in other areas where non-listed, non-covered species do not occur (e.g., mesquite woodlands) would not receive direct benefits under this alternative. Overall, the effects of this alternative on socioeconomic resources should be positive as a result of increased funding assistance and coordination in mitigating the effects of private land activities.

CHAPTER 5 COMMENTS

5.2 Public Involvement

Discussions regarding the preparation of the MSHCP commenced in May of 1996 at a meeting of the Clark County Implementation and Monitoring Committee. The I & M Committee is a broadly based committee established by the Board of County Commissioners of Clark County to implement and monitor the provisions of the DCP for the desert tortoise. The I & M Committee consists of representatives from the Applicants, the Participants, and members representing the Southern Nevada Homebuilders Association, the Las Vegas Board of Realtors, mining interests, off-highway vehicle users, ranchers, environmental interests, and others. All meetings are publicly noticed, agendas posted as required by law, and open to the public. Everyone in attendance is invited to participate in the proceedings.

After significant discussions regarding the pros and cons of an ecosystem-based multiple species habitat conservation plan, the consensus of the group was to recommend to the Clark County Board of County Commissioners and each City Council of the cities located in Clark County that it begin preparation of the MSHCP. In August of 1996, at a public meeting, the Board of County Commissioners authorized the preparation of the MSHCP/EIS. Subsequently, each City Council took similar action by means of an amendment to the existing Interlocal Agreement among the County and the Cities.

The I & M Committee immediately began work on the plan. Approximately 19 public meetings of the I & M Committee have been held to discuss the substantive content of the MSHCP. In addition, the I & M Committee established a Biological Advisory Committee, meetings of which were attended by qualified biologists representing all interest groups. All meetings of the Biological Advisory Committee were publicly noticed and open to the public. Approximately 9 meetings of the Biological Advisory Committee have been held to discuss the biological issues of the MSHCP.

In addition, a public scoping meeting was held from 7 to 9 P.M. on March 11, 1997, in the cafeteria at the Clark County Government Center, 500 South Grand Central Parkway, Las Vegas, NV, 89155-8270 to discuss the Clark County Multiple Species Habitat Conservation Plan and EIS.

Interested persons were encouraged to attend the public meeting to identify and discuss issues and alternatives that should be addressed in the EIS. The agenda for the public scoping meeting included a summary of the proposed action, status of and threats to subject species, tentative issues, concerns, opportunities, and alternatives. Issues of concern in the preparation of the EIS include effects of the plan on the fish and wildlife resources of Clark County, land use and activities on public and private lands, and growth and socioeconomic health of the county.

SIERRA CLUB
FOUNDED 1892

Southern Nevada Group
P.O. Box 19777, Las Vegas, NV 89132

Bob Williams, Field Supervisor
Fish and Wildlife Service
1340 Financial Blvd Suite 234
Reno 89502-7147
Subject: Comments on the Draft CC MSHCP and EIS dated June 2000

Dear Bob,

This letter reiterates the concerns that the Sierra Club has in general about HCPs as they are currently legislated. This letter also includes some detail about the CC MSHCP specifically. None of these comments will be new to you or to Clark County. Some of these concerns, such as a project tracking system, are slowly being addressed, and some of the concerns, such as funding, will remain as significant challenges.

To a large degree, the measure of the CC MSHCP is the track record of the DCP, a program that has been in place for over a decade already. This track record includes the success of programs such as the translocation center, the many acres of former grazing lands that are under recovery, a highway fencing program that is nearing completion, and the awareness of desert conservation values that Mojave Max is building.

The Sierra Club's major complaints of HCPs as currently legislated are:
the 'no surprises rule', the uncertainty of adequate funding, lack of measurable standards, weak mitigation, weak enforcement of the mitigation called for, lack of independent scientific review of the plans and their implementation, lack of public participation early on in the process and throughout the implementation, mitigating for loss only on federal land, and granting permits for take on species for which there is too little scientific understanding.

Some of these complaints are easily and successfully addressed in the Clark County process.
The County does an excellent job of seeking public participation, and has since early on in the process. Mitigating on federal land is the only option in a state with almost 90% of our land managed by federal agencies. Since the plan has dropped coverage for the riparian and spring species, it would seem that only species with sufficient scientific understanding will be permitted – if indeed it is ever possible within human reach to achieve such understanding.

Other complaints remain as concerns with this MSHCP.

Funding
The funding issue has many aspects to it, but it's hard to explain why some HCPs collect much more than $550 per acre. This DCP/MSHCP is a landmark plan in the number of species covered, the variety of habitats and the acreage involved, and the sheer number of land managers responsible for mitigation actions. The County is always on the lookout to expand funding sources for projects that can be credited against the DCP; this is not only prudent but laudable. However the questions remain – is there enough money to do what is necessary? How much mitigation is necessary? 1

Evaluating success: measurable standards, effective and sufficient mitigation, and independent review
To properly evaluate whether the mitigation called for in the MSHCP is effective and sufficient, the Sierra Club would have to perform a professional analysis of the MSCP. We have not done this. This is specifically the role that an independent scientific review of the plan and its implementation would do. This is something that is highly recommended to be done. 2

First, there need to be measurable standards of success for the plan overall, and for each covered species and their habitats. I can't find any standards. There has been some work on this for the bear poppy, where four populations have been identified as necessary for survivability. Other species and habitats need this kind of work, and the plan itself needs a set of standards. Each mitigation project should probably have its own set of measurable standards against which to judge the level of success or failure. 3

Then, the plan overall needs to be evaluated. Is the County doing enough? Is the plan as implemented making a difference for the species and their habitats? Is the difference big enough to ensure species' survivability and recovery? How do these successful projects translate into mitigation - species recovered, habitat conserved, biodiversity ensured? I can't see the mechanism or the tool that will give these answers. 4

Perhaps these questions will be answered and these assessments will be made as part of the AMP. The AMP will have to make some sort of overall status analysis periodically, for the County to be able to decide 'what to do next'. But I cannot see in the MSHCP where the AMP is specifically called to address this area in any clear-cut manner.

Is this one of the deliverables that UNR will be making? Will this be explicitly clear within the AMP? What do we do in the mean time to decide where our program is supposed to go, and whether it's going there? 5

Will independent review be built into the AMP? No matter how competent and professional the AMP contractor is, independent review, not just of individual research projects but of the MSHCP itself, is a recognized necessity for valid and meaningful scientific achievement

Enforcement of the mitigation

There is a requirement for the AMP to provide a project tracking system. This tracking system is absolutely essential to solve the many problems that I have been aware of within the DCP, problems that I have talked about with Clark County representatives rather extensively in the past. 6

I know that you will carefully consider the above comments.

In the end, the final test of the MSHCP is whether we have a healthy, vital desert in Clark County, whether the unique species at higher elevations still thrive, whether our rivers and springs still carry animals and plants that live no where else in the world. Or whether our streams are sterile, our desert is asphalted over, our mountains loved to death.

Sincerely,

Jane Feldman

Jane Feldman
Co-Chair, Conservation Committee, Southern Nevada Group

cc: Cindy Truelove, DCP Administrator, Clark County

KENNETH M. REIM, P.E.
MINING ENGINEER
2733 Billy Casper Drive
Las Vegas, NV 89134-7814
--
(702) 254-2764

July 17, 2000

Commissioner Lance M. Malone

Commissioner Bruce L. Woodbury

Clark County
P.O. Box 551745
Las Vegas, NV 89155-1745

Re: COMMENTS ON U.S. FISH AND WILDLIFE'S DRAFT CLARK COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT, JUNE 9, 2000

Dear Commissioners Malone and Woodbury:

Attached are some brief comments sent to the U.S. Fish and Wildlife Service on the above referenced Draft Environmental Impact Statement. I urge you, and fellow Commissioners, to carefully review these comment, and that you read the DEIS/MSHCP, including the appendices.

Prior to the Clark County Commissioners approval of funding for this Propose MSHCP, you need to carefully look at the management of this program, scope and costs versus the benefits for all of Clark County. I urge all of the Commissioners not to just rubber stamp this program.

I would be happy to meet with you and others, if this would be helpful in your deliberations on this issue.

Sincerely,

Kenneth M. Reim

Kenneth M. Reim, P.E.

enc.

cc: Other Clark County Commissioners all/enc.
Dale W. Askew, Clark County Manager
✓ Robert D. Williams, Field Supervisor, U.S. Fish and Wildlife Service

KENNETH M. REIM, P.E.
MINING ENGINEER
2733 Billy Casper Drive
Las Vegas, NV 89134-7814
--
(702) 254-2764

July 17, 2000

Mr. Robert D. Williams, Field Supervisor
Fish and Wildlife Service
United States Department of the Interior
1340 Financial Boulevard, Suite 234
Reno, Nevada 89502-7147

Re: COMMENTS ON U.S. FISH AND WILDLIFE'S DRAFT CLARK COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT, JUNE 9, 2000

Dear Mr. Williams:

Attached are some brief comments on the above referenced Draft Environmental Impact Statement. I have managed over 15 years a large number of various discipline environmental scientists. Environmental scientists tend to want to be allocated a budget, be left alone to do research on their area of interest, with a minimum interest in the overall project goals. It takes someone with very strong management skills, not a biological scientist, to manage such a project.

It is my professional view that RECON of San Diego, California was inadequately managed in the preparation of this DEIS/MSHCP, resulting in a very complex document, with very high costs to the public. A symptom of this is their listing of an estimated 640 biological references (49 pages), many of which are irrelevant to the DEIS/MSHCP; and mapping the all the North American habitat for a large number of species.

I urge the Fish and Wildlife Service and Clark County to do the following:

- Extend the public comment period beyond July 24, 2000 (45 days) to 90 days, and solicit comments from the non-biologically focused State and Federal agencies, and community. 1
- In the preparation of the Final environmental Impact Statement, simplify the document. Include only those items "needed", and eliminate all those items "nice to have". 2

I urge the adoption of the "No Action Alternative". Thanks for the opportunity to comment on the DEIS/MSHCP.

Sincerely,

Kenneth M. Reim

Kenneth M. Reim, P.E.

enc.

cc: Clark County Commissioners all/enc.
John L. Schlegel, Director, Clark County, Department of Comprehensive Planning

COMMENTS ON U.S. FISH AND WILDLIFE'S DRAFT CLARK COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT JUNE 9, 2000

Based on a preliminary, cursory review of the above referenced document, my comments follow. Hard copies of Appendices A through K were not readily available for review. However, Appendices A and B were briefly scanned from the CD Rom (reading CD Rom is not easy)

1. Based on my "Best Professional Judgement" having managed similar projects for over 15 years, RECON, the preparer of this DEIS/MSHCP was not adequately managed. There are 49 pages of references, estimated to consist of 640 references, with very few if any cited in the main text of this report. A sample of just several irrelevant references are such as: 3

   p. 9-23, Johnson, S.R., and D.R. Herter. 1989. The birds of the Beaufort Sea.

   P. 9-24, Kepler, C.B. and A.K. Kepler, 1978, Status of nesting of the yellow-billed Cuckoo in Puerto Rico.

   p. 9-26, Lack, D. 1976. Island biology illustrated by the land birds of Jamaica.

   In Appendix B, the habitat for all the species reviewed, were mapped for all of North America. The habitat of interest is Clark County, Nevada, and adjacent area. This should not have been this broad a ranging academic study. 4

   It appears that a large group of biological (ecological) scientists were inadequately managed (controlled) versus project goals. They produced a very long, complex document, making it very difficult for future managers to implement. This has resulted in very high costs to date, and in the future high cost management of this Multiple Species Habitat Conservation Plan (MSHCP). 5

2. Section 2.1.9 Proposed funding of this program at $4,100,000 per biennium, adjusted by the Consumer Price Index, with up to an additional $1,000,000 per year, is excessive. In Section 2.8 is an extensive list of research, inventory, monitoring, protection, restoration and enhancement programs by the various federal and state agencies. A careful review needs to be made of each of these programs to determine if they are "needed", or "nice to have". Biological scientists will include a lot of "nice to have" programs, and these should be eliminated. Programs as proposed will tend to "provide full employment opportunities for biologists" at a high cost not commensurate to the benefits. 6

3. Page 2-42 Mineral Extraction. There must be a distinction between an "ACEC" and "Proposed ACEC". Those ACECs over 5,000 acres in size are understood to require U.S. Congressional approval, which has not been authorize by Congress for those proposed in the Bureau of Land Management's Las Vegas Resource Management Plan. In this DEIS, this needs to be made perfectly clear. 7

4. Page 2-69 Mineral Extraction. To "close IMAs and LIMAs to mineral exploration and mining, subject to prior existing rights" requires U.S. Congressional action, and can not be implemented by this proposed MSHCP. 8

5. Section 4.3.9 Mineral Extraction. The statement "Much of the BLM Las Vegas District is open to mining exploration and Development." is simply not true. I see no input from the Nevada Division of Minerals, Nevada Bureau of Mines and Geology and/or U.S. Geological Survey-Minerals Branch in the Mineral Extraction sections of this report. This must be corrected. 9

6. Section 5.1 Federal Laws and Regulations.

Include "Mining and Minerals Policy Act of 1970" (P.L. 91-631), 84 Stat 1876. Provisions in the DEIS/MSHCP may conflict with this act; this needs to be resolved. 10

Include "National Materials and Mineral policy, Research and Development Act of 1980" (P.L. 479) 94 Stat 2305-2310. Provisions in this DEIS/MSHCP may conflict with this act; this needs to be resolved. 11

Include "R.S. 2477 Rights-of-Way". Originally, the grant was Section 8 of a law entitled "An Act Granting Right of Way to Ditch and Canal Owners Over The Public Lands, and For Other Purposes"; subsequently this provision became Section 2477 of the Revised Statutes, and latter still was recodified as 43 United States Code 932. Provisions in this DEIS/MSHCP may conflict with this act; this needs to be resolved. 12

7. The benefits versus costs of this proposed MSHCP are not adequately addressed in this draft EIS. 13

Based on this DEIS/MSHCP as presently presented, I recommend the "No Action Alternative". 14

July 17, 2000

By: Kenneth M. Reim

Kenneth M. Reim, P.E.
2733 Billy Casper Drive
Las Vegas, NV 89134-7814

RESPONSE TO CLARK COUNTY'S MULTIPLE SPECIES HABITAT CONSERVATION PLAN APPENDIX B, INDIVIDUAL SPECIES ANALYSES

RE: File Number DES 00-19

Prepared by

STEVEN C. FERRAND
P.O. BOX 3
SEARCHLIGHT, NEVADA 89046
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PRESENTED TO
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
NEVADA FISH AND WILDLIFE OFFICE

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[1] Refers to Multiple Species Habitat Conservation Plan Document Appendix B, Individual Species Analyses. Appendix B 3.0 Reptiles and Amphibians

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STEVEN C. FERRAND
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July 22, 2000

United States Department of the Interior
Fish And Wildlife Service
Nevada Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, Nevada 89502-7147

Attention: Mr. Robert D. Williams

Re: File Number DES 00-19

Dear Mr. Williams:

Please consider this paper a formal response to Clark County's submission of the MSHCP/DEIS to the United States Fish and Wildlife Service for an incidental take permit pursuant to Section 10(a)(1)(B) of the Endangered Species Act of 1973. This response is directed to concerns expressed in the MSHCP document about commercial collection of reptiles in Clark County referred to as **Threat 201** and **Threat 202.**

Robert C. Stebbins' *A Field Guide To Western Reptiles And Amphibians* (second edition), Behler and King's *The Audubon Society Field Guide To North American Reptiles & Amphibians* and Clark County's MSHCP document along with other sources noted at the end of this document were used as references for supporting information about the range, habitat requirements and reproductive potential of the reptiles under review. The population stability and commercial collecting analysis is based on statistical data provided by the Nevada Division Of Wildlife (NDOW) for the years 1986 through 1998 and information appearing in the MSHCP document. Current conservation measures and proposed mitigation that provide conservation coverage for the affected species will be addressed on an over all MSHCP basis. The report addresses, on a species by species basis the physical range and habitat requirements of reptile species commercially collected in Clark County, their relative abundance, reproductive potential, population stability, and a review of commercial collecting data.

Current conservation measures that mitigate future development of 130,000 acres in Clark County provide species level protection for commercially collected reptiles, include already designated land management areas, (divided into four basic conservation management categories) covering the entire 7,900 square miles (5,056,100 acres or 2,047,004 hectares) that make up Clark County. The

categories are: Intensively Managed Areas, (IMA), Less Intensively Managed Areas (LIMA), Multiple Use Managed Areas (MUMA) and Unmanaged Areas (UMA). These management areas cover all eleven habitat types described in the Clark County MSHCP table 2-4. IMAs comprise 2,764,819 acres (1,119,360 hectares), which represent 54.68% of the ecosystem habitat types within Clark County. LIMAs comprise 377,388 acres (152,789 hectares), which represents 7.46% of the ecosystem habitat types. MUMAs comprise 1,558,822 acres (631,102 hectares), or 30.83% and UMAs comprise 355,470 acres (878,010 hectares), or 7.03%.

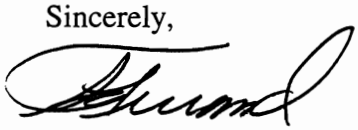
Virtually all of the planned development will occur on the UMAs that represent a small percentage of the described ecosystems in Clark County (table 2-4). When the very small amount of land that is to be developed 130,000 acres is considered as a percentage of the entire ecosystem of Clark County, 5,056,100 acres (table 2-8), it amounts to a 2.57% habitat loss over a period of thirty years. Then consider collecting a numerically smaller percentage of a population, (0.1% per year or less), by an even fewer number of collectors averaging 1 to 7 annually per species collected. When the number of sections (square miles) collected per year, per species is examined as a percentage of the ecosystem, the impact of commercial collection of reptiles in Clark County can be placed into proper perspective; biologically and statistically insignificant, (see species accounts).

The land managed in the IMAs, LIMAs, MUMAs and UMAs carry varying levels of access and use restrictions imposed to accomplish conservation goals or protect private property rights. Commercial collection of reptiles is prohibited on private property without the permission of the owner and on many other management areas: Desert National Wildlife Range, Nellis Air Force Range, Lake Mead National Recreation Area, Indian Springs Air Force Auxiliary Field, Nellis Air Force Base and associated ranges, Overton Wildlife Management Area, Red Rock National Conservation Area, Spring Mountain National Recreation Area, Valley of Fire State Park, all Native American Reservations and other management areas listed in the MSHCP document. These areas combined represent nearly 2,000,000 acres of ecosystem in Clark County. Any areas that are open to commercial collection but are limited use in nature, effectively limit collection on the majority of the ecosystem by limiting access to areas by controlling motorized vehicle access. This effectively protects all but a very small percentage of the land from any type of commercial collection. When this relationship is understood it becomes very clear that commercial collection of reptiles is not a threat to any collected species or the associated habitat. None of the commercially collected species that have been proposed for the MSHCP Covered, Evaluation or Watch Lists are even remotely sensitive and none are being considered for federal listing. They all have very extensive ranges in and out of both Clark County and the State of Nevada.

It should also be mentioned that commercial collection is highly regulated and administered by the Nevada Division of Wildlife who requires monthly reports as a condition of the commercial permit. The data from commercial collection records have provided valuable information from 1986 to the present about reptile populations and species location accounts. In many instances these data are the only data available and have been used by the Nevada Division of Wildlife, Clark County and academic institutions in the publication of various documents, the most prominent being the MSHCP/DEIS. Cited location data was available for virtually all commercially collected species for the MSHCP document while the availability of cited location data was limited for non-collected species.

In conclusion, the commercial collection of reptiles in Nevada is strictly regulated and is administered by the Nevada Division of Wildlife, whose operation is overseen by the Nevada Board of Wildlife Commissioners. NDOW and the Commission have recently completed a two year review of commercial collection of reptiles and found no evidence or reason to suspect that any harm was being done to any of the collected species. The concerns of the environmental community, Clark County, USF&WS, commercial collectors and the general public, among others were heard at numerous Wildlife Commission meetings during the two year period. The Commission, after hearing testimony from all interested parties, unanimously made the decision to allow commercial collecting to continue in Nevada. With that in mind and the overwhelming statistical evidence that follows showing that commercial collection of reptiles in Clark County is not a threat to any species, Clark County's request to give these species covered status under the MSHCP should be granted. Your consideration of this request is appreciated.

Sincerely,



Steven C. Ferrand
P. O. Box 3
Searchlight, Nevada 89046

cc: Nevada Board of Wildlife Commissioners
Nevada Division of Wildlife
Cynthia J. Truelove, Ph.D., for Clark County, Nevada

I. COVERED LIST SPECIES

D. Lizards.

1. Desert Banded Gecko, *Coleonyx v. variegatus* (Appendix B 3.1.2)[1]

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 5,625 square miles (3,600,000 acres or 1,457,490 hectares). The six major ecosystems occupied by the banded gecko are **Mojave Desert scrub, blackbrush, mesquite/catclaw, pinyon-juniper, sagebrush** and **desert riparian** habitats, which together comprise 4,548,800 acres in Clark County (MSHCP tables 2-4 and 2-8); to elevations of approximately 5,000 feet (1,520 meters).

Abundance: Common; population densities range from 3 or 4 to 40 or more per hectare in ideal habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of banded gecko reproduction, population stability and collecting information, the population in Clark County is conservatively estimated to be in excess of 850,000.

Reproduction: Usually during the second year, but during favorable conditions reproduction can occur late in the first year. Up to 3 clutches per season of usually 2 eggs per clutch are laid during good conditions. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard is largely nocturnal and spends much of its life in a subterranean existence under surface debris, trash, fallen dead branches of Joshua trees, dead fallen yuccas, and in rocky crevices. Banded geckos occupy a great deal of habitat that will never be developed in Clark County, and can live in very arid areas or flourish in more moist habitats, which may act to increase its numbers near developing areas. This lizard adapts well, and is commonly found, in developed and disturbed habitat taking advantage of moisture and cover afforded by the landscaping in Las Vegas valley subdivisions. Although a large percentage of the land that has been and will be developed is banded gecko habitat, the impact of the amount being developed, 3.61%, is not significant when the percent of habitat loss, the lizards' range, reproductive potential, adaptability to development and habitat requirements are considered.

Collection Information: 736 desert banded geckos have been collected on 151 different sections in Clark County from 1986 through 1998. There have been 1 to 10 banded geckos collected on 132 of the 151 sections. An average of 3.54 collectors per year catch banded geckos; 21 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 151 square miles collected represent 2.68% of the estimated banded gecko habitat in Clark County.

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[1] Refers to Multiple Species Habitat Conservation Plan Document Appendix Individual Species Analyses. Appendix B 3.0 Reptiles and Amphibians

2. **Desert Iguana, *Dipsosaurus dorsalis* (Appendix B 3.1.3)**[1]

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document and area greater than 4,688 square miles (3,000,000 acres or 1,214,575 hectares). The three major ecosystems occupied by the desert iguana are **Mojave Desert scrub** flats with sandy hummocks, **mesquite/catclaw**, and **salt desert scrub**, which together comprise 3,485,500 acres in Clark County (MSHCP tables 2-4 and 2-8). Desert iguanas are also found along gravelly washes and stream beds well into the foothills and low mountains to elevations of approximately 5,000 feet (1,520 meters).

Abundance: Common; population densities range from 6 or 8 to well over 60 per hectare in ideal habitat, under favorable conditions, in land-locked areas where the animals are unable to disperse. Based on the MSHCP-listed habitat requirements and what is known of desert iguana reproduction, population stability and collecting information, the population in Clark County is conservatively estimated to be in excess of 930,000.

Reproduction: Usually during the second year, but in good conditions reproduction can occur late in the first year. Clutch size usually ranges from 3 to 8 eggs, although more than 8 is not uncommon. Double-clutching during times of good moisture and food availability is common. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard does well in disturbed areas adjacent to developments and concentrations seem greatest in these areas. Although a large percentage of the land that has been and will be developed is desert iguana habitat, the amount being developed over the thirty years of the MSHCP represents less than 4.33% of the available habitat in Clark County. The desert iguanas' range outside of Clark County is considerable and extends through the Mojave Desert region of southern California, covering the southwestern half of Arizona and extending into Mexico and Baja California.

Collection Information: 7,781 desert iguanas have been collected on approximately 340 different sections in Clark County from 1986 through 1998. There have been 1 to 10 desert iguanas collected on 186 of the 340 sections. An average of 7.00 collectors per year catch desert iguanas; 40 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 340 square miles collected represents 7.25% of the estimated desert iguana habitat in Clark County.

3. **Western Chuckwalla, *Sauromalus o. obesus* (Appendix B 3.1.4)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 3,125 square miles (2,000,000 acres or 809,717 hectares). The four major ecosystems occupied by the chuckwalla are **Mojave Desert scrub**, **blackbrush**, **salt desert scrub** and **mesquite/catclaw** habitats, which together comprise 4,541,100 acres in Clark County (MSHCP tables 2-4 and 2-8). The chuckwalla typically occupies areas with rocky cover in the mountains, foothills, rocky flats, lava flows and washes in the four ecosystems, to elevations of approximately 6,000 feet (1,830 meters).

Abundance: Common; population densities range from 3 or 4 to over 80 per hectare in ideal habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of chuckwalla reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 1,150,000.

Reproduction: Usually by the third year of age under average conditions. Clutch size may range from 3 or 4 to as many as 18 eggs, with some females double-clutching during ideal conditions. It is common for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; chuckwallas are found in all the historically recorded locations except one that is under water, flooded by the creation of Lake Mead (Utah State University 1995 chuckwalla report). These lizards do well in moderately disturbed areas and may even persist in land-locked areas, within city limits, with development all around. The rocky nature of this species-preferred habitat assures this animal's insulation from being impacted by most of the proposed development in Clark County.

Collection Information: 6,189 chuckwallas have been collected on approximately 291 different sections in Clark County from 1986 through 1998. There have been 1 to 10 chuckwallas collected on 169 of the 291 sections. An average of 6.77 collectors per year catch chuckwallas; 39 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 291 square miles collected represents 9.31% of the estimated chuckwalla habitat in Clark County.

4. **Collared Lizard, *Crotaphytus insularis bicinctores* (Appendix B 3.1.5)**[1]

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres or 1,174,089 hectares). The seven major ecosystems occupied by the collared lizard are **Mojave Desert scrub**, **salt desert scrub**, **mesquite/catclaw**, **desert riparian**, **blackbrush**, **sagebrush**, and **pinyon-juniper** habitats, which together comprise 4,739,500 acres in Clark County (MSHCP tables 2-4 and 2-8). Collareds are found in primarily rocky habitats from flats and washes to the foothills and suitable mountainous areas, to elevations of approximately 7,500 feet (2,290 meters), in parts of its geographical range.

Abundance: Common; population densities range from 3 or 4 to 30 or more per hectare in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of collared lizard reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 740,000.

Reproduction: Usually begins during the later part of the first season under normal conditions. Clutch size may range from 2 or 3 for small first year females to 8 or 9 for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard is diurnal, spending much of its time on the surface of the desert, basking on rocks. Due to the rocky nature of its principal habitat, only a small portion, less than 2%, will be developed under current plans. When consideration is given to the amount of habitat being developed, the lizards' extensive range in Nevada and surrounding States, its reproductive potential, and habitat requirements in the County, the amount of habitat loss is not significant.

Collection Information: 830 collared lizards have been collected on 181 different sections in Clark County from 1986 through 1998. There have been 1 to 10 collared lizards collected on 163 of the 181 sections. An average of 5.62 collectors per year catch collared lizards; 34 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 181 square miles collected represent 3.99% of the estimated collared lizard habitat in Clark County.

5. **Leopard Lizard, *Gambelia w. wislizenii* (Appendix B 3.1.6)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres or 1,174,089 hectares). The seven major ecosystems occupied by the leopard lizard are **Mojave Desert scrub, salt desert scrub, mesquite/catclaw, desert riparian, blackbrush, sagebrush,** and **pinyon-juniper** habitats, which together comprise 4,739,500 acres in Clark County (MSHCP tables 2-4 and 2-8). Leopard lizards are usually found in sandy to gravelly areas where vegetation is sparse, preferring open expanses that do not inhibit running; to elevations of approximately 6,000 feet (1,830 meters).

Abundance: Common; population densities range from 2 or 3 to 20 or more per hectare in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of leopard lizard reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 900,000.

Reproduction: Usually during the later part of the first season under normal conditions. Clutch size may range from 2 or 3 for small females to 11 or 12 for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard is diurnal, spending much of its time on the surface of the desert. Although a large percentage of the land that has been and will be developed is leopard lizard habitat, the amount being developed, over the thirty years of the MSHCP, represents less than 4.48% of the habitat in Clark County. The leopard lizards' range outside of Clark County is considerable and extends from southern Oregon and Idaho, through the entire State of Nevada, the western third of Utah, the Mojave Desert area of southern California continuing into Baja California and Mexico, through most all of Arizona, into the western third of New Mexico and western tip of Texas.

Collection Information: 3,047 leopard lizards have been collected on 344 different sections in Clark County from 1986 through 1998. There have been 1 to 10 leopard lizards collected on 271 of the 344 sections An average of 6.38 collectors per year catch leopard lizards; 35 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 344 square miles collected represents 7.59% of the estimated leopard lizard habitat in Clark County.

B. Snakes.

1. Western Leaf-nosed Snake, *Phyllorhynchus decurtatus perkinsi* (Appendix B 3.1.8)[1]

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres or 1,174,089 hectares). The major ecosystems occupied by the western leaf-nosed snake are **Mojave Desert** and **salt desert scrub** habitats, which together comprise 3,463,800 acres in Clark County (MSHCP tables 2-4 and 2-8). Leaf-nosed snakes are generally found in sandy to gravelly desert, primarily in the flats and rocky washes to the low foothills, to elevations of approximately 3,000 feet (910 meters).

Abundance: Common; Population densities range from 1 or 2 to 8 or more per hectare in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements, and what is known of leaf-nosed snake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 150,000.

Reproduction: Usually during the second or third season under normal conditions. Clutch size may range from 2 eggs to 4 or 5. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is diurnal in the cooler parts of the season, spending much of its time on the surface of the desert but becomes crepuscular and then nocturnal as the heat increases. It can be found throughout the desert during its surface activity period. Although a large percentage of the land that has been and will be developed is western leaf-nosed snake habitat, the amount being developed, less than 4.48%, is not significant when the percent of habitat loss, the snakes' extensive range, reproductive potential, and habitat requirements in the County are considered.

Collection Information: 45 western leaf-nosed snakes have been collected on 24 different sections in Clark County from 1986 through 1998. There have been 1 or 2 leaf-nosed snakes collected on 20 of the 24 sections. An average of 1.00 collectors per year catch leaf-nosed snakes; 9 *different* collectors over the thirteen year period. A section is considered to have been collected after only one animal has been removed. The 24 square miles collected represents 0.53% of the estimated leaf-nosed snake habitat in Clark County.

2. **Desert Glossy Snake, *Arizona elegans eburnata* (Appendix B 3.1.9)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres or 1,174,089 hectares). The major ecosystems occupied by the desert glossy snake are **Mojave Desert scrub, salt desert scrub** and **pinyon-juniper** habitats, which together comprise 3,741,600 acres in Clark County (MSHCP tables 2-4 and 2-8). The habitat varies from barren desert to woodlands preferring more open areas that may be sandy to hardpan, from the flats and washes to more mountainous terrain, to elevations of approximately 6,000 feet, (1,830 meters).

Abundance: Population densities range from 2 or 3 to 10 or more per hectare in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of glossy snake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 350,000.

Reproduction: Usually during the second or third season under normal conditions. Clutch size may range from 2 or 3 for small females to 20 or more for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is diurnal in the cooler parts of the season, spending much of its time on the surface of the desert but becomes crepuscular, then nocturnal as the heat increases. It can be found throughout the desert during its surface activity period. Although a large percentage of the land that has been and will be developed is glossy snake habitat, the amount being developed, less than 4.48% is not significant when the percent of habitat loss, the snakes' extensive range within Nevada and surrounding states, reproductive potential, and habitat requirements in the County are considered.

Collection Information: 97 glossy snakes have been collected on 53 different sections in Clark County from 1986 through 1998. There have been 1 or 2 glossy snakes collected on 41 of the 53 sections. An average of 2.77 collectors per year catch glossy snakes; 16 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 53 square miles collected represents 1.17% of the estimated glossy snake habitat in Clark County.

3. **California Kingsnake, *Lampropeltis getulus californiae* (Appendix B 3.1.10)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres or 1,174,089 hectares). The major ecosystems occupied by the California kingsnake are **Mojave Desert** and **salt desert scrub** habitats, which together comprise 3,463,800 acres in Clark County (MSHCP tables 2-4 and 2-8). California kingsnakes inhabit almost any available cover in arid desert to developed irrigated land, from the flats and rocky washes to the low foothills into the mountains, to elevations of approximately 6,900 feet (2,100 meters).

Abundance: Population densities range from 2 or 3 to 14 or more per hectare in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of California kingsnake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 200,000.

Reproduction: Usually during the second or third season under normal conditions. Clutch size may range from 2 or 3 for small females to 20 or more for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is active during the day and at night depending upon the time of year and temperature, spending much of its time on the surface of the desert, or in crevices, rocky outcrops and in heavy brush. Although a large percentage of the land that has been and will be developed is California kingsnake habitat, the amount being developed, less than 4.48% is not significant when the percent of habitat loss, the snakes' extensive range in Nevada and surrounding states, reproductive potential, and flexible habitat requirements in the County, are considered.

Collection Information: 48 California kingsnakes have been collected on 33 different sections in Clark County from 1986 through 1998. There have been 1 or 2 California kingsnakes collected on 31 of the 33 sections. An average of 1.54 collectors per year catch California Kingsnakes; 12 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 33 square miles collected represents 0.73% of the estimated California kingsnake habitat in Clark County.

4. **Western Long-Nosed Snake, *Rhinocheilus l. lecontei* (Appendix B 3.1.11)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres, or 1,174,089 hectares). The major ecosystems occupied by the western long-nosed snake are **Mojave Desert** and **salt desert scrub** habitats, which together comprise 3,463,800 acres in Clark County (MSHCP tables 2-4 and 2-8). Long-nosed snakes are primarily found in more open areas, sandy to hardpan, from the flats and rocky washes to the low foothills, to elevations of approximately 5,400 feet (1,650 meters).

Abundance: Common; population densities range from 2 or 3 per hectare to 15 or more in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of long-nosed snake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 325,000.

Reproduction: Usually during the second or third season under normal conditions. Clutch size may range from 2 or 3 for small females to 18 or more for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is diurnal in the cooler parts of the season, spending much of its time on the surface of the desert but becomes crepuscular and then nocturnal as the temperature increases. It can be found throughout the desert during its surface activity period. Although a large percentage of the land that has been and will be developed is long-nosed snake habitat, the amount being developed, 4.48%, is not significant when the percent of habitat loss, the snakes' extensive range, reproductive potential, and habitat requirements in the County are considered.

Collection Information: 188 Long-nosed snakes have been collected on 79 different sections in Clark County from 1986 through 1998. There have been 1 or 2 long-nosed snakes collected on 51 of the 79 sections. An average of 2.92 collectors per year catch long-nosed snakes; 20 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 79 square miles collected represents 1.74% of the estimated long-nosed snake habitat in Clark County.

5. **Sonoran Lyre Snake, *Trimorphodon biscutatus lambda* (Appendix B 3.1.12)**[1]

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 6,562 square miles (4,200,000 acres or 1,699,031 hectares). The six major ecosystems occupied by the Sonoran lyre snake are **Mojave Desert scrub**, **salt desert scrub, mesquite/catclaw, blackbrush, pinyon-juniper** and **mixed conifer** habitats, which together comprise 4,644,400 acres in Clark County (MSHCP tables 2-4 and 2-8). Lyre snakes are usually found in association with rocky habitat in these areas, to elevations of approximately 7,400 feet (2,260 meters).

Abundance: Common; population densities range from 1 or 2 per hectare to 12 or more in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of lyre snake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 205,000.

Reproduction: Usually during the later part of the second season under normal conditions. Clutch size may range from 5 or 6 for first year small females to 18 or 20 for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is primarily nocturnal or crepuscular, spending much of its time in crevices and under rocks in the more rocky areas of the desert, but it also may be found in areas absent of rocks. Only a small percentage of the land that has been and will be developed is lyre snake habitat, and the amount being developed is not significant when the percent of habitat loss, the snakes' extensive range, reproductive potential, and habitat requirements in the County are considered.

Collection Information: 11 Sonoran lyre snakes have been collected on 8 different sections in Clark County from 1986 through 1998. There have been 1 or 2 lyre snakes collected on 7 of the 8 sections An average of 0.54 collectors per year catch Sonoran lyre snakes; 6 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 8 square miles collected represents 0.12% of the estimated Sonoran lyre snake habitat in Clark County.

6. **Speckled Rattlesnake, *Crotalus mitchelli pyrrhus & stephensi* (Appendix B 3.1.13)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 6,562 square miles (4,200,000 acres or 1,699,031 hectares). The major ecosystems occupied by the speckled rattlesnake are **Mojave Desert scrub, mesquite/catclaw, blackbrush, sagebrush** and **pinyon-juniper** habitats, which together comprise 4,531,900 acres in Clark County (MSHCP tables 2-4 and 2-8). Speckled rattlesnakes are typically found in association with rocky habitat in these areas, to elevations of approximately 8,000 feet (2,450 meters).

Abundance: Common; population densities range from 1 or 2 per hectare to 16 or more in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of speckled rattlesnake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 280,000.

Reproduction: Usually during the third season under normal conditions. Speckled rattlesnakes are viviparous; brood size may range from 2 or 3 for third year small females to 11 or 12 for large older females. It is normal for general biological activity and reproduction to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is diurnal during the early spring and fall spending much of its time on the surface of the desert, but becomes crepuscular and the nocturnal as the daytime temperatures increase. It can be found in rocky outcrops and along roadsides, both paved and unpaved in rocky habitat. Only a small percentage of the land that has been and will be developed is speckled rattlesnake habitat, less than 2%. The amount being developed is not significant when the percent of habitat loss, the snakes' extensive range in Nevada and surrounding states, reproductive potential, and habitat requirements are considered.

Collection Information: 216 speckled rattlesnakes have been collected on 82 different sections in Clark County from 1986 through 1998. There have been 1 or 2 speckled rattlesnakes collected on 55 of the 82 sections. An average of 3.38 collectors per year catch speckled rattlesnakes; 18 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 82 square miles collected represents 1.25% of the estimated speckled rattlesnake habitat in Clark County.

7. **Sidewinder Rattlesnake, *Crotalus c. cerastes* (Appendix B 3.1.14)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 4,531 square miles (2,900,000 acres or 1,174,089 hectares). The major ecosystems occupied by the sidewinder are **Mojave Desert scrub**, **salt desert scrub**, and **mesquite/catclaw** habitats, which together comprise 3,485,500 acres in Clark County (MSHCP tables 2-4 and 2-8). Sidewinders are typically found in low lying areas characterized by sandy hummocks, loose sand and gravel, to adjacent gravelly stream beds and washes, hardpan creosote flats and low foothills where vegetation is sparse preferring open expanses that do not restrict its movement; to elevations of approximately 5,500 feet (1,680 meters).

Abundance: Common; population densities range from 2 or 3 per hectare to 20 or more in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements, and what is known of sidewinder rattlesnake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 250,000.

Reproduction: Usually during the third season under normal conditions. Sidewinder rattlesnakes are viviparous; brood size may range from 2 or 3 for small females to 16 or 18 for large, older females. It is common for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is diurnal in the cooler parts of the season, spending much of its time on the surface of the desert, but becomes crepuscular and then nocturnal as the day time heat increases. It can be found throughout the desert during its surface activity period. Although a large percentage of the land that has been and will be developed is sidewinder habitat, the amount being developed represents less than 4.48% and is not significant when the percent of habitat loss, the snakes' extensive range, reproductive potential, and habitat requirements in the County are considered.

Collection Information: 166 Mojave desert sidewinders have been collected on 71 different sections in Clark County from 1986 through 1998. There have been 1 or 2 Mojave desert sidewinders collected on 50 of the 71 sections. An average of 3.08 collectors per year catch sidewinder rattlesnakes; 18 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 71 square miles collected represents 1.57% of the estimated sidewinder habitat in Clark County.

8. **Mojave Rattlesnake, *Crotalus s. scutulatus* (Appendix B 3.1.15)[1]**

Range: Throughout Clark County in suitable habitat; according to table 3-1 of the MSHCP document, an area greater than 6,562 square miles (4,200,000 acres or 1,699,031 hectares). The major ecosystems occupied by the Mojave rattlesnake are **Mojave Desert scrub, salt desert scrub, mesquite/catclaw, sagebrush** and **blackbrush** habitats, which together comprise 4,444,800 acres in Clark County (MSHCP tables 2-4 and 2-8). Mojave rattlesnakes are usually found in grassland, open juniper woodland, Joshua tree forests and scrubland. Sandy to hardpan surfaces, from the flats, sandy or gravelly washes to suitable mountainous habitat that is open with scrubby growth; to elevations of approximately 8,300 feet (2,530 meters), in parts of its geographical range.

Abundance: Common; Population densities range from 1 or 2 per hectare to 20 or more in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements, and what is known of Mojave rattlesnake reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 320,000.

Reproduction: Usually during the third season under normal conditions. Mojave rattlesnakes are viviparous; brood size may range from 2 or 3 for small females to 11 or 12 for large females. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this snake is diurnal in the cooler parts of the season, spending much of its time on the surface of the desert, but becomes crepuscular and then nocturnal as the day time temperatures increase. It can be found throughout the desert in developed and undeveloped areas during its surface activity period. Because the percentage of the land that has been and will be developed represents less than 2 ½ % of Mojave rattlesnake habitat, the amount being developed is not significant when the percent of habitat loss, the snakes extensive geographical range, reproductive potential, and habitat requirements in the County, are considered.

Collection Information: 74 Mojave rattlesnakes have been collected on 36 different sections in Clark County from 1986 through 1998. There have been 1 or 2 Mojave rattlesnakes collected on 29 of the 36 sections. An average of 1.69 collectors per year catch Mojave rattlesnakes; 13 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 36 square miles collected represents 0.55% of the estimated Mojave rattlesnake habitat in Clark County.

II. EVALUATION LIST SPECIES

A. Lizards.

1. Southern Desert Horned Lizard, *Phrynosoma platyrhinos calidiarum* (Appendix B 3.2.2)[1]

Range: Throughout Clark County in suitable habitat; according to the ecosystems identified in the MSHCP document; an area greater than 6,562 square miles (4,200,000 acres or 1,699,031 hectares). The five major ecosystems occupied by the horned lizard are **Mojave Desert scrub**, **salt desert scrub, mesquite/catclaw, blackbrush,** and **pinyon-juniper** habitats, which together comprise 4,722,600 acres in Clark County (MSHCP tables 2-4 and 2-8). Horned lizards inhabit the sandy flats, dunes, rocky washes and alluvial fans to suitable low mountainous terrain; to elevations of approximately 6,500 feet (1,980 meters), in parts of its geographical range.

Abundance: Common; population densities range from 2 or 3 per hectare to 15 or more in good habitat and under favorable conditions. Based on the MSHCP-listed habitat requirements and what is known of horned lizard reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 850,000.

Reproduction: Usually during the second season under normal conditions. Clutch size may range from 2 or 3 for first year, small females to 15 or 16 for large females. Double-clutching may occur in years of good moisture and food availability. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard is diurnal, spending much of its time on the surface of the desert basking on rocks and is quite visible during its period of activity. Although a large percentage of the land that has been and will be developed is southern desert horned lizard habitat, the amount being developed represents less than 3.1% and is not significant when the percent of habitat loss, the lizards' extensive range in Nevada and surrounding states, reproductive potential, and habitat requirements in the County are considered.

Collection Information: 5,126 southern desert horned lizards have been collected on 390 different sections in Clark County from 1986 through 1998. There have been 1 to 10 southern desert horned lizards collected on 268 of the 390 sections. An average of 6.15 collectors per year catch southern desert horned lizards; 31 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 390 square miles collected represents 5.94% of the estimated horned lizard habitat in Clark County.

2. Desert Night Lizard, *Xantusia vigilis* (Appendix B 3.2.4)[1]

Range: Throughout Clark County in suitable habitat; according to the ecosystems identified in the MSHCP document; an area greater than 6,562 square miles (4,200,000 acres, or 1,699,031 hectares). The six major ecosystems occupied by the desert night lizard are **Mojave Desert scrub, salt desert scrub, mesquite/catclaw, blackbrush, sagebrush** and **pinyon-juniper** habitats, which together comprise 4,722,600 acres in Clark County (MSHCP tables 2-4 and 2-8). The night lizards' range extends to elevations of approximately 9,300 feet (2,830 meters), in parts of its geographical range.

Abundance: Common; population densities range from 2 or 3 per hectare to 100 or more in good habitat and under favorable conditions. Based on the MSHCP habitat requirements, and what is known of night lizard reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 1,450,000.

Reproduction: Usually during the later part of the first season under normal conditions. Night lizards are viviparous; live bearers, brood sizes range from 1 to 3. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard is largely diurnal with activity continuing into the early evening, spending much of its time under surface debris, trash, fallen dead branches of Joshua-trees, dead fallen yuccas, in rocky crevices, and under the bark of some pines. This lizard adapts well and is commonly found in developed and disturbed habitat, taking advantage of the moisture and cover afforded by the landscaping in Las Vegas valley subdivisions. Although a large percentage of the land that has been and will be developed is night lizard habitat, it represents less than 3.1% and is not significant when the percent of habitat loss, the lizards' extensive range, reproductive potential, adaptability to development and habitat requirements in the County are considered.

Collection Information: 61 desert night lizards have been collected on 12 different sections in Clark County from 1986 through 1998. There have been 1 to 10 desert night lizards collected on 9 of the 12 sections. An average of 0.85 collectors per year catch night lizards; 8 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 12 square miles collected represents 0.18% of the estimated night lizard habitat in Clark County.

III. WATCH LIST SPECIES

A. Zebra-tailed Lizard, *Callisaurus d. draconoides* (Appendix B 3.3_)[1]

Range: Throughout Clark County in suitable habitat; according to the ecosystems identified in the MSHCP document; an area greater than 4,531 square miles, 2,900,000 acres, or 1,174,089 hectares. The major ecosystems occupied by the zebra-tailed lizard are **Mojave Desert scrub**, **salt desert scrub**, and **mesquite/catclaw** habitats, which together comprise 3,485,500 acres in Clark County (MSHCP tables 2-4 and 2-8). Zebra-tailed lizards are most commonly found in low lying areas characterized by sandy hummocks, loose sand and gravel, to adjacent gravelly stream beds and washes, hardpan creosote flats, and low foothills where vegetation is sparse preferring open expanses that do not restrict its movement; to elevations of approximately 5,000 feet (1,520 meters), in parts of its geographical range.

Abundance: Common; population densities range from 2 or 3 per hectare to 70 or more in good habitat and under favorable conditions. Based on what is known of zebra-tailed lizard reproduction, population stability and collecting information, the population in Clark County is estimated to be in excess of 1,700,000.

Reproduction: Usually during the later part of the first season under normal conditions. One to five clutches of 2 to 8 eggs are laid each season, during favorable weather conditions. It is normal for general biological activity to be restricted in times of drought; breeding may not occur every year.

Population Stability: Good; this lizard is diurnal, spending much of its time on the surface of the desert and is quite visible during its period of activity, on flat ground with sparse vegetation, in washes and in relatively clear areas of the foothills. This lizard adapts well to disturbed areas and is commonly found within the developed limits of cities in Clark County. A large percentage of the land that has been and will be developed in the County is zebra-tailed lizard habitat. The impact of the amount of land being developed represents less than 4% and is not significant when the percent of habitat loss, the lizards' extensive range in Nevada and surrounding states, reproductive potential, adaptability to development and habitat requirements in the County are considered.

Collection Information: 2,396 zebra-tailed lizards have been collected on 273 different sections in Clark County from 1986 through 1998. There have been 1 to 10 zebra-tailed lizards collected on 209 of the 273 sections. An average of 5.85 collectors per year catch zebra-tailed lizards; 32 *different* collectors over the 13 year period. A section is considered to have been collected after only one animal has been removed. The 273 square miles collected represents 6.03% of the estimated zebra-tailed lizard habitat in Clark County.

TABLE 2-4
LEVEL OF CONSERVATION MANAGEMENT IN EACH HABITAT
(percent)

Ecosystem	Acres	IMA	LIMA	MUMA	UMA	Total
Alpine	500	100	0	0	0	100
Bristlecone pine	15,800	91.1	2.5	0	6.3	100
Mixed conifer	56,400	81.7	15.6	0	2.6	100
Pinyon-juniper	277,800	62.5	29.3	6.7	1.5	100
Sagebrush	134,600	58.0	29.1	12.1	<1.0	100
Blackbrush	824,700	51.5	13.5	33.9	1.0	100
Salt desert scrub	190,700	58.8	9.9	20.7	10.3	100
Mojave desert scrub	3,273,100	54.0	3.2	33.9	8.7	100
Mesquite/catclaw	21,700	39.6	0	36.8	22.5	100
Desert riparian	16,900	30.7	0	33.7	35.5	100
Springs	506	49.0	15.0	20.5	15.4	100

TABLE 2-8
ACRES OF ECOSYSTEM, EXISTING LAND USES,
AND EXISTING HABITAT IN CLARK COUNTY

Ecosystem	Clark County Total	UMA Total	Existing Urban	Existing Agriculture	Habitat in Clark County	Habitat in UMA	Percent of Habitat in UMA
Alpine	500	–	–	–	500	–	0
Bristlecone pine	15,800	1,000	–	–	15,800	1,000	6.3
Mixed conifer	56,400	1,500	–	–	56,400	1,500	2.6
Pinyon-juniper	281,700	4,200	–	–	277,800	4,200	1.5
Sagebrush	139,000	900	–	–	134,600	900	1.0
Blackbrush	831,500	8,800	–	–	824,700	8,700	<1.0
Salt desert scrub	208,600	22,400	1,000	–	190,700	19,800	10.3
Mojave desert scrub	3,466,500	455,100	169,900	–	3,273,100	285,000	8.7
Mesquite/catclaw	34,500	15,900	400	10,500	21,700	5,000	23.0
Desert aquatic	21,600	10,000	300	3,700	16,900	6,000	35.5
Other		1,800					0
Ecosystem Totals	5,056,100	521,500	171,600	14,200	4,812,200	332,100	6.9

TABLE 3-1
COVERED SPECIES CONSERVATION EVALUATIONS

Species	Conserved (IMAs, LIMAs)	Potential Indirect Impacts (MUMAs)	Potential Direct Impacts (UMAs)[1]	Management	Rationale for Coverage	Measurable Biological Goals
Desert tortoise *Gopherus agassizii* **Federal Threatened**	56% of potential habitat	33% of potential habitat	11% of potential habitat	BLM RMP NPS GMP USFWS (DNWR)	Mojave desert endemic. 90% of potential habitat in Clark Co in IMAs, LIMAs (>2 million ac), or MUMAs (>1.4 million ac).	• Implementation of the DCP goals in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Banded gecko *Coleonyx variegatus*	56% of potential habitat; 37% of cited locations	33% of potential habitat; 53% of cited locations	11% of potential habitat; 11% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 90% of potential habitat in Clark Co (>3.6 million ac) and cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Desert iguana *Dipsosaurus dorsalis*	55% of potential habitat; 28% of cited locations	32% of potential habitat; 44% of cited locations	13% of potential habitat; 28% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 87% of potential habitat in Clark Co (>3 million ac) in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Western chuckwalla *Sauromalus obesus*	57% of potential habitat; 23% of cited locations	33% of potential habitat; 69% of cited locations	11% of potential habitat; 9% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 89% of potential habitat in Clark Co (>2 million acres) and 91% of cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Western red-tailed skink *Eumeces gilberti rubricaudatus*	92% of potential habitat	7% of potential habitat	1% of potential habitat	USFS SMNRA USFWS (DNWR) BLM Red Rock Cyn NCA BLM RMP	Eastern Mojave desert endemic. 92% of potential habitat in Clark Co (>250,000 ac) in IMAs & LIMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Large-spotted leopard lizard *Gambelia wislizenii wislizenii*	55% of potential habitat; 34% of cited locations	32% of potential habitat; 58% of cited locations	13% of potential habitat; 8% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Great Basin, southwestern desert endemic. 87% of potential habitat in Clark Co (>2.9 million acres) and 92% of cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers

TABLE 3-1
COVERED SPECIES CONSERVATION EVALUATIONS
(continued)

Species	Conserved (IMAs, LIMAs)	Potential Indirect Impacts (MUMAs)	Potential Direct Impacts (UMAs)[1]	Management	Rationale for Coverage	Measurable Biological Goals
Great Basin collared lizard *Crotaphytus insularis bicinctores*	60% of potential habitat; 30% of cited locations	30% of potential habitat; 59% of cited locations	10% of potential habitat; 11% of cited locations	BLM RMP NPS GMP USFS SMNRA BLM Red Rock Cyn NCA USFWS (DNWR)	Great Basin, southwestern desert endemic. 90% of potential habitat in Clark Co (>2.9 million acres) and cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
California (common) kingsnake *Lampropeltis getulus californiae*	55% of potential habitat; 38% of cited locations	32% of potential habitat; 57% of cited locations	13% of potential habitat; 5% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert and Pacific coast species. 87% of potential habitat in Clark Co (>2.9 million acres) and 95% of cited locations in IMAs, LIMAs, MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Glossy snake *Arizona elegans*	55% of potential habitat; 57% of cited locations	32% of potential habitat; 23% of cited locations	13% of potential habitat; 20% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 87% of potential habitat in Clark Co (>2.9 million acres) and cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Western long-nosed snake *Rhinocheilus lecontei lecontei*	55% of potential habitat; 20% of cited locations	32% of potential habitat; 68% of cited locations	13% of potential habitat; 11% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 87% of potential habitat in Clark Co (>2.9 million acres) and 89% of cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Western leaf-nosed snake *Phyllorhynchus decurtatus*	55% of potential habitat	32% of potential habitat	13% of potential habitat	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 87% of potential habitat in Clark Co (>2.9 million acres) in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Sonoran lyre snake *Trimorphodon biscutatus lambda*	60% of potential habitat	30% of potential habitat	10% of potential habitat	BLM RMP NPS GMP USFS SMNRA BLM Red Rock Cyn NCA USFWS (DNWR)	Sonora and east Mojave desert species. 90% of potential habitat in Clark Co (>4.2 million acres) in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers

TABLE 3-1
COVERED SPECIES CONSERVATION EVALUATIONS
(continued)

Species	Conserved (IMAs, LIMAs)	Potential Indirect Impacts (MUMAs)	Potential Direct Impacts (UMAs)[1]	Management	Rationale for Coverage	Measurable Biological Goals
Sidewinder *Crotalus cerastes*	55% of potential habitat; 34% of cited locations	32% of potential habitat; 46% of cited locations	13% of potential habitat; 20% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Mojave desert endemic. 87% of potential habitat in Clark Co (>2.9 million acres) in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Speckled rattlesnake *Crotalus mitchelli*	59% of potential habitat; 25% of cited locations	31% of potential habitat; 75% of cited locations	10% of potential habitat	BLM RMP NPS GMP USFWS (DNWR) USFS SMNRA BLM Red Rock Cyn NCA	Southwestern desert endemic. 90% of potential habitat in Clark Co (>4.2 million acres) and all cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Mojave green rattlesnake *Crotalus scutulatus scutulatus*	56% of potential habitat; 64% of cited locations	33% of potential habitat; 21% of cited locations	11% of potential habitat; 14% of cited locations	BLM RMP NPS GMP USFWS (DNWR)	Southwestern desert endemic. 89% of potential habitat in Clark Co (>4.2 million acres) and 86% of cited locations in IMAs, LIMAs, or MUMAs.	• No net unmitigated loss or fragmentation of habitat in IMAs, LIMAs, & MUMAs • Maintain stable or increasing population numbers
Relict leopard frog *Rana onca*	Both extant populations; 76% of cited locations	19% of cited locations	5% of cited locations	NPS GMP	Clark County/northwestern Arizona endemic. Both extant populations in Clark County managed by NPS.	• Increase the number of springs with populations through reintroduction in appropriate locations • Maintain stable or increasing populations at extant springs • Develop and implement relict leopard frog management plan

[1]In all cases, projected potential impacts represent the "worst case" analysis.

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ATTACHMENT B

Final
Clark County Multiple Species Habitat Conservation Plan
and
Environmental Impact Statement
for
Issuance of a Permit to Allow Incidental Take of
79 Species in Clark County, Nevada
September 2000

Clark County, Nevada, has prepared a proposed Multiple Species Habitat Conservation Plan (MSHCP) to conserve a wide variety of species and their habitats throughout the county. The MSHCP has been prepared pursuant to Section 10(a) of the Endangered Species Act of 1973, as amended (Act). The MSHCP identifies those actions necessary to maintain the viability of natural habitats in the county for approximately 232 species residing in those habitats, including 4 species listed as endangered (southwestern willow flycatcher, *Empidonax traillii extimus*; Moapa dace, *Moapa coriacea*; woundfin, *Plagopterus argentissimus*; Virgin River chub, *Gila seminuda*), 1 threatened species (Mojave desert tortoise, *Gopherus agassizii*), and 1 candidate species (blue diamond cholla, *Opuntia whipplei* var. *multigeniculata*). While the MSHCP addresses all 232 species, it proposes that 79 of these species be covered by a Section 10(a) Permit for those species which are currently listed and Prelisting Agreements for those species which are not listed (Covered Species). All Covered Species are treated in this plan as though they were listed and are subject to the standards set forth in Section 10(a)(1)(B) of the Act and 50 CFR 17.32(b) and 17.22(b). By addressing the habitat needs of the Covered Species, the MSHCP benefits many of the other species that utilize the same habitats. In addition, the MSHCP establishes a process that may be utilized to assure the maintenance of the viability of the natural habitats of the remaining approximately 153 species described in the MSHCP.

If the MSHCP is approved by the U.S. Fish and Wildlife Service, the USFWS would authorize incidental take of the listed species covered by the plan through the issuance of a Section 10(a)(1)(B) permit. In addition, the MSHCP would also be the basis for an incidental take permit and implementation agreement for additional species if these species become listed.

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APPENDIXES

FIGURES

Chapter 1
Purpose and Need for Action

1.1 Introduction

Clark County; the Cities of Las Vegas, North Las Vegas, Boulder City, Mesquite, and Henderson; and the Nevada Department of Transportation (Applicants) have prepared a Multiple Species Habitat Conservation Plan (MSHCP) and Environmental Impact Statement (EIS) for Clark County, Nevada. The MSHCP/EIS was prepared in cooperation with the Clark County Implementation and Monitoring Committee (I & M Committee), the United States Fish and Wildlife Service (USFWS), the Nevada Division of Wildlife (NDOW), the United States Bureau of Land Management (BLM), the United States National Park Service (NPS), the United States Forest Service (USFS), the U.S. Geological Survey Biological Resources Division (BRD), the United States Environmental Protection Agency (EPA), the University of Nevada, Las Vegas (UNLV), the University of Nevada, Reno (UNR), the Biological Resources Research Center at UNR (BRRC), the Nevada Natural Heritage Program (NNHP), the Nevada Division of Forestry (NDF), the Southern Nevada Water Authority (SNWA), and Utah State University (USU) (collectively, the Participants). The Draft MSHCP/EIS was prepared in accordance with the provisions of the Federal Endangered Species Act (ESA), the National Environmental Policy Act (NEPA).

The Applicants were responsible for preparation of the MSHCP while the USFWS has acted as lead agency responsible for managing the preparation of the EIS.

The MSHCP is intended under Section 10(a) of ESA to support the issuance, by the USFWS, of a permit or permits (Section 10(a) Permit) which would:

- Allow the "take" of threatened or endangered species resulting from otherwise lawful activities on non-Federal properties within the county; and

- Allow the "take" of threatened or endangered species that are currently unlisted but may become listed in the future.

Chapter 2

Multiple Species Habitat Conservation Plan

2.1 Executive Summary of the Multiple Species Habitat Conservation Plan

2.1.1 Introduction

Clark County; the Cities of Las Vegas, North Las Vegas, Boulder City, Mesquite, and Henderson; and the Nevada Department of Transportation (Applicants) have prepared a Multiple Species Habitat Conservation Plan (MSHCP) and Environmental Impact Statement (EIS) for Clark County, Nevada. The MSHCP/EIS was prepared in cooperation with the Clark County Implementation and Monitoring Committee (I & M Committee), the United States Fish and Wildlife Service (USFWS), the Nevada Division of Wildlife (NDOW), the United States Bureau of Land Management (BLM), the United States National Park Service (NPS), the United States Forest Service (USFS), the U.S. Geological Survey Biological Resources Division (BRD), the United States Environmental Protection Agency (EPA), the University of Nevada, Las Vegas (UNLV), the University of Nevada, Reno (UNR), the Biological Resources Research Center at UNR (BRRC), the Nevada Natural Heritage Program (NNHP), the Nevada Division of Forestry (NDF), the Southern Nevada Water Authority (SNWA), and Utah State University (USU) (collectively, the Participants).

The MSHCP is intended under Section 10(a) of the Endangered Species Act to support the issuance, by the USFWS, of a permit or permits (Section 10(a) Permit) which would:

- Allow the "take" of threatened or endangered species resulting from otherwise lawful activities on non-Federal properties within the county; and

- Allow the "take" of threatened or endangered species that are currently unlisted but may become listed in the future.

The MSHCP is an extension of the effort begun with the Clark County Desert Conservation Plan (DCP), which was prepared in response to the Federal listing of the desert tortoise as a threatened species. Whereas the DCP focused primarily on the conservation of the desert tortoise, the intent and purpose of the MSHCP is to establish a means to address the conservation needs of the entire range of biological resources within Clark County. The provisions of the DCP have been integrated into the MSHCP, and if approved by the USFWS, the MSHCP will supersede the provisions of the DCP.

The key purpose of the MSHCP is to achieve a balance between:

- Long-term conservation and recovery of the diversity of natural habitats and native species of plants and animals that make up an important part of the natural heritage of Clark County; and

- The orderly and beneficial use of land in order to promote the economy, health, well-being, and custom and culture of the growing population of Clark County.

Implementation of the conservation measures in the MSHCP is anticipated to be a cooperative effort among the Applicants and many of the Participants, including but not limited to the USFWS, BLM, USFS, NPS, NDOW, NDF, and other Federal and state land managers and regulators.

This document is being prepared as Phase 1 of a Multiple Species Habitat Conservation Plan in support of an application for a Section 10(a) Permit pursuant to the provisions of Section 10(a) of the Endangered Species Act (ESA). It is anticipated that additional phases of the MSHCP will follow after additional data collection and conservation information has been accumulated sufficient to move species from the category of Evaluation Species to the category of Covered Species as those terms are defined hereinafter. It will also serve as an Environmental Impact Statement as part of the public process followed by the U.S. Fish and Wildlife Service in making their determination regarding whether to issue permit(s) as required by the National Environmental Policy Act.

2.1.2 Regulatory Framework

In preparing this MSHCP, legal requirements that directly or indirectly apply have been taken into account. These include the Endangered Species Act (particularly Section 10), the National Environmental Policy Act (NEPA), Federal Land Policy and Management Act (FLPMA), National Forest Management Act, Nevada Revised Statutes, and local plans and ordinances.

On August 5, 1995, the DCP was approved and the Section 10(a) Permit was issued (PRT 801045). The DCP and its implementing agreements are incorporated into this document by reference and the documents are intended to be complementary to each other. However, in the event of a direct conflict between the terms of the DCP and the MSHCP, the terms of the MSHCP shall prevail.

2.1.3 MSHCP Plan Area

The MSHCP plan area includes all of Clark County. In addition, specifically for the desert tortoise, the MSHCP plan area also includes Nevada Department of Transportation (NDOT) rights-of-way (including material sites) below 5,000 feet in elevation, south of the 38th parallel in Nye, Lincoln, Mineral, and Esmeralda Counties.

Land uses in Clark County have been dictated largely by patterns of land ownership and management and four decades of rapid population growth. Key issues to be addressed in this conservation plan include existing uses and activities on lands managed by public agencies as well as proposed land uses within Clark County.

About 89.0 percent of the land in Clark County is owned by the U.S. and managed by seven Federal agencies, five of which are agencies within the Department of the Interior. The seven agencies are BLM, NPS, USFWS, U.S. Air Force (USAF), USFS, Bureau of Indian Affairs, and Federal Aviation Administration.

Lands held by the State of Nevada, local government, and private parties comprise 10.9 percent of the county's area, or about 553,600 acres. Major state holdings include Valley of Fire, Floyd Lamb, and Spring Mountain Ranch State Parks. Local government holdings consist primarily of parks, office complexes, and storage and maintenance facilities. Sixty percent of all state, local government, and private holdings are located in Las Vegas Valley.

Existing and proposed land uses of primary concern with respect to the species addressed by this MSHCP and their habitats include agriculture, flood control, livestock grazing, mineral extraction, off-highway vehicle activities, parks and recreation, residential and commercial development, solid waste facilities, transportation, utilities, and water and sewage facilities. These activities will be covered by the terms and conditions of the MSHCP on non-Federal lands within Clark County. While changes in these land uses will be the result of the growth of the population in the Las Vegas Valley and rural communities, with the exception of residential, industrial, and commercial land development, these activities will occur on both non-Federal and Federal lands.

The MSHCP will provide coverage under Section 10(a) for Covered Species on non-Federal lands. Although the MSHCP will not provide for incidental take on Federal lands

ultimate outcome, habitat perpetuation, species conservation and recovery, and addition of new species as Covered Species.

2.1.8.2 Clark County Measures to Minimize and Mitigate the Impacts of Take

The mitigation and conservation measures discussed in this section include the continuation and augmentation of many measures proposed and implemented during the DCP for the desert tortoise, many of which, subject to future decisions made pursuant to the AMP, may be funded during the entire 30-year term of the proposed permit. However, because the DCP and the MSHCP have been integrated into one plan, the mitigation measures proposed in this MSHCP are intended to supersede and replace those set forth in the DCP. The mitigation measures that will be implemented, subject to future modifications, during the term of the MSHCP include the following.

- Imposition of $550-per-acre development fee and implementation of an endowment fund
- Funding of conservation measures
- Administration of the MSHCP
- Public information and education program
- Purchase of grazing allotments and interest in real property and water
- Maintenance and management of allotments, land, and water rights which have been acquired
- Construction, monitoring, and maintenance of barriers along linear features
- Translocation of desert tortoises
- Participation in and funding of local rehabilitation and enhancement programs (Muddy River Regional Environmental Impact Alleviation Committee, Las Vegas Wash Wetlands Park, rural roads, and development and implementation of an Adaptive Management Process)
- Develop and administer the AMP

2.1.8.3 Federal and State Land Managers

In addition to the agreement to participate in the Adaptive Management Process, Federal and state land managers will implement a total of approximately 650 specific conservation measures. The conservation measures include:

- Public information and involvement
- Research
- Inventory
- Monitoring
- Protective measures
- Restoration and enhancement measures
- Land use policies and actions

These incorporate agreements such as the Spring Mountains National Recreation Area Conservation Agreement, the Blue Diamond Cholla Conservation Agreement, the Las Vegas Bearpoppy Memorandum of Agreement, and existing general management plans and land use plans and the recently approved BLM Las Vegas Resource Management Plan. The Federal and state land and resource managers include:

- U.S. Forest Service
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- National Park Service
- Nevada Division of Wildlife
- Nevada Department of Transportation
- Nevada Division of State Parks
- Nevada Division of Forestry

2.1.9 Financial Assurances for the MSHCP

2.1.9.1 Funding the MSHCP through Continuation of Development Fees

The MSHCP proposes to minimize and mitigate the impacts of take of Covered Species on non-Federal lands in Clark County through expenditures of funds raised through imposition of its development fee of $550/acre on all lands in Clark County as they are developed that require a permit from the County and Cities (which imposition will be made by the adoption of County and City ordinances in substantially the same form as set forth in Chapter 28.46 of the Clark County Code, but which will be modified to cover all lands within the County and the Cities) to assist in the implementation of conservation

In addition, NDOT has the responsibility for maintaining approximately 1,000 miles of highway through desert tortoise and other habitats and for necessary improvements to these existing roads to meet the demands of increased traffic volumes in a manner consistent with public safety standards.

The proposed development of a cargo handling airport facility in the Ivanpah Valley is currently under consideration, as is a general aviation airport in Mesquite.

Transportation facilities occur on both non-Federal and Federal lands in Clark County. Most major highways cross Federal lands and involve Federal highway funds.

k. Utilities

Numerous major utility rights-of-way transect Clark County from north to south. None of these rights-of-way are within a designated corridor. However, the Las Vegas RMP designates several utility corridors for rights-of-way on public lands managed by BLM. BLM encourages future utility rights-of-way on public land to be located within those corridors whenever feasible.

l. Water and Sewage

Water supplies in Clark County include the Virgin, Muddy, and Colorado Rivers, groundwater, and wastewater reuse. Water from the Colorado River is highly regulated, and the net depletion of the mainstream for all of Nevada is limited to 300,000 acre-feet per year, unless a surplus is declared by the Secretary of the Interior, in which case Nevada would be able to consumptively use more than 300,000 acre-feet per year. The Las Vegas Valley relies on water resources available to the Southern Nevada Water Authority and groundwater from wells. Current forecasts indicate that the Southern Nevada Water Authority can meet projected demands with its existing resources through the year 2030. Sewage and wastewater treatment needs are currently handled at facilities managed by the County and individual cities. Currently, three of the wastewater treatment plants in the Las Vegas Valley are being expanded. Clark County also is planning a central activated sludge treatment plant to process sewage from the unincorporated area.

2.3.3 Growth Trends and Forecasts

During the past decade, Clark County's population has increased from 654,765 to 1,170,113 (1987-97 estimates). By 2000, it is expected to grow to 1,361,424; and by 2007 to 1,701,756. The latter projected population growth rate predicts more than a tripling of the population in 40 years (Clark County Department of Comprehensive Planning 1997).

During the 1980s, county-wide employment increased by about 60 percent, rising from a total of 216,700 jobs in 1980 to about 378,000 in 1990 (*Las Vegas Review-Journal* et al.

2.4.1.1 Non-Federal Lands

The area covered by the Section 10(a) Permit will include the non-Federal lands in Clark County (553,600 acres) and, additionally for the desert tortoise, those NDOT rights-of-way described above. In general, this area includes non-Federal lands within the cities of Las Vegas, North Las Vegas, Henderson, Mesquite, and Boulder City; the unincorporated towns of Sunrise Manor, Enterprise, Whitney, Winchester, Paradise, Laughlin, Moapa Valley, Moapa, Glendale, Indian Springs, Bunkerville, Mount Charleston, Searchlight, and Spring Valley; and portions of the unincorporated areas of Lone Mountain, Goodsprings, Mountain Springs, Jean, Primm, Cactus Springs, Red Rock, Sandy Valley, Apex, Coyote Springs Investment Corporation, and portions of the Pahrump Valley.

2.4.1.2 Federal Disposal Lands

In addition to the non-Federal lands identified above, the alternatives set forth in the Final Las Vegas RMP provide that the BLM may sell or otherwise transfer up to 540,200 acres of lands currently managed by it. For purposes of this plan, we are assuming that approximately 175,000 acres will be sold or otherwise transferred over the next 30 years (Clark County Comprehensive Planning estimate).

The permit sought hereunder is intended to apply to all such Federal lands sold or otherwise transferred during the term of the permit with the exception of lands sold or transferred within established IMAs and LIMAs.

2.4.1.3 Lands Subject to Development

Of the approximate 728,600 acres within the permit area potentially subject to future development, approximately 200,000 acres contain existing urban development (Planning Information Corporation 1990, updated to 1997 based on annual land disturbance reports under the DCP). Furthermore, approximately 86,600 acres of the 107,500-acre lands transferred to Boulder City under the terms of the Eldorado Valley Transfer Area are subject to a conservation easement that will restrict activities on the land to those which are not detrimental to the survival and recovery of the desert tortoise and other species sharing that habitat, and 14,100 acres are in the Overton Wildlife Management Area and state parks under conservation management. Thus, the total number of acres of Federal and non-Federal lands within the permit area that potentially are available for future development is approximately 418,200 (Table 2-1).

TABLE 2-4
LEVEL OF CONSERVATION MANAGEMENT IN EACH HABITAT
(acres or number* of springs)

Ecosystem	Total	IMA	LIMA	MUMA	UMA
Alpine	500	500	0	0	0
Bristlecone pine	15,800	14,400	400	0	1,000
Mixed conifer	56,400	46,100	8,800	0	1,500
Pinyon-juniper	278,200	173,800	81,500	18,700	4,200
Sagebrush	134,600	78,200	39,200	16,300	900
Blackbrush	824,800	425,000	111,500	279,600	8,700
Salt desert scrub	190,700	112,300	19,000	39,600	19,800
Mojave desert scrub	3,273,000	1,770,600	105,600	1,111,800	285,000
Mesquite/catclaw	21,700	8,700	0	8,000	5,000
Desert riparian	16,900	5,200	0	5,700	6,000
Springs*	506	248	76	104	78
Total Acres	4,812,600	2,634,800	366,000	1,479,700	332,100

From the landscape perspective, there are three primary interconnected blocks of IMA/LIMA managed lands within the plan area: the Spring Mountains, Sheep Mountains/Nellis/DNWR, and Virgin Mountains/Colorado River/McCullough Range.

The smallest block is centered on the Spring Mountains and Red Rock Canyon areas. This block is bounded on the north, west, and south by MUMA lands (BLM undesignated lands) and on the east by the urbanized Las Vegas Valley. The Spring Mountains areas have the greatest number of species, the highest biodiversity, highest density of species, and the highest level of current conservation management. This area has most of the properties of a good reserve: relatively rounded, high habitat diversity, best example of remaining habitat, habitat for unique species and assemblages, existing management for biological resources, and relatively unfragmented.

The Sheep Mountains/Nellis/DNWR block is the largest and least fragmented portion of the plan area and is virtually all within IMA management as the DNWR and U.S. Air Force lands managed by the USFWS. This block is connected to Department of Defense and Department of Energy lands in adjacent Nye and Lincoln Counties, on the north and west, and by the Las Vegas Valley on the south and MUMA lands (BLM undesignated lands) on the east. This area also has most of the properties of a good reserve.

The Virgin Mountains/Colorado River/McCullough Range is linearly distributed approximately along the Colorado River. The area includes the mid to high elevation ecosystems in the Virgin Mountains to the north, Mojave desert and associated aquatic habitats along the Colorado River watershed, and McCullough Range and associated Mojave desert habitats to the southwest, and the Las Vegas Valley to the west. While the area has many of the properties of a good reserve, it is relatively linear and is somewhat fragmented by urban development and Lake Mead and Lake Mohave. The area provides an interconnected reserve area with geographic and ecosystem diversity.

The MSHCP proposes to cover incidental take on 145,000 acres of habitat in Clark County, including 130,000 acres subject to fee collection and approximately 15,000 acres of land disturbance not subject to fee collection. The projected level of land disturbance subject to the collection of fees is based on population growth and needs of supporting infrastructural development over the term of the permit.

It is anticipated that approximately 15,000 acres of land disturbance exempt from fee collection will occur during the term of the permit. This includes (1) areas to be developed by the County and Cities as parks (5,700, to 7,000 acres; Southern Nevada Strategic Planning Authority Needs Assessment, 1998 Report) and roads (approximately 5,700 acres through the year 2030; Regional Transportation Commission 1998); and (2) areas disturbed by mining and agriculture on private lands. Local government projects were exempted because these agencies prefunded the development and implementation of the DCP. No new agricultural development is expected to occur during the period; however, additional agricultural development will not be precluded by this plan. There is little or no mining for precious metals on private lands in Clark County and no projected new gypsum or limestone mining. Previous resource development in Clark County has nearly exhausted the supply of aggregate materials, including sand and gravel, and these materials are now being imported from outside the County (Nevada Division of Minerals, pers. com.). The County shall provide an estimate of the number of acres of land disturbance per biennium resulting from activities not requiring payment of the development fee.

Private and non-Federal lands (UMAs) potentially subject to land disturbance under the proposed permit are primarily located in Mojave desert scrub (285,000 acres), salt desert scrub (19,800 acres), and blackbrush (8,700 acres) ecosystems, although the ecosystems with the greatest proportion potentially subject to land disturbance are desert aquatic (35.5 percent) and mesquite/catclaw (23.0 percent), as presented in Table 2-8.

TABLE 2-8
ACRES OF ECOSYSTEM, EXISTING LAND USES, AND EXISTING HABITAT IN CLARK COUNTY

Ecosystem	Habitat in Clark County	Habitat in UMA	Percent of Habitat in UMA*
Alpine	500	0	0
Bristlecone pine	15,800	1,000	6.3
Mixed conifer	56,400	1,500	2.7
Pinyon-juniper	278,200	4,200	1.5
Sagebrush	134,600	900	0.70
Blackbrush	824,800	8,700	1.1
Salt desert scrub	190,700	19,800	10.4
Mojave desert scrub	3,273,000	285,000	8.7
Mesquite/catclaw	21,700	5,000	23.0
Desert aquatic	16,900	6,000	35.5
Urban, agriculture, non-habitat	243,500	189,400	77.8
Clark County Totals	5,056,100	521,500	6.9

*Primarily non-Federal lands on which incidental take may occur.

Almost all of the past urban land disturbance in Clark County occurred in Mojave desert scrub, with small amounts in salt desert scrub, mesquite/catclaw, and desert aquatic ecosystems. Agricultural activities primarily affected the mesquite/catclaw and desert riparian ecosystems.

Direct and indirect effects from multiple use activities may occur within Federal and state lands managed for uses other than conservation of biological resources. These areas are classified as MUMAs in this plan. The maximum proportion of the county potentially subject to direct or indirect effects of land use and land disturbance activities (in areas classified as MUMA and UMA) varies from none for the alpine ecosystem to 69.2 percent for desert aquatic (Table 2-9).

TABLE 2-9
LANDS POTENTIALLY SUBJECT TO DIRECT AND INDIRECT EFFECTS (acres)

Ecosystem	Clark County Total	Remaining Habitat in UMA	Remaining Habitat in MUMA	Total UMA + MUMA	Total UMA + MUMA (%)
Alpine	500	0	0	0	0
Bristlecone pine	15,800	1,000	0	1,000	6.3
Mixed conifer	56,400	1,500	0	1,500	2.7
Pinyon-juniper	278,200	4,200	18,700	22,900	8.2
Sagebrush	134,600	900	16,300	17,200	12.8
Blackbrush	824,800	8,700	279,600	288,300	35.0
Salt desert scrub	190,700	19,800	39,600	59,400	31.1
Mojave desert scrub	3,273,000	285,000	1,111,800	1,396,800	42.7
Mesquite/catclaw	21,700	5,000	8,000	13,000	59.9
Desert aquatic	16,900	6,000	5,700	11,700	69.2
Ecosystem Totals	4,812,600	332,100	1,479,700	1,811,800	37.6

The actual, versus the potential, amount of each habitat type that will be affected by indirect effects will be substantially lessened as a result of the conservation measures outlined in this MSHCP.

2.7.3 Incidental Take Associated with Loss of Habitat on Non-Federal Land

Incidental take of Covered Species on non-Federal lands within all ecosystems would be authorized pursuant to the terms of this plan and the 10(a) Permit. Notwithstanding the fact that Table 2-5 indicates that the known populations of many of the Covered Species are located exclusively on Federal lands, if populations are later identified on non-Federal lands within these ecosystems, incidental take of these species would be authorized by this permit. The analysis of the Covered Species included in this plan suggests to the applicant that the conservation measures on Federal lands provide adequate coverage and the incidental take of Covered Species on non-Federal lands will not appreciably reduce the likelihood of the survival and recovery of those species in the wild.

In addition, Clark County shall also make funds available to acquire or facilitate acquisition of conservation easements or other interest in real property or water by purchase, exchange, or donation to meet conservation goals and objectives, including, without limitation, acquisition necessary or appropriate for riparian birds as well as implementation of the Upper Muddy River Site Conservation Plan attached as Appendix E and completion and implementation of the Virgin River Site Conservation Plan.

2.8.3.6 Maintenance and Management of Allotments, Land, and Water Rights Which Have Been Acquired

As part of the program instituted by the DCP, Clark County, in cooperation with The Nature Conservancy and The Conservation Fund, has and will continue to acquire allotments and interests in real property and water rights on a willing-seller/willing-buyer basis. In order to assure viability of habitats and species located upon those lands and waters, Clark County will continue to fund actions to maintain and defend its rights to the allotments and to assure that those allotments continue to be accorded non-use status by the BLM. In addition, the County will work with the City of Boulder City to ensure the enforcement of the terms of the conservation easement and will provide funds to maintain, operate, and manage lands and water rights which it has or will acquire to conserve and protect habitats and species located thereon.

2.8.3.7 Construction, Monitoring, and Maintenance of Barriers along Linear Features

As part of the initial goals of the long-term DCP, Clark County has placed a high priority on the installation of barriers to protect the desert tortoise and other wildlife. In 1995, Clark Country entered into a contract with Enviroplus Consulting to determine effective and economically feasible road barriers to decrease tortoise mortality along roadways. Enviroplus completed the latter study and it was determined that one-inch-by-two-inch galvanized steel mesh was the most feasible material to use for the purpose of constructing tortoise barriers along roadways. In April 1996 Clark County entered into a contract with the Nevada Division of Forestry and Nevada Department of Transportation to conduct the field testing phase of the road barrier study. The I & M Committee decided to use the translocation site as the fencing field testing site, as the translocation site needed to be fenced. Using this site would accomplish both the Phase I field testing and translocation site fencing goals. While the Interstate 15 retrofitting and southern boundary fence construction were being completed, it was found that the prison-based honor camps were less efficient in the installation of new versus retrofitted fencing materials. Therefore, the County contracted with an Idaho-based licensed fence contractor to complete the second phase of barrier construction on the northern border of the translocation area, which was completed in 1998. Based on that experience and the Road Barrier Prioritization Study completed by UNR, the I & M Fencing Subcommittee

and Clark County decided to rely upon the use of prison-based honor camp labor for all future retrofitting projects and professional fence installers for all new fence installation as described below.

The DCP Road Barrier Construction Program initiated in 1999 is comprised of three phases including (a) the Phase One retrofitting of existing highway right-of-way fence with tortoise fencing material on U.S. 95 from approximately the California-Nevada border north to a point several miles south of State Route 165 where the highway fence ends; (b) the Phase Two construction of new tortoise fencing on relatively flat terrain along U.S. 95 north and south of State Route 165, along State Route 165, and along State Route 164; and (c) the Phase Three construction of new tortoise fencing along U.S. 95 in relatively steep and rocky terrain.

NDOT will continue to monitor tortoise fencing along NDOT rights-of-way at specific sites designated as field testing areas for the tortoise barrier program, budget permitting. This is in addition to any biennial funding for tortoise fencing. NDOT will assist in the construction, maintenance, and monitoring of barriers along federal and state roadways, within budgetary and personnel constraints, and retains the right to request additional funding from the MSHCP during the biennial budget review process. It will be the responsibility of Clark County to monitor such barriers and report maintenance needs to NDOT's District 1 office. Since the location of fencing (which barriers attach to) weaves on and off roadway rights-of-ways and no detailed inventory of fencing locations exists, it will be at the discretion of NDOT maintenance personnel to determine what barriers NDOT will assist with. Nevertheless, Clark County is ultimately responsible for all required MSHCP mitigation barriers installed along roadways in Clark County. Clark County will not be responsible for non-MSHCP barriers installed along roadways, such as the proposed barriers along State Route 163, as this was a requirement of a biological opinion issued to the Federal Highway Administration. Existing roadway fencing that is retrofitted will require the applicant to receive a temporary permit for access from NDOT's District 1 office if access will occur from the highway side. However, all new fencing located on NDOT rights-of-way will require an encroachment permit. NDOT encroachment permit conditions will be consistent with the responsibilities mentioned above.

2.8.3.8 Translocation of Desert Tortoises

In February of 1996, Clark County contracted with BRD and UNR to develop and implement an experimental desert tortoise translocation program. The five- to six-year program was to examine the feasibility of large-scale translocations into different habitats and the release conditions that maximized success and the long-term efficacy of translocation. The first programmatic group of tortoises was released on April 23, 1997. The translocation program has proceeded much more quickly and efficiently than was anticipated. The 1,200 tortoises being held at the Desert Tortoise Conservation Center

were translocated during the first year of the program, and by November 1, 1998 over 1,500 tortoises had been translocated into the Large-scale Translocation Study Site adjacent to Interstate 15, south of Jean, Nevada.

The translocation program has been controversial and expensive. The controversy has resulted from an overwhelming public sentiment opposed to euthanasia of displaced and surplus tortoises and a lack of options for disposition of those tortoises. The expense has resulted from the necessity of properly and humanely housing these tortoises and the cost of conducting credible research into translocation. Many experts throughout the country voiced the opinion that large-scale translocations would be unsuccessful. Many biologists and conservation experts pointed out that lack of evaluation through credible research made translocation an experimental option for disposition of displaced tortoises and a conservation benefit only if scientifically validated. The USFWS allowed the programmatic translocation of tortoises by Clark County only as part of a credible scientific study.

Preliminary results indicate that more than 80 percent of the translocated tortoises are surviving. This figure is much higher than was anticipated and certainly reflects the good environmental conditions during the fall of 1997 and throughout the spring and summer of 1998. It is anticipated that translocations during dry years and when less forage is available will result in lower survivorship. Nonetheless, these preliminary results are encouraging and refute the pessimistic predictions of many of the critics of translocation. The efficiency of the translocation program in moving a much larger number of tortoises in the first year has saved Clark County the cost of housing and maintaining these tortoises. The translocation study has resulted in a number of recommendations that will be presented to the USFWS that should streamline the handling of tortoises that, if adopted, would result in further savings. Finally, successful completion of the first phase of the translocation study should result in additional cost savings to Clark County. While a final conclusion is still premature, the Clark County Translocation Program seems to be a resounding success and will significantly expand knowledge of tortoise translocation, handling, housing, and maintenance.

2.8.3.9 Participation in and Funding of Local Rehabilitation and Enhancement Programs

The I & M Committee believes that local initiatives to rehabilitate and enhance habitats sponsored by local communities, in many cases present an opportunity for both the local community and the MSHCP to leverage their respective funds and to more actively involve the local communities in conservation goals and objectives supported by the MSHCP.

a. Muddy River Regional Environmental Impact Alleviation Committee

At the present time, the Muddy River Regional Environmental Impact Alleviation Committee (MRREIAC) has instituted an active program to enhance the Muddy River ecosystem through tamarisk abatement and restoration of riparian habitat with native species with support from the communities of Moapa, Logandale, Glendale, and Overton. It has received funding from the U.S. Environmental Protection Agency, the USFWS, and the DCP to continue its work. So long as its conservation measures are determined to be effective, Clark County intends to continue to provide funding to assist MRREIAC.

b. Las Vegas Wash Wetlands Park

Utilizing 13.5 million dollars in bond set-aside funds, Clark County is currently initiating the construction of a desert riparian and desert wetland multiuse conservation and recreational area, which will provide enhancement and rehabilitation of both wetlands and animal and plant species disturbed by rapid development in the Las Vegas Valley. Since the mid-1970s, increased effluent discharges from the fast-growing Las Vegas Valley have caused extreme headcutting and channel erosion and have reduced the riparian and wetland areas at the Las Vegas Wash from over 2,000 acres in 1975 to less

than 200 acres today. Because desert riparian and desert wetland habitats are characterized by a greater volume of water and vegetation than the surrounding desert areas, they are disproportionately important to plant and animal species relative to the surrounding upland desert and, therefore, have a very high priority for habitat enhancement for the benefit of resident native and migratory animals and plants. The Las Vegas Wash comprises important desert wetland and riparian communities in the region and may be important to a wide variety of species. Clark County will specifically establish the Wetlands Park to mitigate the effects of development on a wide variety of plant and animal species through the construction of multiple erosion control structures, the development of both open water and riparian aquatic habitats, the conversion of strand communities to restored emergent wetlands, and the enhancement of wetlands and common reed communities. Through these enhancement and restoration efforts, the Clark County Parks and Recreation Department expects to create 600-800 acres of emergent and/or open water wetlands complemented by an additional 600 acres of riparian habitat in addition to the existing upland habitat. It is estimated that over 40 species of plants are likely to occur in the wash with over 45 species of mammals, 35 species of reptiles, and a wide variety of species of amphibians and fish, including species which may be found at the Las Vegas Wash and which appear on the initial list of species to be covered in Phase 1 of the plan. Species that may benefit from the development of the plan include American peregrine falcon, southwestern willow flycatcher, Las Vegas bearpoppy, phainopepla, spotted bat, banded Gila monster, chuckwalla, relict leopard frog, and rosy two-toned beardtongue.

The Las Vegas Wash Wetlands Park will provide an important opportunity for a wide array of county, state, and Federal agencies to work together to multiply the resources dedicated to mitigation under the auspices of the Clark County Multiple Species Habitat Conservation Plan. First, under the Clark County DCP, the Clark County Department of Parks and Recreation was granted $120,000 in matching funds for the 1999-2001 biennium in order to support that agency's initial conservation efforts to establish and refurbish riparian habitats in the Las Vegas Wash, which is the site for the wetlands park. Second, the recently formed Las Vegas Wash Coordination Committee has worked directly with DCP staff to identify initial multiple species conservation efforts that will eventually be carried out by the wide variety of agencies working to enhance the water quality and flora and fauna throughout the Las Vegas Wash area. These activities will be funded through collaborative efforts of the participating agencies including the Southern Nevada Water Authority, the Bureau of Reclamation, Clark County, the Cities of Henderson and Las Vegas, and the Nevada Division of Wildlife, among several others, as well as through various grant opportunities. Finally, the Southern Nevada Public Lands Management Act of 1998 will undoubtedly provide substantial funding for conservation measures to be carried out at the site of the wetlands park, and it is fully expected that funds made available through public land sales as outlined in the act will facilitate a collaborative multiagency approach to implementing conservation measures to benefit

either endemic or migratory species at the Las Vegas Wash Wetlands Park as outlined in the MSHCP and as part of the plan's iterative development over the next 30 years.

The park will also provide opportunities for attracting extramural funds for collaborative conservation and conservation education initiatives. Through the construction and development of the Las Vegas Wash Wetlands Park Nature Center under Clark County Parks and Recreation sponsorship, a variety of extramural conservation-related program proposals will be developed in collaboration with the MSHCP Public Information and Education Committee and the Clark County School District.

Two additional important benefits of the proposed Wetlands Park include the expected improvement of water quality to the Las Vegas Valley and surrounding states as well as recreational benefits associated with this limited multiuse park facility. First, the substantial restoration of wetlands will result in the intensification of water purification which will be accomplished through natural processes endemic to wetland communities. This will directly result in enhanced water quality in the wash itself as well as in Lake Mead, which receives water after it passes through the Las Vegas Wash and will thereby affect the quality of water consumed in the Las Vegas Valley as well as in surrounding states with water allotments drawn from Lake Mead. Second, the construction of this multiuse recreational facility will permit extensive on-site environmental and conservation educational programming including a planned interpretive campus as well as substantial recreational opportunities ranging from wildlife viewing to biking, hiking, and picnicking and potential accommodation of OHV connections to the north and south, among other activities.

Finally, while there is no guarantee that the entire Wetlands Park complex will be completed as presently planned, if completed, over $50 million dollars will be spent on conservation measures. The $50 million expected to be expended on conservation measures within the park will be in addition to contributions from the MSHCP and will not be derived from the development fee.

c. Off-Highway Vehicles

In order to implement the interim process suggested by the Rural Roads Management Subcommittee, pending completion of the first stage of the Rural Roads Adaptive Management Plan, Clark County has undertaken certain tasks and responsibilities:

1. In cooperation with the BLM, continue the joint process they have begun to establish accurate maps and determine baseline mileage of all unpaved roads within Clark County, including R.S. 2477 roads. This process should result in an updated GIS coverage for the county. This process has begun in the southern end of the county and is proceeding north.

NPS(57) Prepare a biennial management plan and report (Biennial Management Plan). As set forth in other sections of this document, the Biennial Management Plan will be submitted to the USFWS through Clark County. This Biennial Management Plan will address proposed management plans and programs for the ensuing two years as well as an evaluation of management actions imposed or continued during the previous two-year period. The Biennial Management Plan will provide information enabling the USFWS and the I & M Committee to determine that the terms of the MSHCP and the permit are being fulfilled.

NPS(58) To the extent permitted by law, integrate the terms of the Multiple Species Habitat Conservation Plan and their obligations hereunder into their respective management plans which govern their land management policies.

NPS(59) Include in their agency budget requests adequate dedicated and earmarked funding to allow NPS to fully operate, manage, maintain, and monitor their lands pursuant to the terms of this MSHCP and to fulfill their obligations to protect the species and ecosystems consistent with statutory obligations imposed by Congress. They acknowledge that funds collected by Clark County and paid to them to assist in land management policies and actions are not intended to be substituted for monies which would otherwise be allocated to them to fulfill statutory obligations to protect the resources, but are intended to supplement those funds.

NPS(60) Consolidate utility corridors to the extent feasible on Federal lands.

NPS(61) Close desert tortoise critical habitat to new mining. Develop criteria for review of mineral lease requests that require a finding for any new mineral leases that such leases would be consistent with the purposes of the MSHCP.

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2.8.8 State of Nevada

2.8.8.1 Nevada Division of Wildlife

Existing conservation measures are identified in italics in the text.

a. Public Information and Education

NDOW(1) Cooperate with local agencies in developing a backyard habitat program.

NDOW(2) Continue to support the Teaming with Wildlife Initiative, which would provide funding for habitat restoration, wildlife conservation education, acquisition of land for conservation purposes, development of interpretive recreation programs, and monitoring for non-game species.

NDOW(3) Facilitate awareness of the MSHCP into the ongoing Project Wild.

NDOW(4) Coordinate with PIE, as requested, in developing material for NDOW's weekly television spot with local NBC affiliate.

NDOW(30) Assist in the design and installation of Palmer's chipmunk signs at developed recreation sites in the Spring Mountains NRA.

b. Research

NDOW(5) Cooperate with the USFWS, the I & M Committee, and the appropriate land manager to oversee a tortoise translocation program.

NDOW(6) Consider and authorize, as appropriate, in conjunction with the USFWS, utilization of wildlife collected pursuant to this plan for research and educational programs.

NDOW(7) Coordinate in efforts to inventory bat roosts (including mines prior to closure) and foraging areas to aid in the understanding of bat ecology in Clark County.

2.8.8.2 Nevada Department of Transportation

a. Public Information and Education

NDOT(1) Include in the current NDOT hazardous material awareness training course, a section identifying aquatic resources that occur within NDOT rights-of-way and the importance of fast responses on hazardous spills in such areas.

NDOT(2) Develop a worker education program for NDOT personnel in the plan area describing the MSHCP requirements. This will be coordinated by NDOT's Environmental Services Division. Currently, NDOT requires all maintenance personnel working in desert tortoise habitat to attend a desert tortoise training class.

NDOT(3) Develop a reference binder which contains natural history information on all species covered under the MSHCP and make this binder available to all workers, including contractors and encroachment permittees, involved in activities on NDOT rights-of-way. Binders will be available at NDOT's District I (Las Vegas) office and appropriate maintenance stations. Binder will also be available at construction sites that occur in the permit area.

b. Research

NDOT(4) NDOT will continue to monitor tortoise fencing along NDOT rights-of-way at specific sites designated as field testing areas for the tortoise barrier program. At this time, fencing within NDOT rights-of-way at the translocation site is the only site being monitored.

c. Inventory (Status)

NDOT(5) Compile an inventory of Covered Species and valuable habitat lands that occur on NDOT rights-of-way. This inventory will be accumulated on a project-by-project basis during NDOT's environmental review process.

NDOT(6) Compile an inventory of all culvert/bridge crossings and tortoise fencing within the permit area.

d. Monitoring (Trends)

NDOT(7) Complete the NDOT land disturbance/take form when land disturbance/takes occur. NDOT Environmental Services will supply Clark County and the USFWS with four quarterly and one annual report summarizing takes, land disturbance, and mitigation fees paid. This will be incorporated into the current monitoring protocol used for the DCP.

NDOT(35) Within IMAs and LIMAs, if NDOT acquires new material sites or expands existing material sites, NDOT will relinquish the same amount of acreage from existing material sites within IMAs and LIMAs to the appropriate agency.

2.8.8.3 Nevada Division of State Parks

a. Public Information and Involvement

NSP(1) Provide rules in brochure and signs throughout the park to remind people of rules and regulations.

NSP(2) Provide literature on the desert tortoise. There is also a display specifically for the desert tortoise at the entrance to Valley of Fire State Park.

NSP(3) Displays in the Valley of Fire visitor center reinforce rules and regulations.

NSP(4) Provide discussion concerning protection of resources during interpretive programs.

b. Protective Measures

NSP(5) Prohibit off-road driving and post signs to that effect throughout Valley of Fire State Park.

NSP(6) Prohibit collection or destruction of vegetation, including dead and down material.

NSP(7) Prohibit collection or destruction of rocks or other minerals.

NSP(8) Prohibit hunting, collection (other than for scientific research), or harassment of any wildlife.

NSP(9) Conduct routine Park Ranger patrols daily to protect and preserve resources.

NSP(10) Limit trails to areas that are sparsely vegetated, mainly in natural washes. Other trails will be developed by using "social trails" where vegetation has already been removed.

NSP(11) Prohibit open campfires, except in designated campgrounds.

NSP(12) Limit camping to areas provided. No overflow camping is permitted.

NSP(13) Require approval of the Supervisor or their representative for all "special recreation" (hang gliding, rock climbing, equestrian, ATV use, mountain biking, etc.).

NSP(14) Fence and close to the public sensitive areas of the Park, except for during interpretive hikes.

NSP(15) Prohibit use of pitons, chocks, or other such climbing devices or any magnesium carbonate chalk in climbing the formations, except for rescue operations, in Valley of Fire State Park.

NSP(16) Prohibit unconstrained pets or domestic animals.

c. Restoration and Enhancement Measures

NSP(17) Where possible, establish erosion control in areas that present problems.

d. Land Use Policies and Actions

NSP(18) To the extent feasible, ensure that minimal impacts occur to resources during the planning stages for projects.

NSP(19) Construct all facilities to create the least amount of visual impact to the park.

2.8.8.4 Nevada Division of Forestry

a. Protective Measures

NDF(1) Regulate the removal and possession of cacti and yucca for commercial purposes (NRS 527.060-120).

NDF(2) Prohibit the removal or destruction of native flora listed as fully protected (NRS 527.270), except by special permit.

NDF(3) Cooperate, to the maximum extent practicable, with Clark County, and enter into agreements, as appropriate, with Clark County and other Participants in the MSHCP for the administration and management of any areas established for the conservation, protection, restoration, and propagation of species of native flora which are threatened with extinction (NRS 527.300).

2.12.3 Implementation Agreement

Section 10(a)(2)(iv) of the ESA states that a conservation plan must specify "such other measures that the Secretary may require as being necessary or appropriate for the purposes of the plan." Region 1 of the USFWS (the West Coast region) believes it is generally necessary and appropriate to prepare an Implementing Agreement for conservation plans. The purpose of an Implementing Agreement is to ensure that each party understands its obligations under the HCP and Section 10(a) Permit and to provide remedies should any party fail to fulfill its obligations. Therefore, an Implementing Agreement has been prepared for this MSHCP and is attached as Appendix J. At the time of this writing, no other measures have been identified by the USFWS.

Each entity that has committed to participate in and contribute to the implementation of the plan, in obligations set forth in Section 2.8 of the MSHCP, will enter into an agreement with the USFWS. This agreement will specify the responsibilities of each agency; the minimization, conservation, and mitigation measures to be implemented; reporting and enforcement procedures; and any other permit conditions USFWS may require.

b. U.S. Forest Service

The Spring Mountains National Recreation Area includes three WSAs: La Madre Mountain, Mount Stirling, and Pine Creek, which comprise 63,200 acres, or 38.8 percent of the NRA (see Figure 3-2; Table 3-2).

TABLE 3-2
USFS WILDERNESS STUDY AREAS

WSA	Acres	Acres Recommended for Wilderness
La Madre Mountain	20,300	19,300
Pine Creek	4,700	4,600
Mount Stirling	38,200	29,700
Total	63,200	53,600

USFS management policies identify three types of management areas: Wilderness, WSAs, and the NRA. Wilderness areas are more intensively managed and restricted in uses, with primitive or semi-primitive, roadless, non-motorized recreation opportunities, lack of developed facilities, and public access restrictions. Management policies are generally more restrictive in WSAs than in the rest of the NRA but are not as restrictive as areas designated Wilderness. For example, existing roads, trails, and recreational use areas are maintained, but new facilities will not be developed unless the WSA designation has been removed. The remainder of the NRA is managed for a broader spectrum of uses and includes intensive public recreational use areas. However, the underlying management policies and actions for WSAs and the NRA are not substantially different, especially with the additional measures provided for in the SMNRA Conservation Agreement. Therefore, reversion from WSA to NRA management should not have a significant effect upon conservation management.

USFS recommendations within the SMNRA for wilderness designations cover 53,600 acres (84.8 percent) of the current WSAs. If adopted, the newly designated wilderness areas would probably have a decrease in public use and access levels, which would enhance their value as conservation lands. Areas not designated as wilderness would not experience any significant decrease in conservation-related management actions, although some additional dispersed recreational use and facilities could result.

c. National Park Service

In 1979 the National Park Service conducted a wilderness suitability inventory for Lake Mead National Recreation Area. That inventory identified 418,655 acres within the recreation area as meeting qualifications for classification as wilderness. It also identified an additional 262,125 acres as meeting standards to be classified as potential wilderness. This includes 208,330 acres meeting the wilderness standards and an additional 85,950 acres of potential wilderness within Clark County. These areas include designated

year term of the MSHCP in the year 2028. The applicant is requesting an incidental take permit that would cover 79 species on 145,000 acres of land disturbance on non-Federal lands in Clark County and desert tortoise on NDOT rights-of-way below 5,000 feet, south of the 38th parallel in Nye, Lincoln, Mineral, and Esmeralda Counties.

The MSHCP analysis considered over 225 species for possible coverage under the MSHCP. The 79 species that are currently proposed are those for which sufficient information on status, threats, and conservation needs are available to support issuance of an incidental take permit or prelisting agreement (Section 2.6). The remainder of the species will remain under evaluation, and future phases of the MSHCP may include permit requests for incidental take of additional species as the appropriate level of information becomes available on minimizing and mitigating the effects of take.

3.2.2.2 Funding and Coordination

Mitigation fees of $550 per acre were established under the DCP for take on private lands and for NDOT activities including road widening, new construction, and material sites outside of the DWMAs. Multiple species inventory and protective measures were included in the DCP. The MSHCP integrates the provisions of the DCP and broadens the scope of the activities to be funded with the mitigation fees. The USFWS reviews, evaluates, and prepares a report concerning each biennial management plan and budget review, and provides a written report. The report evaluates the consistency of the proposed management plans with the ESA, recovery plans, and this plan, after approval of the proposed management plans and budgets by the I & M Committee. In the event that the management plan and budget is not consistent with the ESA, recovery plans, and this plan, the matter shall be referred back to the I & M Committee for further review and approval.

The MSHCP includes the following funding and coordination measures:

- Implementation of an endowment fund from the collection of a $550-per-acre development fee, as described in Section 2.8.3.1 of the MSHCP.

- Management and administration of the MSHCP by the Plan Administrator and through the I & M Committee, as described in Section 2.8.3.3 of the MSHCP.

- Implementation of the Public Information and Education Program by the PIE subcommittee, appointed by the I & M Committee, as described in Section 2.8.3.4 of the MSHCP.

- Purchase of grazing allotments and interest in real property and water rights, as described in Section 2.8.3.5 of the MSHCP.

of biological diversity. These analyses will provide the scientific basis for management decisions based on objective criteria. Such decisions might include repositioning, reconsideration, or reconfiguring of IMAs and LIMAs to provide for the maximum level of conservation for individual or suites of species. Other management decisions that may be facilitated by the SADG include opening or closing areas to recreation, mining, utility corridors, land disposals, or other multiple-use activities; emphasizing or deemphasizing law enforcement activities; and prioritizing habitat restoration projects.

The **Indicator Species** component of the AMP will identify "shortcuts" for monitoring many species and ecosystems without monitoring every individual species. This will involve stratifying the covered species into three groups: disturbance dependent (species that require disturbance to thrive and reproduce), disturbance tolerant (species that neither require nor are negatively affected by disturbance of habitat), and disturbance averse (species that require no disturbance to thrive and reproduce). The indicators project will use sampling arrays to sample presence, absence, and abundance of species at numerous sites differing in amount (or absence) of disturbance. The data will be subjected to multivariate analysis to determine the most appropriate indicators of individual species and ecosystem health for gauging management effectiveness in the IMAs, LIMAs, and MUMAs.

Various anthropogenic disturbances are ongoing in the IMAs, LIMAs, and MUMAs, some of which may ultimately have an adverse effect on the covered species. The AMP will assure an appropriate level of monitoring through the use of the SADG and indicator species components of the AMP. Over the life of the permit, monitoring through the AMP will be focused on threats perceived to be having damaging effects on the covered species and their habitats. Initially, use of rural roads in the IMAs and LIMAs is perceived as the single greatest impediment to effective conservation management of the covered species and their habitats. The **Rural Roads Project** will evaluate the effects of rural road use on the covered species. The Rural Roads Project overlaps with indicator species activities in scope and approach.

Finally, management of the MSHCP will entail constant assessment of the effectiveness of management actions. The AMP will, over time, focus on the various management activities being funded through the MSHCP to gauge effectiveness and provide scientifically based information to determine the need for modifying management direction. Initially, this component of the AMP will be focused on evaluating the conservation activities, in particular, tamarisk control, being undertaken on the Muddy River. The **Muddy River Efficacy Monitoring** component of the AMP will initially define the desired future condition of the Muddy River ecosystem. The existing tamarisk removal effort provides the experimental framework for collecting data in areas not yet modified, areas recently modified, and areas modified in recent years. An inventory of species using these areas is clearly needed before initiating monitoring. Results derived

from efforts along the Muddy River will be exportable and should be useful for guiding future efforts on the Virgin River and Las Vegas Wash.

3.2.3 Low Elevation Ecosystems MSHCP Alternative

This alternative would cover approximately 29 species occurring primarily within the lower elevation ecosystems (blackbrush, salt desert scrub, Mojave desert scrub, mesquite/catclaw, and desert riparian). Lands supporting these ecosystems are primarily under the jurisdiction of BLM, NPS, NDOW, State Parks, and NDOT. Conservation measures in existing plans as well as new measures proposed under the MSHCP that apply to these low elevation areas would be implemented, while existing conservation plans, measures, and actions for ecosystems at higher elevations above the blackbrush community, particularly those in the SMNRA GMP and CA, RRCNCA GMP, and DNWR, would continue to be implemented as agency funding permits. Incidental take of high elevation species would not be covered under this permit and would require separate consultation and permits for individual take on private lands under Section 10 of the ESA. Funding for mitigation of take on private lands and from NDOT and local government activities established under the DCP would continue. The DCP allows, to a limited extent, these mitigation funds to be extended to other species, for implementation of conservation actions that benefit species other than the desert tortoise. Funding and coordination under the low elevation MSHCP would be more broadly focused on the conservation needs of multiple species. However, such funding and coordination would not be afforded to species within high elevation ecosystems (blackbrush communities and above). These high elevation lands comprise about four percent of lands under private ownership or local government jurisdiction in Clark County. The USFWS would consider issuance of individual Section 10(a) Permits within these areas as requested. As the low elevation MSHCP alternative encompasses most of the Federal land under BLM jurisdiction in Clark County, the potential future consequences of redesignating WSAs would affect this alternative to much the same degree as for the No Action or MSHCP Alternatives. For those WSA lands that could be redesignated to mixed-use management (approximately 300,000 acres), conservation potential could be diminished.

3.2.4 Permit Only for Threatened, Endangered, or Candidate Species

This alternative would cover the seven Federally or state listed and candidate species. The actions proposed would focus on the following species and their habitats within Clark County.

- Mojave desert tortoise – Mojave desert scrub and blackbrush covered by the DCP. (The provisions of the DCP would be integrated into this alternative.)

managed lands. The National Park Service has been managing the recreation area since 1964, with identified resource protection and conservation strategies. Capability in resource management has increased over the last 10 years. Many projects have been undertaken already, many in concert with the Clark County DCP, which protect and monitor species and their habitats. A primary focus over the next five years is to develop strategic programs for resource protection, to restore damaged habitats, and through education, to enhance public awareness of the natural resources within the recreation area. Under the No Action Alternative, conservation-oriented management of the recreation area would continue, but not at the level that can be achieved by enhanced funding and coordination that are afforded under various MSHCP Alternatives.

d. U.S. Fish and Wildlife Service

Regardless of which alternative is selected, the USFWS will continue to manage the DNWR for bighorn sheep, other wildlife species, and other biological resources. However, under the No Action Alternative, resource management on the DNWR would not be enhanced by the funding and coordination that would be derived from multispecies planning efforts included in the other alternatives. Further urbanization of the Las Vegas Valley will negatively affect the DNWR, particularly in the southern portions of the range. Under the No Action Alternative, it will become increasingly more difficult, over time, to maintain the undisturbed character of the range.

3.3.1.2 Potential Redesignation of Proposed Wilderness and Wilderness Study Areas

If wilderness and WSAs were not designated, these areas would revert to some level of multiple use management rather than intensive management to maintain wilderness values of the land. This may increase the level of land use intensity and range of uses from current management. Changes in land use on BLM lands could include opening areas to new mining claims, opening areas to new grazing activities, increases in use of motorized and off-highway vehicles, increased recreational uses, and opening of areas to rights-of-way for roads or utilities. There could also be changes in land use on USFS, NPS, and USFWS lands.

Regardless of which alternative is selected, measures to minimize these potential impacts include requirements for permit review of new mining claims or grazing rights, road, and utility crossings. Management of desert tortoise habitat under the provisions of the DCP, as well as conservation provisions of other existing management plans, would remain in effect after redesignation. Thus, no significant deterioration of habitat quality or direct or indirect unmitigated impacts to sensitive species should result. The cumulative area of habitat that would be affected (approximately 450,000 acres) is limited in area and

- Through the $550/acre development fees and endowment structure, it provides assurances for funding of conservation measures identified in the MSHCP.

- It provides an administrative structure for coordination and implementation of the program with participating agencies and organizations which reports to the USFWS on a regular basis with respect to actions taken, priorities for future action, expenditures, and budget.

- It provides a formalized organizational and review structure for adaptive management, including inventory, monitoring, technical review of data, data management, status review, and prioritization of activities.

- The MSHCP under the WSA redesignation condition would still function to provide assurances of habitat quality and other conservation benefits to Covered Species.

Benefits of the MSHCP Alternative to Clark County and other participating agencies include the following:

- It provides a surety of process for the orderly development of Clark County under existing local land use plans and policies.

- It does not preclude economic or public uses of Federal and non-Federal lands.

- It is organized around and builds upon existing management objectives and conservation programs on Federal and state lands rather than the acquisition and specialized management of large blocks of habitat under non-Federal jurisdiction.

- Applicants covered under the Section 10(a) Permit would receive assurance that incidental take of listed, candidate, or sensitive species from otherwise lawful activities would not result in additional USFWS review or imposition of measures for the conservation of species or habitat under the ESA.

3.3.3 Low Elevation Ecosystems MSHCP Alternative

This alternative would cover future take of species that primarily occur on approximately 96 percent of the habitat subject to impact from otherwise lawful activities in Clark County. It would prioritize coordination, monitoring, and conservation management to MUMAs under Federal and state jurisdictions that receive higher levels of public use. Higher elevation ecosystems and species not covered under the alternative are predominantly within Federal lands that are designated for low-impact public use and have conservation management policies and programs established or adopted but awaiting implementation. These use designations and existing conservation management

Over three million acres of desert tortoise habitat occur within the Las Vegas RMP. To comply with the ESA, the BLM must consult with the USFWS on all Federal actions (including the RMP/EIS) and take positive actions to aid in the recovery of all listed species. The Final Las Vegas RMP/EIS compares the provisions of Alternatives A, B, C, D, and Supplemental Alternative E as set forth in the 1992 draft Stateline Resource Area RMP/EIS and 1994 Supplemental RMP/EIS with respect to grazing, the number of acres proposed to be contained within ACECs, the number of acres proposed to be disposed of by the BLM, the number of acres proposed to be withdrawn for the Desert Tortoise Conservation Center, wild horse and burro policy, recreation and OHV use, and mining.

(3) Habitat Management Plans

The designation of DWMA/ACECs and the maintenance of their integrity require management actions and changes in land uses not currently provided for by the two existing land use plans. Decisions about specific range, wildlife, and watershed improvements are not made in the RMP/EIS, but rather in subsequent activity level plans (i.e., habitat management plans, allotment management plans, etc.) designed to implement the Las Vegas RMP/EIS decisions. In June 1992, a Piute-Eldorado Habitat Management Plan (HMP) was prepared by the BLM with cooperation of the NPS and NDOW. However, the HMP has not yet been finalized and approved by those agencies. This BLM planning document outlines management prescriptions for high-density tortoise populations within three tortoise management areas: Piute Valley, Cottonwood Valley, and Eldorado Valley. The three habitat management areas of this HMP were established through the Clark County Short-Term HCP. The BLM and the NPS (on NPS lands) are responsible for identifying and implementing land use controls through the Piute-Eldorado HMP and the Las Vegas RMP. The establishment of other DWMAs/ACECs in the county will require the development of one or more activity plans.

b. Lands Managed Pursuant to the Provisions of the DCP

As part of the implementation of the DCP, BLM has designated 290,300 acres of the critical habitat in the Piute-Eldorado area as conserved habitat for desert tortoise. Additional areas totaling 397,700 acres within critical habitat (Arrow Canyon/Coyote Springs, Mormon Mesa, and Gold Butte-Pakoon) are also focused upon protection of desert tortoise and have been designated as ACECs under the Las Vegas RMP.

c. Special Status Plant Management

The BLM has also developed a strategy plan for special status plants that was adopted in October 1992. It is the policy of the BLM that special status plants and their essential habitat be conserved and that their continued existence be assured. The special status plants strategy plan focuses on four objectives: (1) land use planning for resource

protection; (2) plant inventory and studies; (3) special status plants monitoring; and (4) interagency/groups coordination.

d. Wilderness Study Area

In compliance with the Federal Land Policy and Management Act, BLM evaluated all its lands for the presence of wilderness characteristics. Recommendations as to which areas should be designated as Wilderness were forwarded to Congress, which has not yet acted upon the recommendations. Until a formal determination is made, the study areas are to be managed under an interim management plan for WSAs so as not to degrade existing wilderness values. Once a determination is made, current management prescriptions to maintain wilderness values may be modified or removed on those areas not designated.

There are 21 WSAs in Clark County. Seven WSAs, totaling more than 120,000 acres, are within desert tortoise critical habitat areas (USFWS #1, #2, and #3; a portion of Arrow Canyon, Garret Buttes, Jumbo Springs, Million Hills, and Lime Canyon; a small portion of North and South McCullough Range WSAs also extend into the Piute-Eldorado management area). Portions of six BLM WSAs were recommended for wilderness designation: 20,000 of 57,500 acres in the South McCullough Range; 36,900 of 87,200 acres in the Muddy Mountains; 13,900 of 35,100 acres in the Lime Canyon WSA; 23,000 of 42,100 acres in La Madre Mountain; 17,600 of 20,100 acres in Pine Creek; and 800 of 4,200 acres in Mount Stirling WSA. The USFS also has recommended portions of the Mount Stirling, Pine Creek, and La Madre Mountain WSAs as suitable for wilderness designation with adjacent wilderness in the Humboldt-Toiyabe National Forest.

Under interim management the only permitted activities are temporary uses that create no new surface disturbance or do not involve permanent placement of structures. Existing uses (i.e., grazing, mining, mineral leasing) may continue. The following activities may occur within WSAs:

> **Land Actions.** Generally, no land disposals will be allowed; however, existing rights-of-way may be renewed or even approved for temporary uses as long as there is no impairment of wilderness values.
>
> **Mineral Uses.** Existing mining activities such as drilling, use of existing rights-of-way, heavy equipment use, and so on may continue; however, they must be monitored to guarantee no impairment of wilderness values.
>
> **Watershed Rehabilitation and Vegetative Manipulation.** Watershed rehabilitation work required by emergency conditions (e.g., fire, flood, storms, or landslides) are allowed. Land treatments such as trenching, ripping, pitting, terracing, and plowing are not permitted.

recreational use, although hunting by permit is allowed. There are also 1,322,900 acres that have been identified as Wilderness Study Areas. These areas are under management by the USFWS.

In January 1999 the Integrated Natural Resources Management Plan (INRMP) for Nellis Air Force Base and Range was completed by the Air Force. The INRMP includes goals, objectives, and operational component plans for natural resources surveys and inventories (e.g., bat species, desert tortoise, chuckwalla, Merriam's bearpoppy), mapping, and data integration. The INRMP also includes eradication of tamarisk, an integrated pest management plan, and a land use management plan for the NAFB.

4.2.1.6 Other Federal Jurisdictions

The Bureau of Indian Affairs, a part of the Department of the Interior, is authorized to act as trustee for the Moapa Indian Reservation (about 71,500 acres), Fort Mojave Indian Reservation (about 3,700 acres), and Las Vegas Paiute Indian Reservation (about 3,900 acres), comprising less than 2 percent of Clark County.

The Bureau of Reclamation manages 50,700 acres, or 1 percent, of Clark County (including Hoover Dam, Lake Mead, and Lake Mohave).

4.2.2 Non-Federal

Landholdings by the state, local government, and private landowners total approximately 420,500 acres, or 8.3 percent of Clark County (see Figure 4-2).

4.2.2.1 State of Nevada

Lands held by the State of Nevada include areas managed by State Parks, NDOW, NDOT, and other state agencies. Major state parks and wildlife areas include Valley of Fire, Floyd Lamb, and Spring Mountain Ranch state parks and the Overton Wildlife Management Area, comprising 46,400 acres (almost one percent of Clark County). NDOT has an additional 14,700 acres of rights-of-way for material sites and 840 miles of highway rights-of-way of various widths in Clark County.

a. Nevada Division of Wildlife

(1) Existing NDOW Regulations

The Nevada Revised Statutes require that the state's wildlife be classified as game or as either protected or unprotected and that protected species are further classified as sensitive, threatened, or endangered. This classification of protected species was

4.3 Affected Environment and Impacts of the MSHCP and Alternatives

4.3.1 Biological Resources

4.3.1.1 Existing Conditions

Detailed information on habitats and wildlife in Clark County are presented in Volumes II and III of the MSHCP.

a. Threatened, Endangered, and Candidate Species

A number of species listed as threatened or endangered under Federal or Nevada Revised Statutes, and one candidate for Federal listing, occur in the planning area. Background information on each species is contained in Appendix B of the MSHCP. The status of these species is summarized in this section.

- Desert tortoise is a Federally listed threatened species for which a recovery plan and Section 10(a) Permit has been issued. It is currently covered under the DCP, and is proposed for coverage under the MSHCP.

- Yellow-billed cuckoo is a state listed endangered species that is transient, or a rare resident, and inhabits riparian habitat. It has been documented on the Virgin and Muddy rivers, and in Las Vegas Wash. There is no formal recovery or conservation plan for the species. It is proposed for coverage under the MSHCP.

- Southwestern willow flycatcher is Federally listed as endangered and protected in the State of Nevada. It is a transient or rare resident in Clark County, inhabiting riparian habitat. It has been documented on the Virgin and Muddy rivers, and in Las Vegas Wash. There is currently no formal recovery plan. The southwestern willow flycatcher is proposed for coverage under the MSHCP.

- The Moapa dace is Federally and state listed as endangered and only occurs in stream and spring outflows of the Muddy River. A Recovery Plan for the Rare Aquatic Species of the Muddy River Ecosystem has been developed. The Moapa dace is a High Priority Evaluation Species but is not currently proposed for coverage under the MSHCP.

- The woundfin and Virgin River chub are Federally and state listed as endangered and occur in the Virgin River (a separate population of chub that is state protected occurs in the Muddy River). A Recovery Plan for Virgin River Fishes has been developed.

Both are High Priority Evaluation Species but are not currently proposed for coverage under the MSHCP.

- Blue Diamond cholla is a Federal candidate for listing, and is state listed as critically endangered. It is endemic to the Blue Diamond Hills and only occurs in an area encompassing 300 acres west of Las Vegas. Of this habitat, 83 percent is within BLM lands. Take of the species without a permit is prohibited under the Nevada Revised Statutes. A Conservation Agreement for the Blue Diamond cholla is under development by the BLM, USFWS, NDF, and a private mining entity. The Blue Diamond cholla is proposed for coverage under the MSHCP.

- Las Vegas bearpoppy is listed by the State of Nevada as critically endangered. It is estimated that 25 percent of the species' range has been lost to urban development in the Las Vegas Valley. Of the remaining habitat, roughly 92 percent occurs under Federal jurisdiction. Take of the species without a permit is prohibited under the Nevada Revised Statutes. BLM has developed a Habitat Management Plan, and NPS manages for the species under their general management practices. Three parcels in the Las Vegas Valley contain genetically unique populations of bearpoppy that should be protected. A Memorandum of Agreement designed to facilitate development of range-wide conservation strategies for the bearpoppy is being circulated among various jurisdictions. This MOA will, in particular, facilitate development of strategies for long-term protection of the three Las Vegas Valley populations. The Las Vegas bearpoppy is proposed for coverage under the MSHCP.

- Threecorner milkvetch and sticky buckwheat are also listed by the State of Nevada as critically endangered. Both species occur primarily in sandy soils in Mojave desert scrub communities that fall under BLM, NPS, and private jurisdiction. Each species has approximately 20 known populations in Clark County. Take of either of these species without a permit is prohibited under the Nevada Revised Statutes. To date, no formal management plans have been developed. Both are proposed for coverage under the MSHCP.

- American peregrine falcon was removed from Federal endangered status in 1999. It is proposed for coverage under the MSHCP. The ESA requires the USFWS to monitor the status of delisted species for at least five years following delisting. If a delisted species is found to be at risk, the USFWS can review the best available information and if necessary invoke the emergency listing clause of the ESA and relist the species.

b. Other MSHCP Covered Species

Additional MSHCP Covered Species are described in detail in Appendix B. They include 4 mammals (3 bats and Palmer's chipmunk), 6 additional birds, 14 additional reptiles, 1

amphibian, 10 species of invertebrates (8 butterflies and two springsnails), 33 additional vascular plants, and 4 species of moss.

Additional MSHCP High Priority Evaluation Species are described in detail in Appendix B. They include 4 additional species of mammals, 1 bird, 3 reptiles, 1 amphibian, 4 fishes, and 13 invertebrates.

c. Other Biological Resources

The distribution of species, habitats, and ecoystems within Clark County is the result of the unique biogeography and climate of the region. The interface between ecoregions, climates, desert basins and the Colorado River watershed creates a dynamic topographic, hydrologic, and climatic region. A number of habitat types or ecosystems occur in Clark County, including alpine, bristlecone pine, mixed conifer, pinyon-juniper, sagebrush, blackbrush, salt desert scrub, Mojave desert scrub, mesquite/catclaw, and desert riparian. These ecosystems, which are described in detail in Appendix A, provide habitat for a variety of unique species, including those that are endemic to southern Nevada or are otherwise rare or sensitive. In particular, the Spring Range provides habitat for 27 species found nowhere else in the world.

Overall, Clark County provides habitat for at least 775 species of plants, 41 species of fish, 9 species of amphibians, 54 species of reptiles, 392 species of birds, and 142 species of mammals. Approximately 102 species, other than those identified as Covered Species, are evaluated in the MSHCP. These species are identified and discussed in greater detail in Appendix B. Higher elevation ecosystems (alpine, bristlecone pine, mixed conifer, pinyon-juniper, and sagebrush) provide for a majority of the MSHCP evaluated species occurring in Clark County. All fish species and a great number of bird species are located in water-related communities (desert spring, desert riparian, and lakes).

4.3.1.2 Impacts

Under any future scenario, biological resources will be subject to the loss of up to 113,000 acres of habitat on private lands in Clark County under the existing DCP and increased use of Federal and state land by the general public, particularly for recreation. Differences in the impacts of the alternatives are focused on the amount of habitat that would be lost (up to 145,000 acres in the MSHCP) and the degree of conservation that would be afforded to species and habitats under the different alternatives.

MAMMALS

Silver-haired bat

BIRDS

Vermilion flycatcher
Summer tanager
Blue grosbeak
Arizona Bell's vireo

REPTILES & AMPHIBIANS

Banded gecko
Desert iguana
Western chuckwalla
Western red-tailed skink
Large-spotted leopard lizard
Great Basin collared lizard
California kingsnake
Glossy snake
Western leaf-nosed snake
Western long-nosed snake
Sonoran lyre snake
Sidewinder
Speckled rattlesnake
Mojave green rattlesnake

PLANTS

White-margined beardtongue
Anacolia menziesii
Claopodium whippleanum
Dicranoweisia crispula
Syntrichia princeps

These species would not be afforded the adaptive management (inventory, monitoring, and status evaluation) or protective measures relative to species or habitat maintenance or enhancement measures identified in the MSHCP (see Appendix B for species specific conservation measures proposed). Without the supplementary funding and coordination afforded to species and other biological resources through the MSHCP and existing resource management agency efforts, adverse effects to the species may include loss of

The Clark County Regional Flood Control District is developing a comprehensive, integrated flood control system for Las Vegas Valley and nearby areas. This system will include 21 detention basins, 1 debris basin, and over 100 miles of channels, pipelines, dikes, and levees. Many of the planned facilities are located on BLM land and, because of local flooding problems, are deemed essential to the protection of existing as well as new development on private land.

Water supplies in Clark County include the Virgin, Muddy, and Colorado Rivers, groundwater, and wastewater reuse. Water from the Colorado River is highly regulated, and the net depletion of the mainstream for all of Nevada is limited to 300,000 acre-feet per year, unless a surplus is declared by the Secretary of the Interior, in which case Nevada would be able to consumptively use more than 300,000 acre-feet per year. The Las Vegas Valley relies on the Southern Nevada Water Authority and groundwater from wells; current forecasts indicate that at the current rates of use, existing supplies will be able to meet local needs until the year 2013. Sewage and wastewater treatment needs are currently handled at facilities managed by the county and individual cities. Currently, three of the wastewater treatment plants in the Las Vegas Valley are being expanded. Clark County also is planning a central activated sludge treatment plant to process sewage from the unincorporated area.

4.3.2.2 Impacts

a. No Action

Under the No Action Alternative, water resources would continue to be developed concurrent with human population growth. If the No Action Alternative is selected, then Federal agencies would not receive targeted funding needed to implement specific agency actions that would benefit both species and water resources in Clark County, such as funding for conservation actions to protect riparian areas from grazing, reduce sediment flows, decrease stormwater runoff, and more effectively retain floodwaters. The land management agencies would continue to manage water resources to maintain Federal and state water quality standards, and to ensure the availability of water to meet management objectives for their trust resources.

Implementation of current agency management objectives for hydrological resources could result in adverse effects to biological resources. This could include the facilitation of a hopscotch pattern of urban development, which has the potential to result in inefficient uses of water resources. If the actions proposed to achieve these objectives have the potential to affect listed species, other than the desert tortoise, they would require the development of avoidance and minimization measures within the provisions of Section 7 or Section 10 of the ESA. Impacts to non-listed species and habitats on Federal lands would be evaluated on a project-by-project basis and could result in project modifications.

and water sources from trampling. The proposed MSHCP would fund and coordinate agency management actions to protect sensitive habitat and species from the indirect impacts of wild horses and burros. These management actions would allow for the recovery of vegetation and threatened species due to overgrazing. In the long term, these measures would improve the overall forage conditions and water quality and quantity within Herd Management Areas. The range of management activities addressing wild horses and burros that may be coordinated or funded over the life of the permit is listed in Sections 2.8.4 through 2.8.9 of the MSHCP.

All conservation activities undertaken through this alternative would be in compliance with the existing management policies of the BLM and NPS.

c. Low Elevation Ecosystems MSHCP

The effects of the Low Elevation Ecosystems MSHCP on wild horses and burros would be similar to those of the proposed MSHCP. Higher elevation areas within HMA's total about 289,547 acres or about 21 percent of the total herd area. This is predominately within the Johnnie/Spring Mountains/Red Rock HMA's in the Spring Mountains and within Gold Butte (2,230 acres). Management of these higher elevation HMA's under USFS jurisdiction has already been established under the SMNRA GMP and CA, and the Las Vegas RMP.

Wild horse and burro management at low elevations would continue through the Las Vegas RMP and Lake Mead NRA management plans. The Low Elevations Ecosystems MSHCP would supplement budgets and coordinate conservation actions with BLM and NPS, as discussed under the MSHCP Alternative to accomplish management of wild horses and burros to benefit the covered species. All conservation activities undertaken through this alternative would be in compliance with the existing management policies of the BLM and NPS.

d. Permit Only for Threatened or Endangered and Candidate Species

The effects of a permit only for listed and candidate species on wild horses and burros would be similar to those of the No Action Alternative. Many of the conservation actions undertaken under this alternative would be focused on protection of the desert tortoise. Similarly, the No Action Alternative retains the provisions of the DCP which focus management on conservation of desert tortoise habitat on Federal lands. The funding provisions of this alternative would be directed towards BLM and NPS actions in the ACECs, particularly for conservation actions to benefit both desert tortoise and Las Vegas bearpoppy. Additional conservation activities in Mojave Desert scrub habitats would be focused on Blue Diamond cholla, the threecorner milkvetch, and sticky buckwheat. Conservation activities focused on the other listed species would occur largely in aquatic and riparian habitats. All conservation activities undertaken through this alternative would be in compliance with the existing management policies of the BLM and NPS.

materials and sand and gravel extraction along streams and riparian areas and in the Las Vegas valley.

e. Alternative Permit Terms for the MSHCP

The effects of the alternative permit terms on mineral extraction activities would be similar to those of the proposed MSHCP. The primary differences would be that funding levels and therefore, intensity of management, would vary under shorter or longer permit terms. The AMP process would provide the necessary level of monitoring and oversight to ensure that MSHCP funding and coordination are appropriately focused.

4.3.10 Transportation

4.3.10.1 Existing Conditions

Major transportation facilities in Clark County include Interstates 15, 215, and 515; Highways 93 and 95; State Routes 160, 163, 164, 168, and 169; McCarran International Airport; and the Union Pacific Railroad (Figure 4-7). In general, road construction throughout Las Vegas Valley has accelerated over the past 10 years in response to urban growth. Highway 95 and Interstate 15 were expanded over the period, using mostly public lands and, as with other local transportation projects, sand and gravel from local operations. Planned improvements include a beltway around Las Vegas from Interstate 15 to Interstate 515; continued widening of Route 160 between Las Vegas and Pahrump; a 55.5-acre expansion of McCarran Airport; a cargo airport in Ivanpah Valley, a commercial airport near Mesquite, widening of Highway 95 (including the segments between Railroad Pass and Route 163 and adjacent to the SNWA North Well Field); a Hoover Dam bypass; a Boulder City bypass; a proposed rail system within the Las Vegas Valley; and a proposed high-speed train from California to Nevada.

NDOT has the responsibility for maintaining approximately 1,000 miles of highway through desert tortoise and other habitats and for necessary improvements to these existing roads to meet the demands of increased traffic volumes in a manner consistent with public safety standards. NDOT rights-of-way are broadly defined to include lands purchased or withdrawn from public lands for the use of highways, transportation facilities, material sites and their access roads. NDOT rights-of-way also include those areas of highway facilities that extend beyond the purchased or withdrawn property. This includes drainage or V-ditches constructed and regularly maintained by NDOT.

Transportation facilities occur on both non-Federal and Federal lands in Clark County. Most major highways cross Federal lands and involve Federal highway funds.

4.3.10.2 Impacts

a. No Action

Under the No Action Alternative, incidental take of the desert tortoise would be permitted for transportation projects on non-Federal lands and for maintenance and construction projects within NDOT rights-of-way. Maintenance and construction would be allowed in NDOT rights-of-way outside DWMAs south of the 38th parallel below 5,000 feet in elevation. Within DWMAs only routine and emergency maintenance would be allowed. Routine NDOT maintenance activities are listed on page 2-53.

Also under the No Action Alternative, the DCP Road Barrier Construction Program initiated in 1999 would continue. This program consists of (1) retrofitting of existing highways rights-of-way fence with desert tortoise proof fencing material and (2) construction of new tortoise fencing. This program minimizes mortality of desert tortoise on highways.

Without the MSHCP, incidental take of species other than the desert tortoise during development of new transportation resources on non-Federal lands would not be permitted. Therefore, new transportation planning on non-Federal lands would continue to be impacted by the presence of environmentally sensitive lands. Additionally, the reduction in development fragmentation within the County anticipated with adoption of the MSHCP would not be realized under the No Action Alternative. This could result in the indirect adverse effect of longer, more circuitous transportation routes required to serve the resulting development caused by avoiding environmentally sensitive lands. More circuitous transportation routes would result in incremental increases in automotive emissions.

Existing environmental review of proposed transportation projects on both public and private lands, as required by existing state and Federal legislation, would continue unchanged.

ACECs established under the Las Vegas RMP will include increased management prescriptions against disturbance and reduced intensity of uses in these areas. With respect to transportation resources, the ACECs can be divided into two categories: desert tortoise ACECs and other resource ACECs.

For desert tortoise ACECs, reclamation of temporary roads is required. New roads will be authorized in response to specific proposed actions where no feasible alternative exists.

- Incorporate the terms and conditions for material site rights-of-way contained in Appendix M of the RMP in all new material site rights-of-way.

- Coordinate with the NDOT and evaluate the need for existing sites.

- Encourage the NDOT to relinquish sites no longer needed.

- Receive justification by the NDOT for continued use of existing sites or need for additional sites.

The RMP EIS concludes that the impacts of these management actions would result in:

> Designation of rights-of-way exclusion areas, constituting a loss of 5,600 acres of public land available for linear rights-of-way and a loss of 1,005,000 acres of public land available for site type rights-of-way (excluding existing established communication sites).
>
> Designation of rights-of-way avoidance areas, constituting a potential loss of 1,011,100 acres of public land available for all types of rights-of-way.

(1) Potential WSA Redesignation

WSAs are currently designated as avoidance areas for new roads although existing roads are maintained. Redesignation could result in the extension of new roads, associated with a permitted and lawful activity. New right-of-way acquisition and roadway construction on public lands previously designated as WSAs would continue to be subject to additional environmental review (preparation of an EA or EIS) as required by existing state and Federal legislation. If potential impacts to listed or candidate species were identified, a Section 7 consultation would be entered into with the Service. The WSA Redesignation Sub-Alternative action would not alter the required environmental review process for transportation projects on public lands.

No adverse impacts to transportation resources are anticipated with the WSA Redesignation Sub-Alternative action.

b. MSHCP

Incidental take of Covered Species within Clark County and desert tortoise below 5,000 feet south of the 38th parallel would be allowed in connection with maintenance and construction projects within NDOT rights-of-way. Consistent with the DCP, routine maintenance and construction would be allowed in NDOT rights-of way outside IMAs

and LIMAs. Within IMAs and LIMAs, only routine and emergency maintenance would be allowed.

The area covered by the MSHCP would include approximately 840 miles of roadway right-of-way of varying width; approximately 14,700 acres of material sites; and other rights-of-way as mentioned above, in Clark County. Consistent with the terms of the DCP, the MSHCP would also cover desert tortoises and their habitat (areas below 5,000 feet in elevation and south of the 38th parallel) on approximately 260 miles of NDOT rights-of-way in Nye, Lincoln, Mineral, and Esmeralda Counties that are presently maintained by NDOT. Also covered in the MSHCP would be any additional right-of-way, which may be added in the future, the routing of which would consider avoidance of areas being conserved for species. For species other than the desert tortoise, the area covered by the MSHCP for NDOT activities would be limited to Clark County.

Some of NDOT's routine maintenance activities may impact species addressed in the MSHCP. These routine maintenance activities would not disturb areas outside of NDOT's right-of-way. NDOT's maintenance activities should not significantly impact species covered by the MSHCP, although some loss of habitat and species impacts will occur as a result of road widening activities, new highway construction, and materials extraction.

The DCP Road Barrier Construction Program consisting of retrofitting of existing highways rights-of-way fence with desert tortoise proof fencing material, and construction of new tortoise fencing, would continue under the MSHCP, and would minimize mortality of desert tortoise and other species on highways.

The range of management activities addressing transportation that may be coordinated or funded over the life of the permit is listed in Section 2.8.9 of the MSHCP.

NDOT would agree to implementation of 35 conservation actions under the MSHCP, including worker education programs, desert tortoise fence monitoring, inventory of covered species and habitats on NDOT rights-of-way, preconstruction surveys and species relocations, on-site monitoring, minimization and avoidance of species and habitat disturbance during construction and maintenance activities, restrictions on chemical use in habitats of the covered species, and installation of movement directing devices.

No significant adverse impacts to existing transportation resources are anticipated with implementation of the MSHCP. New right-of-way acquisition and roadway construction on non-Federal lands within Clark County would be covered by the MSHCP. Therefore, implementation of the MSHCP could facilitate development of new transportation facilities on non-Federal lands within Clark County. The MSHCP could have the indirect positive effect of more direct roadways since sensitive lands would not necessarily be avoided in new roadway planning. Furthermore, implementation of the MSHCP is

anticipated to reduce "checkerboard" development in the county by facilitating more contiguous development. This also could result in the indirect positive effect of shorter, more direct roadways and transportation corridors. Implementation of the proposed MSHCP would not have significant adverse effects on maintenance of existing transportation resources since such activities would be covered under the MSHCP.

New right-of-way acquisition and roadway construction on Federal lands would not be covered by the MSHCP and would continue to require additional environmental review (preparation of an EA or EIS) subject to existing state and Federal legislation. Implementation of the MSHCP would not alter the required environmental review process for transportation projects on public lands. Additionally, adoption of the MSHCP would close IMAs and LIMAs to state roadway development.

Therefore, no significant adverse impacts to transportation resources are anticipated with implementation of the proposed action. The proposed action could have an indirect positive effect on transportation resources by allowing the development of shorter, more direct roadways on private lands.

c. Low Elevation Ecosystems MSHCP

The effects of the Low Elevation Ecosystems MSHCP on transportation would be similar to those of the proposed MSHCP. Most of the County's transportation network is located at low elevations. NDOT and BLM conservation activities associated with roads would be funded and coordinated under this alternative. Conservation actions focused on roads at higher elevations (USFS activities such as coordination with NDOT, and minimization or avoidance of road impacts on species and habitats), would not be coordinated or funded under this alternative. No significant adverse impacts to transportation resources are anticipated with implementation of this alternative. As under the MSHCP alternative, implementation of the Low Elevations Ecosystem alternative could have an indirect positive effect on transportation resources by allowing the development of shorter, more direct roadways on private lands.

d. Permit Only for Threatened or Endangered and Candidate Species

The effects of a permit only for listed and candidate species on transportation would be similar to those of the No Action or MSHCP alternatives. Funding and coordination of conservation activities addressing transportation concerns under this alternative would be focused in the desert tortoise ACECs, in Las Vegas bearpoppy habitats, and in the sandy habitats of the three-corner milkvetch, and sticky buckwheat. Listed species and their habitats in riparian areas would be monitored and addressed as needed. High elevation ecosystems subject to transportation impacts, in particular the SMNRA, would not initially receive the benefits of funding and coordination of management activities under this alternative since listed species do not occur in these areas. However, if new species

provides an important venue for public involvement. The MSHCP's Public Information and Education Subcommittee is active in planning and implementing activities that inform the community on a variety of topics including species conservation. The goal of this subcommittee is to increase public understanding and awareness of the value of Clark County's natural ecosystems. The MSHCP also funds and coordinates other community interests, including the activities of the Muddy River Regional Environmental Impact Alleviation Committee, and the Rural Roads Management Subcommittee. All of these activities seek to minimize or avoid impacts on the citizens and communities of Clark County through awareness and involvement. The range of management activities accessing socioeconomic concerns that may be coordinated or funded over the life of the permit is listed in Sections 2.8.4 through 2.8.9 of the MSHCP.

c. Low Elevation Ecosystems MSHCP

The effects of the Low Elevation Ecosystems MSHCP on social and economic resources would be similar to those of the proposed MSHCP, except that funding and coordination of management activities for covered species and their habitats at higher elevations would not be available through this alternative. Management activities for species and habitats in the SMNRA and on higher elevation lands under other Federal management authority would continue under existing agency management directives. The USFS and BLM would continue to carry out public education and involvement programs to the extent possible under existing budgets. Conservation measures undertaken as part of a low elevation ecosystems MSHCP would not preclude or severely burden existing economic activities on public or private lands. Overall, the effects of this alternative on socioeconomic resources would be positive as a result of increased funding assistance and coordination in reducing and mitigating the effects of private land activities.

d. Permit Only for Threatened or Endangered and Candidate Species

The effects of a permit only for listed and candidate species on socioeconomics would be similar to those of the No Action Alternative, in that species and habitat conservation activities would be focused primarily in the desert tortoise ACECs. Additional activities would be funded and coordinated to benefit the Las Vegas bearpoppy, threecorner milkvetch, sticky buckwheat, Blue Diamond cholla, and in riparian areas, the southwestern willow flycatcher and yellow billed cuckoo. Species and habitats occurring at high elevations and in other areas where non-listed, non-covered species do not occur (e.g., mesquite woodlands) would not receive direct benefits under this alternative. Overall, the effects of this alternative on socioeconomic resources should be positive as a result of increased funding assistance and coordination in mitigating the effects of private land activities.

Lincoln County Honor Camp
Lt. Vell Washburn
Lincoln County Public Lands
Shelley Wadsworth
Nevada Power
John Bare
Southern Nevada Water Authority
Holly Williams

Companies/Organizations

Aquatic Ecology & Conservation
Donald Sada
Budd-Falen Law Offices
Karen Budd-Falen
Environmental Consultants
Mark Raming
Friends of Nevada Wilderness
Mark Saylor
Las Vegas Review-Journal
Keith Rogers
Las Vegas Sun
Mary Manning
Muddy River Regional Environmental Impact Alleviation Committee (MRREIAC)
Ann Schreiber
NECI
JJ Gregory
Nevada Trails Coalition
Christina Adams
Ogden Environmental
Mike White
Ranges West
Wayne Burkhardt
SAIC
Danny Rakestraw
Kurt R. Rautenstrauch
Selzer, Ealy, Hemphill & Blasdell
Paul Selzer
Sierra Club, Southern Nevada
David Brickey
Jane Feldman
Southern Nevada Horse and Burro Association (SNHBA)
Lori Rackley

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2.1.4 Southwestern willow flycatcher, *Empidonax traillii extimus*

Status: USFWS Endangered, BLM Nevada Special Species, USFS Endangered, Nevada National Heritage Program Global Rank G5T2 and State Rank S1, Nevada State Protected.

Clark County MSHCP Status: Covered.

Range: Southern Nevada, southern California, Arizona, New Mexico, southern Utah, western Texas, northwestern Mexico, and possibly southwestern Colorado. Critical habitat designations for the southwestern willow flycatcher include riparian areas in southern California, Arizona, and New Mexico.

Clark County Distribution: The southwestern willow flycatcher was observed along the Virgin River in 1997. None of the currently proposed critical habitat is in Nevada. Clark County's known habitat includes the Virgin River. Other riverine areas with potential habitat include Meadow Valley Wash, the Muddy River, Las Vegas Wash, and the Colorado River system (Figure 2-4).

Habitat: Southwestern willow flycatchers are restricted to **desert riparian** habitats along rivers, streams, or other wetlands. Approximately 16,900 acres of desert riparian woodland are mapped in Clark County, although much of this is actually non-native tamarisk. This species prefers areas where growths of willows, *Baccharis*, tamarisk, or other riparian vegetation are present, and sometimes is found in areas with a scattered overstory of cottonwood. Habitat occurs along the Virgin and Muddy Rivers, and there is potentially suitable habitat along the Las Vegas Wash.

Population Trends: At least a dozen territories were identified on the Virgin River in Nevada as of 1997 (NDOW, Biowest). Historically, the species has been documented in Clark County at Indian Spring, Colorado River (at the southern tip of the state), and Corn Creek. It is a summer resident in riparian areas and a transient in woodland and montane forest areas. Because of population declines throughout its range, it was listed as endangered on February 27, 1995.

Ecosystem Level Threats:

- The habitat rarity and small, isolated populations of southwestern willow flycatcher make remaining birds susceptible to local extirpation through stochastic events. **Threat 101**
- Reduction or degradation of riparian habitat, particularly cottonwood-willow riparian habitats, including river channelization. **Threat 1301**

- Coordination with MRREIAC or similar efforts in tamarisk control and possible conservation easements with willing private and public landowners to allow mutually beneficial habitat management activities.

Potential habitat for this species occurs in UMA on private (18%) and Native American lands (23%) (Fort Mojave Indian Reservation) and in MUMA on BLM lands (31%). Approximately 7% is in LIMA (Overton State Wildlife Management Area) and 21% is in IMA (NPS, Lake Mead National Recreation Area, Virgin River National Recreation Lands). Based on the GIS analysis, approximately 19% is within the mapped boundary of water along the Colorado River and in the Overton Arm of Lake Mead.

The only habitat known to be occupied by this species on private lands is near Mesquite on the Virgin River. Discussions are currently under way between the County, BLM, and the property owner of this site, with the goal of willing acquisition or exchange.

References: Alcorn 1988; Farrand 1983; Southern Nevada Water Authority 1995; Southwest Wetlands Consortium 1998; Steve W. Carothers & Associates, Inc., 1999, 2000; USFWS 1993, 1995, 1997; NDOW 1995.