5. SKR Conservation and Mitigation Measures

This chapter describes the specific features of the SKR HCP being proposed by the RCHCA, including:

A. The level of incidental take of SKR for which the RCHCA is seeking authorization from USFWS and CDFG;
B. Proposed terms and conditions governing that incidental take;
C. Potential impacts of and alternatives to the proposed taking;
D. Habitat conservation and impact mitigation measures which will be implemented by the RCHCA as a condition of incidental take authorization, and;
E. Institutional and funding arrangements established by the RCHCA, U.S. Department of Interior, BLM, and the State of California Resources Agency to assure HCP implementation.

A. Summary of SKR Conservation and Mitigation Measures

Through the implementation of this plan and its predecessor Short-Term HCP, more than $45 million will be dedicated to the establishment and management of a system of regional preserves designed to ensure the persistence of SKR in the plan area. This effort is anticipated to result in the permanent conservation of approximately 50% of the SKR occupied habitat remaining in the HCP area. Through direct funding and in-kind contributions provided by the RCHCA, State of California, U.S. Department of Interior, and BLM, SKR habitat in the regional reserve system will be managed to ensure its continuing ability to support the species. Additionally, these entities will finance monitoring and biological research activities necessary to identify changes in SKR distribution over time, and develop management strategies capable of adapting successfully to changing conditions.

Mitigation for incidental take occurring under this HCP will be provided through the completion and expansion of a regional network of seven SKR reserves. In addition to the $30 million already expended by the agency for SKR conservation, the RCHCA will devote an additional $1 1.7 million to implement this HCP.

A detailed description of the SKR conservation and mitigation measures to be provided by the RCHCA under this HCP is presented in this Chapter.

B. Scope of the Permit and Agreement

The RCHCA and its member agencies are seeking to replace their existing permit and agreement for incidental take of SKR with a permit and agreement based on the conservation and mitigation measures proposed in this HCP. While the conservation program provided by this HCP certainly will benefit a number of sensitive species and habitat types, incidental take authorization is sought only for SKR. No other federal or State listed species will be covered by the permit and agreement. Thus, activities resulting in incidental take of other listed species (e.g., California gnatcatcher. Riverside fairy shrimp or Least Bell's vireo) must secure separate authorization for incidental take of those species from USFWS and CDFG as appropriate before proceeding.

The fact that this HCP covers no listed species other than SKR will be quite important to many property owners in the plan area. Since SKR are known to occur in close proximity to other listed species (most commonly the California gnatcatcher), many individual land parcels in the HCP area are occupied by both SKR and other protected species. Owners of such parcels may ti"d themselves in a position of being unable to fully utilize RCHCA member agency SKR incidental take authorizations if such use would result in the taking of another listed species. In those cases separate authorization would have to be secured by project proponents from USPWS and/or CDFG for incidental take of such protected species.

This situation demonstrates the limitations of single species approaches, and provides ample evidence of the need to approach conservation on an ecosystem basis. Accordingly, the RCHCA has entered into a MOU with USFWS, BLM, and CDFG which provides that following federal and state approval of this HCP, the agencies will work cooperatively toward the development of a comprehensive multi-species conservation plan designed to address all sensitive habitat and species issues in RCHCA member jurisdictions.

C. Terms and Conditions

The permit and agreement sought by the RCHCA would allow incidental take of SKR in connection with otherwise lawful activities anywhere in the plan area, subject to the terms and conditions described in this subsection.

1. Establishment and Completion of the Core Reserves

This HCP provides for the establishment of the following seven permanent SKR core reserves (Figure 21):

i. Lake Mathews-Estelle Mountain;
ii. Lake Skinner-Domenigoni Valley; 110
iii. Motte Rimrock Reserve;

iv. San Jacinto-Lake Perris;

v. Sycamore Canyon-March Air Force Base;

vi. Steele Peak, and;

vii. Potrero ACEC

a. Establishment of the Core Reserve System

In total, the seven core reserves encompass 41,221 acres including 12,460 acres of SKR occupied habitat (Table 18). Within the reserves approximately 96% of SKR occupied habitat occurs on lands currently in public ownership; the remaining 4% of occupied habitat is located on private properties that will be conserved by the RCHCA either through direct acquisition of fee interests or under conservation agreements negotiated with the land owners subject to the concurrence of USFWS and CDFG.

The individual core reserves range in size from 13,158 acres in Lake Skinner to 638 acres in the Motte Reserve. Total SKR occupied habitat varies from 4,264 acres in Lake Mathews to 335 acres in Motte (Figure 22). Collectively, the San Jacinto and Lake Mathews reserves contain more than 7,772 acres of SKR occupied habitat already in public ownership. Lake Skinner has the largest amount of SKR occupied habitat on private lands (332 acres); this comprises approximately 16.7% of the SKR occupied habitat in that core reserve.

As of March 1, 1996 approximately 91% of the land in core reserves was in public ownership; that percentage is being regularly increased by the RCHCA's ongoing land acquisition program. Within the core reserves, only Lake Mathews-Estelle Mountain (683 acres). Lake Skinner-Domenigoni Valley (316 acres), and San Jacinto-Lake Perris (154 acres) include privately owned land. The Motte Rimrock, Potrero ACEC, and Steele Peak core reserves are entirely in public ownership.

A brief biogeographical and land use profile of each SKR core reserve is presented in the following section and in Appendix E. An analysis of the overall conservation value and long-term viability of the reserve system follows the summary profiles. More detailed information concerning the core reserves, including maps of habitat types and public ownership is included in Appendix E.

b. Lake Skinner-Domenigoni Valley Core Reserve

Lake Skinner-Domenigoni Valley (LS-DV) is the largest of the core reserves, encompassing 13,158 acres including 1,988 acres of SKR occupied habitat (Figure 23). Most of core reserve is presently included in the Southwestern Riverside County MSHCP approved by USFWS and CDPG in October 1992; as noted on Table 18 the MSHCP area includes lands which MWD is still in the process of acquiring in Domenigoni Valley. LS-DV core reserve lands not presently covered by the MSHCP include property in RCHCA fee ownership and approximately 316 acres in privately held parcels for which acquisition is contemplated by the RCHCA. Upon approval of this HCP, the RCHCA will petition the MSHCP Management Committee to: 1) formally add all property under its ownership in the LS-DV reserve to the Southwestern Riverside County MSHCP, and; 2) manage those lands pursuant to the MSHCP Cooperative Management Agreement.

Within the LS-DV core reserve, MWD is the single largest property owner. This agency operates the existing reservoir at Lake Skinner and is constructing a new reservoir in the Domenigoni Valley which will be the largest in southern California. Almost all of the land within this reserve is undeveloped, but crossed by a number of dirt roads which generally facilitate SKR dispersal. Some portions of the area have been previously used for agricultural activities, particularly grazing.

The RCHCA recently executed an agreement with the USFWS, CDFG, MWD, County of Riverside, and Finisterra Farms, owner of approximately 350 acres adjacent to the MSHCP area within the LS-DV core reserve. Under this agreement Finisterra Farms will develop an extremely low density equestrian community on its property including nine residential lots, equestrian trails and facilities, and a caretakers residence. Finisterra Farms will convey a permanent conservation easement to the RCHCA covering 205 acres of SKR occupied habitat areas within its ownership, and the balance of its property will be excluded from the core reserve. The conservation easement area will be formally added to the Southwestern Riverside County MSHCP, and conserved habitat will be managed by the existing MSHCP Management Committee. In addition, that portion of the Finisterra Farms property not subject to the conservation easement will be covered by incidental take permits and pre-listing agreements issued by USFWS and CDFG for the MSHCP.

Land uses within the immediate vicinity of the LS-DV are characterized by open space, agriculture, and some very low density rural residential development. At this time the reserve is not encroached upon by surrounding incompatible development.

LS-DV was selected as a SKR core reserve due to the fact that most of this area, including land under RCHCA ownership or conservation easement, is currently in public ownership and permanently managed for conservation of SKR and other sensitive species. Although the existing LS-DV reserve SKR distribution is rather patchily distributed, its overall size provides a good measure of protection to the resident animals.

Through the establishment of the Shipley Reserve and Southwestern Riverside County MSHCP, the vast majority of the SKR occupied habitat in the reserve already is under active SKR management. The Management Committee for the multi-species reserve will conduct continuing research into the distribution and abundance of SKR under its

ecological studies program. These research activities are and will continue to be important to the development of adaptive SKR management strategies to be conducted under this HCP.

Although most of the LS-DV reserve contains appropriate soils and topography for SKR, the dominant vegetation of Riversidean sage scrub and chamise chaparral is not suitable for this species. In fact, much of the SKR occupied habitat in the reserve occurs on lands cleared of sage scrub and chamise chaparral by agriculture. SKR also are found in areas where native vegetation has been replaced by mixed European annual grassland/coastal sage scrub due to grazing and fires.

This set of circumstances had a significant influence on the proposed configuration of the LS-DV reserve. Since underlying natural conditions are not as favorable to SKR as those in other areas, reserve design gave priority to strengthening connections between SKR populations within the existing reserve over the addition of significantly more conserved habitat to the reserve periphery. Specifically, attention was focused on connecting major populations of SKR in the southern portion of the reserve around Lake Skinner to those to the north in the Shipley area. This was accomplished through RCHCA acquisition of property in locations deemed important for the establishment of corridor connections.

In regard to the suitability of vegetation for SKR, it is important to note that the recent California Fire burned much of the land in the existing Lake Skinner/Shipley/Domenigoni Valley wildlife reserves. Preliminary investigations by Dr. Michael O'Farrell indicate that SKR generally survived the fire quite well. in fact, burning of vegetation actually created a significant amount of new habitat suitable for SKR occupation. As part of its ecological studies program on the reserve, the MSHCP Management Committee will contract with a SKR biologist to document changes in distribution and abundance of SKR following the fire. This research will lead to improved management techniques for ensuring the viability of SKR populations in the reserve.

As previously noted, much of the LS-DV core reserve is covered by the Southwestern Riverside County MSHCP. That approved document designated operational and recreational areas around the Lake Skinner and Domenigoni reservoirs which are specifically excluded from the MSHCP reserve. Figure 23 depicts these operational and recreational areas, which encompass a total of approximately 5,400 acres. Within these areas MWD and the County of Riverside are authorized to conduct activities necessary to:

i. Meet water service obligations and responsibilities, including metering of water inflow into reservoirs, maintenance of water quality, and assurance of necessary public safety and security;

ii. Operate and maintain recreational facilities in the existing Lake Skinner County Park, including fishing and boating activities, camping, and trail maintenance;

iii. Operate and maintain recreational facilities at the planned Domenigoni reservoir;

iv. Maintain, repair, replace, and use existing roads, water facilities, and ancillary improvements, and subject to approval by USPWS and CDFG, to designate, construct, and use rights of way for roads, trails, flood control structures, utility corridors, sewers, water facilities, and utility lines across the reserve;

v. Construct unpaved service roads around the perimeter of the Domenigoni reservoir to ensure access for water quality measurements and treatments;

vi. Construct and operate a visitor center north of the dam embankment for the reservoir;
vii. Maintain an operations buffer around the two reservoirs, and;

viii. Construct and operate three permanent dam-keeper residences. This HCP is intended to be completely consistent with the provisions of the approved Southwestern Riverside County MSHCP concerning operational and recreational areas in the LS-DV reserve. Such areas will be not be part of the designated SKR core reserve, and the public facility operation and maintenance activities permitted under the MSHCP also will be authorized under this HCP.

c. Lake Mathews-Estelle Mountain Core Reserve

The Lake Mathews-Estelle Mountain (LM-EM) core reserve is the westernmost in the system and includes the greatest amount of SKR occupied habitat (4,264 acres). In terms of total area LM-EM is the second largest core reserve, encompassing 11,243 acres (Figure 24). The reserve is bisected in an east-west direction by Dawson Canyon, which serves to divide the area into the northern Lake M athews and southern Estelle Mountain components.

MWD is the largest landowner in the LM-EM core reserve, controlling approximately 5,113 acres. The RCHCA currently owns 4,598 acres in the reserve and, in the context of a multiple species HCP prepared cooperatively with MWD for their properties at Lake Mathews, will purchase conservation easements over an additional 1,269 acres of SKR occupied habitat on MWD properties. In addition, the RCHCA is currently negotiating with several landowners regarding dedications and acquisitions in this area. Consequently, upon its completion LM-EM will contain more RCHCA-owned lands than any of the other core reserves. As of March 1996 a total of 683 acres in private ownership remained to be either acquired or conserved through property owner agreements by the RCHCA in order to complete the LM-EM reserve.

In the northern portion of the reserve, existing land uses include the Lake Mathews reservoir facilities, MWD operations areas, large tracts of undeveloped open space, and limited unpaved internal roadways. Within MWD's holdings a 2,565 acre State Ecological Reserve was previously established through agreements between CDFG and MWD; as discussed below, this was recently expanded via the multi-species plan prepared by MWD and the RCHCA.

The Estelle Mountain portion of the reserve is an undeveloped area characterized by steep terrain and limited access via a few narrow dirt roads. The existing El Sobrante landfill site lies adjacent to the western boundary. A large-scale expansion of the landfill is planned, and this project has been the subject of lengthy discussions among Western Waste Industries (the project proponent), the County of Riverside, Riverside County Waste Resources Management District, RCHCA, USFWS, and CDFG. Since the proposed landfill expansion would result in significant impacts to SKR, California gnatcatcher, and several sensitive animal and plant species, a mitigation plan has been developed by WWI in consultation with USFWS and CDFG. That mitigation plan has been incorporated in a Final EIR which will be submitted to the Riverside County Board of Supervisors for approval in the next few months.

Principal components of the El Sobrante Landfill Expansion Mitigation Plan affecting the RCHCA include the following:

i. Upon the receipt by Western Waste Industries (WWI) of all applicable permits for operation of the landfill expansion, approximately 292 acres in the eastern potion of the project property shall be conveyed to the RCHCA as part of a permanent multi-species reserve;

ii. WWI shall pay to the County of Riverside §1.00 per ton of out-of-County waste accepted at El Sobrante for multi-species habitat acquisition and management;

iii. Upon receipt of all applicable permits for operation of the landfill expansion, WWI shall make an advance payment of $500,000 of the $1 per ton of out-ofCounty waste accepted at El Sobrante, for multi-species habitat acquisition and management;

iv. Of the $500,000 advance payment, $100,000 shall be paid by WWI upon execution of a Memorandum of Agreement with the USFWS, CDFG, RCHCA, County of Riverside, and the Riverside County Waste Resources Management District regarding multi-species habitat acquisition and management;

v. Upon receipt of all applicable permits for operation of the landfill expansion, WWI shall set aside 180 acres of the site through a non-disturbance agreement. In the event WWI or its successor of interest decide to sell the 180 acre non-disturbance area, the RCHCA shall be provided a right of first refusal to purchase the 180 acres;

vi. When the landfill expansion is complete (i.e., after closure of all phases and at the end of the post-closure monitoring and maintenance period [currently a minimum of 30 years]), including the restoration of Riversidean sage scrub in accordance with the performance standards of the Restoration Plan, the area of onsite disturbance (approximately 645 acres) shall be conveyed by a conservation easement to the RCHCA for permanent management as part of a multi-species core preserve, and the non-disturbance agreement on the 180 acres shall be eliminated.

The boundary of the LM-EM core reserve proposed in this HCP will be consistent with the above provisions of the El Sobrante Landfill expansion Final EIR. Accordingly, the boundary of the core reserve affecting lands in WWI ownership will be set pursuant to the terms of the mitigation measures contained in the Final EIR certified by the Riverside County Board of Supervisors and the terms of the above referenced Memorandum of Agreement between the RCHCA, WWI, County of Riverside, Riverside County Waste Resources Management District, USFWS, and CDFG.

It is anticipated that pursuant to the mitigation measures detailed above, 292 acres now in WWI ownership will be conveyed to RCHCA for inclusion in the core reserve, and additional lands will be added to the reserve in the future upon conveyance of conservation easements by WWI following closure of the landfill.

Within the immediate vicinity of the LM-EM reserve, land at the northern edge and northeastern edge is used primarily for agriculture and low density residential development purposes. Land to the south is generally in open space, as is much of the territory to the east of the reserve. To the west, land uses include open space, the existing El Sobrante Landfill site, rural residential development in Dawson Canyon, and existing mining operations. The Dawson Canyon area is specifically excluded from the reserve in order to preserve the rural lifestyle of existing residences.

In December of 1995 the USFWS and CDFG approved a multi-species HCP jointly prepared by MWD and RCHCA covering over 11,000 acres owned by the two agencies. This conservation plan, which fulfills the requirements of Section 10(a) of the ESA and the NCCP:

i. Creates a 5,110 acre multi-species reserve by adding 2,545 acres to the existing State Ecological Reserve around Lake Mathews;

ii. Establishes a mitigation bank for use by MWD and RCHCA based upon the conservation value of the 2,545 acres to be added to the existing reserve;

iii. Provides for the ongoing management of MWD reserve lands and RCHCA properties proposed for inclusion in the LM-EM SKR core reserve, and;

iv. Identifies approximately 40 target species for conservation and mitigation planning purposes, including providing pre-listing assurances for incidental take.

Under the Lake Mathews MSHCP reserve management will be guided by a Management Committee comprised of CDFG, USFWS, MWD, and RCHCA. Funding for management activities on MWD properties will be provided through revenues derived from RCHCA's purchase of conservation easements from MWD; the MSHCP will establish a $2.5 million non-wasting management endowment for that purpose. Pursuant to the BLM/RCHCA Assembled Land Exchange Agreement included in Appendix A, lands in the LM-EM reserve now owned by RCHCA will be traded to the BLM. Following that action BLM will assume responsibility for managing those lands pursuant to the terms of the MSHCP. BLM responsibility for SKR management in the LM-EM reserve is described in the Implementation Agreement underlying this HCP.

It is the intention of MWD to use 1,675 acres of the mitigation bank for habitat impacts occurring within its operations and project areas. The RCHCA will receive credit from USFWS and CDFG for the 1,269 acres of SKR occupied habitat as replacement habitat for take allocated under the Short-Term HCP and this HCP. In addition, the RCHCA's portion of the mitigation bank will be credited toward the conservation goals or mitigation requirements established under any multi-species HCP the RCHCA may adopt in the future.

The Lake Mathews MSHCP establishes a 729 acre Operations Area for the MWD reservoir; these properties are excluded from the habitat conserved in the MSHCP. Within the Operations Area MWD will continue to perform activities necessary to ensure water quality and the proper operation and maintenance of Lake Mathews as a water supply facility. Such activities include; control of water quality, water levels, and vegetation; water quality monitoring; operation of water storage, conveyance, and associated facilities; security measures to protect water supply integrity, and; construction and maintenance of physical structures associated with the reservoir.

Also established under the MSHCP is a 155 acre area reserved for planned capital projects. The following five projects are anticipated:

i. Construction, operation, and maintenance by MWD of a sediment basin, detention dam and basin, and saddle dam in Cajaico Creek;

ii. Construction, operation, and maintenance by MWD of a water outlet structure, tunnel, and access road as part of the Central Pool Augmentation Project;

iii. Construction, operation, and maintenance by the Western Municipal Water District (WMWD) of two water storage tanks, a pipeline extension, and improvements to an existing administrative office;

iv. Subject to further planning, construction of a tunnel and portals for a bypass system to convey water from the Colorado River Aqueduct to MWD distribution facilities, and;

v. Construction, operation, and maintenance of a series of sediment basins on the south side of Lake Mathews.

This HOP is intended to be completely consistent with the provisions of the Lake Mathews MSHCP. Accordingly, the MWD Operations Area and MWD/WMWD Project Area are excluded from the LM-EM core reserve. All activities authorized under the MSHCP aiso will be authorized under this HCP.

Lake Mathews was selected as a core reserve primarily due to the large amount of SKR occupied habitat in public ownership covered by existing or anticipated conservation arrangements. The area also has tremendous biological value for multi-species purposes; conserved public lands encompass habitat for the bald eagle, California gnatcatcher, and a large number of sensitive species and habitat types. Additionally, this reserve offers valuable opportunities for the RCHCA to conduct cooperative habitat conservation and management activities with other public agencies.

The most important SKR management issue within the Lake Mathews reserve is the need to strengthen corridor connections across Dawson Canyon. The core reserve includes land necessary for such a corridor, but its effectiveness will require regular monitoring. It is anticipated that the core reserve may need to be expanded in the future through BLM land trades to provide a wider corridor less vulnerable to edge effects. The need for such expansion will be evaluated on a regular basis by the Management Committee, and it is anticipated that adaptive management techniques will be of particular importance in ensuring the effectiveness of corridor connections.

d. San Jacinto Lake Perris Core Reserve

The San Jacinto (SJ-LP) core reserve is located southeast of the City of Moreno Valley and north of the Ramona Expressway. Encompassing a total of 10,932 acres, this is the third largest of the core reserves. However, with 3,640 acres of SKR occupied habitat SJ-LP includes the second largest amount of conserved occupied habitat for this species. Figure 25 illustrates the core reserve. All but 515 acres in the core reserve are part of either the Lake Perris State Recreation Area or the San Jacinto Wildlife Area owned by the State of California. Approximately 361 acres are owned by other public agencies, including the RCHCA.

Within the SJ-LP core reserve defined in this HCP, the 154 acres remaining in private ownership is under exclusive option to the RCHCA. The first three phases of that option agreement, involving the purchase of approximately 232 acres, have been completed by the RCHCA. This and all other property subject to the option agreement will be conveyed to CDFG by the RCHCA for purposes of expanding the San Jacinto Wildlife Area. That conveyance will be subject to appropriate conservation easements to ensure the continuation of land uses compatible with SKR.

As noted, the State of California is the primary property owner in the SJ-LP core reserve and also has responsibility for managing the majority of land through the State Department of Parks and Recreation and CDFG. The State Department of Water Resources (DWR) operates the existing reservoir at Lake Perris. MWD has limited land ownership in the SJ-LP core reserve for their Lake Perris water extraction facilities. These facilities include the Lake Perris Bypass Pipeline, Perris Power Plant, Perris Control Facility, Lakeview Pipeline, Colorado Aqueduct system, and Bernasconi Tunnels No. 1 and No. 2.

The core reserve area generally consists of undeveloped lands in the Lake Perris State Recreation Area and San Jacinto Wildlife Area, and previously farmed lands to the east. The area features some rocky and steep terrain including Mt. Russell to the north and the Bernasconi Hills to the south.

Lands containing facilities operated by MWD and State agencies for water, recreation, or other public purposes are excluded from the SJ-LP core reserve. Lands and facilities specifically excluded from this core reserve include the following:

i. Facilities operated and maintained by the California Department of Parks and Recreation for the Lake Perris State Recreation Area, including paved access roads, developed campgrounds covering approximately 742 acres near the lake, water tanks in the hills surrounding the campgrounds, and small areas west of the Lake Perris dam which are used for support and maintenance facilities and fairgrounds;

ii. The Lake Perris reservoir and ancillary facilities operated by the California Department of Water Resources;

iii. Lands and facilities associated with MWD's Lake Perris Bypass Pipeline, Perris Power Plant, Perris Control Facility, Lakeview Pipeline, Colorado Aqueduct system, Bernasconi Tunnels No. 1 and No. 2, and Inland Feeder Pipeline, and;

iv. Land and facilities associated with The Gas Company's 6900 Pipeline Project.

Land within the vicinity of the reserve is primarily in agriculture to the east, northeast, and south, with the Recreation Area to the west and residential development to the northwest. Much of the land surrounding the SJ-LP core reserve is potentially subject to future development. This situation is illustrated by the approval of the Moreno Highlands Specific Plan, a proposed 3,038 acre development including over 7,700 residential units, commercial land uses, and a golf course. Although Moreno Highlands has announced its abandonment of the project, it is evident that substantial development interest in the property will emerge in the future when local economic conditions improve.

The total size of the SJ-LP core reserve is slightly smaller than the current Study Area. Its configuration reflects the elimination of private lands with little or no SKR habitat, as well as the addition of the 386 acre Anderson acquisition adjacent to the San Jacinto Wildlife Area.

SJ-LP is the only core reserve not presently subject to a formally adopted or proposed SKR management plan. CDFG and the California Department of Parks and Recreation will develop habitat management procedures which will conserve SKR in a manner compatible with the activities of Lake Perris State Recreation Area and the San Jacinto Wildlife Area. Major issues to be addressed include: 1) management of SKR within a multi-species context, e.g., sage scrub and wetlands habitats; 2) development of procedures to ensure the ability of public agencies to conduct recreational, operational, maintenance, and water quality activities, and; 3) planning to anticipate and minimize potential habitat impacts resulting from future development in areas surrounding the reserve.

As overseer of CDFG and the Department of Parks and Recreation, the State of California Resources Agency has expressed its commitment to ensure that these two agencies will manage lands in the SJ-LP reserve consistent with the goals of this HCP.

Another potentially significant management issue is the future of Davis Road, which runs in a north-south direction through the entire reserve. This facility, presently dirt for most of its length, is planned for paving and widening under the County of Riverside's General Plan. CDFG has expressed concern over potential project impacts and has met with the County to seek abandonment of improvement plans. In light of wildlife concerns the County has informally expressed its willingness to comply with CDFG's request if a suitable alternate transportation corridor can be established. This will require appropriate transportation studies for which no funding has been identified to date.

SJ-LP was selected as a core reserve due to its extensive distribution of SKR occupied habitat which will remain in public ownership in perpetuity. With the RCHCA's completion of the Anderson acquisition, the reserve will extend east of Gilman Springs Road to the Badlands. This offers excellent potential for establishment of a regionally significant wildlife corridor for SKR and other species. Additionally, SJ-LP provides an opportunity to work cooperatively with CDFG and the State Parks and Recreation Department to manage public lands for the benefit of a species listed as threatened under the California ESA.

The anticipated long-term conservation value of the SJ-LP core reserve is high. Some of the largest contiguous blocks of SKR occupied habitat exist here, and these are well protected by natural features. With the establishment of an

active habitat management program and a corridor connection to SKR populations in the Badlands, prospects for long-term SKR persistence in the SJ-LP core reserve are quite good.

As a final note, both the MWD Inland Feeder Pipeline and The Gas Company 6900 Pipeline Projects are covered by agreements approved by USFWS and CDFG. Under the Inland Feeder Pipeline Agreement MWD will acquire and convey to CDFG 75.3 acres of land in the core reserve. Additionally, MWD will pay to the RCHCA $196,500 for the purpose of assisting the RCHCA in acquiring 154 acres of land in the core reserve under Phase 4 of the Anderson property option agreement. The 6900 Pipeline Project agreement provides for The Gas Company to pay $100,000 to CDFG for mitigation of SKR impacts. CDFG will use these funds to: 1) acquire lands contiguous to the San Jacinto Wildlife Area that contain suitable habitat for SKR, or; 2) carry out projects to enhance SKR habitat within the SJ-LP core reserve.

e. Sycamore Canyon-March Air Force Base Core Reserve

The Sycamore Canyon March Air Force Base (SC-MAFB) core reserve encompasses existing SKR reserves owned by the City of Riverside and March Air Force Base (MAFB). It is the northernmost of the seven core reserves and is located in the closest proximity to urban land uses. The SC-MAFB reserve covers 2,502 acres, with approximately 1,400 acres located within Sycamore Canyon Park in the City of Riverside and 1,000 acres contained within the SKR Management Area on March Air Force Base. The amount of SKR occupied habitat in the core reserve is fairly evenly distributed among the two components, with over 600 acres in Sycamore Canyon Park and over 700 on March Air Force Base (Figure 26). Excluded from the reserve is MWD owned land along the Box Springs Feeder, which contains facilities operated and maintained by MWD to provide necessary water services.

Virtually the entire SC-MAFB reserve is currently in public ownership. The Department of Defense owns the 1,000 acre MAFB SKR Management Area, while the City of Riverside owns and manages the Sycamore Canyon Park portion of the reserve. A very small number of privately owned acres currently exist in the reserve; it is anticipated that these will be acquired by Caltrans under the terms of a Section 7 Biological Opinion from the USFWS.

Land within the reserve is essentially undeveloped, but is crossed by underground water and gas lines and a number of dirt roads and trails. Sycamore Canyon Park is designated by the City of Riverside as a wilderness area to be protected and preserved. The City has entered into a Memorandum of Understanding with RCHCA member agencies under which it agrees to operate and maintain Sycamore Canyon Park ".in a fashion which shall not jeopardize SKR populations within its boundaries and shall enhance the likelihood of the continued existence of SKR in the wild." The RCHCA is now working with the City to develop a SKR management element for inclusion in the Sycamore Canyon Park Development Plan.

The southern portion of the SC-MAFB core reserve on March Air Force Base was established as a SKR Management Area by means of a December 4, 1991 Section 7 Biological Opinion (1-6-91-F-33). This area is currently managed by The Nature Conservancy using a $1.5 million non-wasting management endowment established under the Section 7 consultation. Details of the Biological Opinion are presented in later in this chapter.

A significant habitat management issue for the SC-MAFB reserve results from its bisection by Alessandro Boulevard, a major arterial. Under another Section 7 Biological Opinion issued for an Interstate 215 improvement project, Caltrans was required to construct culverts under Alessandro Boulevard in order to maintain a biological connection between the northern and southern portions of the reserve. Preliminary design plans for the culverts were completed, but the USFWS is no longer requiring their construction due to the cost involved. Although a reasonable decision in economic terms, the abandonment of this project is certainly problematical to the reserve due to the elimination of a direct connection between the Sycamore Canyon and MAFB SKR populations.

The other principal management issue is the extent of development surrounding the reserve. The Sycamore Canyon Park portion is presently surrounded to the north, and will be surrounded to the east, by industrial development. Immediately to the west lies the MWD Mills Treatment Plant and housing tracts. The MAFB reserve area is bordered to the west and south by residential development; land to the east is largely vacant but eventually may be developed if surplus properties are released for sale or transfer as a result of the planned realignment of MAFB. The close proximity of this development will necessitate active monitoring of the reserve to minimize predation by domestic animals and destruction of habitat by visitors. Such activities are anticipated by the City, and are intended for inclusion in the SKR management element of the Sycamore Canyon Development plan.

In conclusion, SC-MAFB was selected as a core reserve in recognition of its: 1) significant amount of SKR occupied habitat protected in Sycamore Canyon Park and the MAFB SKR Management Area; 2) existing SKR management arrangements, and; 3) public land ownership.

March Air Force Base Realignment

The future of the SC-MAFB reserve may be significantly affected by activities related to a 1993 federal decision to realign MAFB. The realignment converted MAFB from active duty status to a reserve facility effective April 1, 1996. With that action the U.S. Air Force will retain approximately 2,100 acres on the base for continuing military operations. All or most of the remaining 4,400 acres ultimately may be released for civilian use through conveyance, sale, or other methods.

A reuse plan for MAFB has been prepared by the March Joint Powers Authority, an organization recently formed by the County of Riverside and the cities of Moreno Valley, Perris, and Riverside. The Joint Powers Authority is governed by an eight member Commission consisting of two representatives of the governing bodies of each member

jurisdiction. The March Joint Powers Commission (JPC) has adopted a series of goals and strategies to guide the development of a reuse plan for MAFB. These emphasize the establishment of land uses which facilitate the creation of a wide range of employment types and opportunities on those lands released for civilian use. Among the most important goals adopted by the March JPC for the reuse plan is to replace jobs lost in the MAFB realignment with new and expanded employment opportunities.

Consistent with this fundamental purpose, the March JPC has endorsed a strategy whereby MAFB lands now defined as SKR Management and Open Space Areas would be sold to traded with private parties to secure SKR habitat in other locations which support the core reserves designated in this HCP. Due to the fact that land values on MAFB are significantly higher than those in other SKR core reserve areas, trading of the 2,200 acres in the SKR Management and Open Space Areas has the potential of securing a far greater amount of SKR habitat in the vicinity of reserves such as Lake Mathews, Lake Skinner, or the Potrero ACEC. This strategy offers a "win-win" scenario in which lands presently constrained are released for job creating uses, while a much greater amount of SKR habitat is secured to expand core reserves in areas free from the incompatible land uses which surround MAFB habitat. Recognizing the potential to significantly expand the amount of land dedicated to SKR conservation in the HCP area, the RCHCA Board of Directors has endorsed the land trade strategy and requested its consideration by the USFWS and U.S. Air Force.

In February 1995 the MAFB reuse planning process produced a Draft Land Use Plan and Alternatives. The draft plan includes the following four land use alternatives for those portions of MAFB to be made available for civilian use:

i. The "Preferred" plan, under which the 2,200 acres presently designated as the SKR Management and Open Space Areas would be made available for development in conjunction with a federal land trade program;

ii. An "Alternative" land use pattern, which also assumes the availability of the SKR Management and Open Space Areas for development;

iii. The "SKR Partially Constrained" plan based upon an assumption that the 1,000 acre SKR Management Area will remain dedicated to SKR while the 1,200 acre Open Space Area is made available for development, and;

iv. A "SKR Fully Constrained" option which assumes that the entire 2,200 acres presently dedicated as the SKR Management and Open Space Areas will remain in their present uses and therefore will be unavailable for development.

The MAFB realignment is the subject of an Environmental Impact Statement (EIS) which includes an alternative involving land trades through which the SKR Management Area and/or the Open Space Areas will be released for development. In conjunction with the EIS, the U.S. Air Force will request a Section 7 Consultation with the USFWS concerning potential impacts to listed species. Through the EIS and Section 7 Biological Opinion, these federal agencies will determine whether any of the MAFB lands designated as SKR Management and Open Space Areas will be made available for development.

At this time the eventual outcome of this process is unknown, and therefore this HCP includes the existing MAFB SKR Management Area as part of the SC-MAFB core reserve. Should the EIS and Section 7 Biological Opinion result in a release of those lands for private development, responsibility for mitigation of impacts to SKR will belong to the federal government and not the RCHCA. In the event that the SKR Management Area is made available for development or otherwise cease to be dedicated to this species, the RCHCA will amend this HCP to incorporate mitigation provisions defined in the USFWS Biological Opinion.

f. Steele Peak Core Reserve

In terms of total land area, Steele Peak is the fifth largest of the SKR core reserves, covering 1,753 acres of land in several individual tracts of publicly owned land. Approximately 860 acres or 49% of the reserve is currently occupied by SKR. The Steele Peak core reserve is located in the central portion of the plan area, lying east of Interstate 215 and north of State Highway 74 (Figure 27).

All land in the Steele Peak core reserve is presently in public ownership. A total of 1,544 acres or 88% of reserve lands are owned by the federal government and managed by BLM; the remaining 209 acres are owned by the RCHCA.

Since the Steele Peak core reserve consists of five individual blocks of land separated by intervening private properties, the most important issue in this area is the need to connect these tracts through BLM land trades. Such a connection will be necessary to ensure long-term viability of SKR populations currently living on reserve lands. Through the implementation of this HCP the RCHCA and BLM will work cooperatively to complete land trades necessary to reconfigure the core reserve into a contiguous block of public ownership.

Land uses surrounding much of the reserve include limited agricultural operations, open space, and rural residential development. To the south of the reserve, land lying within a recently annexed portion of the City of Lake Elsinore is the site of the North Peak Specific Plan, an area planned for rather extensive residential development.

g. Potrero Area of Critical Environmental Concern Core Reserve

The Potrero Area of Critical Environmental Concern (ACEC) is located south of State Highway 60 and east of Gilman Springs Road in the Badlands area of unincorporated Riverside County. (Figure 28). This area consists of steep hills and valleys covered largely by sage scrub and chaparral vegetation.

As described in Chapter , under its South Coast Resource Management Plan BLM designated 995 acres of federal land located in the Badlands area as the Potrero ACEC. The RMP calls for BLM to expand the ACEC to a total of 12,982 acres through the acquisition of 11,952 acres of land now in private ownership. Toward that end the RMP designates almost 5,000 acres currently in federal ownership as available for exchange for the sole purpose of expanding the ACEC.

In light of the fact that the Potrero ACEC has been established for the specific purpose of conserving SKR in western Riverside County, the existing 995 acre site is proposed as a core reserve in this HCP. However, since only 18 of the 995 acres are presently occupied by SKR, the ultimate value of this area to SKR conservation will depend entirely upon the results of the BLM land exchange program necessary to expand the ACEC as called for in the RMP.

Lands surrounding the Potrero ACEC are presently in open space, with some agricultural uses. The Lockheed Corporation owns over 10,000 acres in the vicinity of the reserve which is the site of the Potrero Creek Specific Plan recently annexed by the City of Beaumont. Over 11,000 housing units are contemplated in this Specific Plan development. Obviously, this scale of development poses the key issue for the future expansion and management of the Potrero ACEC.

h. Motte Rimrock Core Reserve

The Motte (MRR) core reserve is located two miles northwest of Perris roughly midway between the northeastern tip of Lake Mathews and the southwestern edge of San Jacinto. It is by far the smallest of the five reserves, encompassing approximately 638 acres including 335 acres of SKR occupied SKR habitat (Figure 29). MRR also is the most isolated of the SKR core reserves in that it is not part of a large contiguous block of conserved habitat and is largely surrounded by urbanizing land use patterns.

The entirety of the MRR reserve is presently in public ownership, with 397 acres owned and managed by the University of California at Riverside (UCR); this is the existing Motte Rimrock Reserve, an area dedicated to habitat conservation and biological research. Approximately 80 acres of land are under BLM ownership, and the balance of property in the reserve has been acquired by the RCHCA. Upon approval of this HCP all RCHCA lands within the MRR reserve will be conveyed to the UCR Natural Reserve System.

Lands within the reserve are essentially undeveloped, with natural vegetation covering approximately 96% of the total area. Within the immediate vicinity of the reserve land uses include residential development, open space, and a small amount of agriculture.

MRR was selected as a core reserve primarily for its biological values and existing pattern of public land ownership. It has also played a very important role in SKR biological research; in fact, several of the reports presented in Volume II are based upon SKR field research conducted on the UCR Motte Rimrock Reserve. Motte is anticipated to continue its leadership role in furthering SKR research due to its ability to function as a laboratory for UCR field biologists and students. Although its small size greatly reduces its individual viability as a SKR reserve, it still has significant value in the context of the overall reserve design. Inclusion of the MRR reserve reflects a RCHCA design objective of including small SKR populations as well as large ones in the reserve system.

However, due to its small size and presence of adjacent development it is anticipated that MRR will require more active and extensive management than the other SKR core reserves. This is acknowledged by UCR and will be reflected in the Motte management plan currently being prepared.

i. Completion of the Core Reserve System

As noted, the vast majority of lands contained within the core reserve system identified above are already in public ownership and dedicated to habitat conservation. The RCHCA will ensure the completion of the core reserve system through the following two actions:

i. Subject to project approval by the Riverside County Board of Supervisors, the RCHCA will execute agreements with Western Waste Industries, the County of Riverside, Riverside County Waste Resources Management District, USFWS, and CDPG concerning land dedication and other mitigation measures for the proposed expansion of the El Sobrante Landfill adjacent to the Lake Mathews core reserve, and;

ii. For the privately owned property remaining in the core reserves, the RCHCA will either: a) purchase fee simple or conservation easement interests, or; b) enter into agreements with land owners to ensure ongoing maintenance of SKR habitat.

j. Expansion of the Core Reserves

To provide additional assurances that the configuration of individual reserves and the reserve system as a whole are adequate to conserve resident SKR populations, the reserves defined in this HCP will be expanded through the use of

lands owned by the federal government. The primary assets involved in this effort will be those lands identified in the BLM South Coast Resource Management Plan as available for sale or trade. As noted previously, 12,974 acres were designated in that document as available for sale or trade. Of that total, 4,818 acres will be retained by BLM, with 1,815 of those acres included in the Motte Rimrock, Steele Peak and Potrero ACEC core reserves. Both the RCHCA/BLM Assembled Land Exchange Agreement and a list of all BLM trade properties are included in Appendix A.

A total of 8,156 acres of federal land under BLM management will be available for trade for the purpose of expanding SKR core reserves. The BLM District Manager and Area Manager have pledged to devote the entirety of that acreage to SKR core reserve expansion. This will involve the trading of BLM lands with owners of private property located within the HCP area. Such trades will be conducted by BLM pursuant to the terms of the Assembled Land Exchange Agreement and provisions of applicable federal laws, regulations, and policies.
In addition to these BLM trade lands, it is anticipated that the core reserves could be expanded as a result of the realignment of MAFB. If the EIS and USFWS Section 7 Biological Opinion result in land trades involving all or a portion of the existing 1,000 acre SKR Management and 1,200 acre Open Space Areas, it is expected that lands obtained in trade will serve to expand both the total acreage and SKR occupied habitat included within the SKR core reserves.

The objective of these core reserve expansion activities will be to increase the amount of SKR occupied habitat in the reserve system to a total of approximately 15,000 acres. This level of SKR occupied habitat conservation has been deemed sufficient by USFWS and CDFG to meet federal and State HCP approval criteria given the level of incidental take contemplated in this plan. It is the opinion of the RCHCA that with the establishment, expansion, and ongoing management of the SKR core reserves as provided herein, incidental take of SKR populations outside of those reserves will not appreciably reduce the likelihood of the species' survival within the plan area.

k. Ongoing Management of Conserved SKR Habitat in the Core Reserve System

The RCHCA will ensure ongoing management of SKR habitat in the core reserve system by: 1) coordinating existing and proposed institutional arrangements for land management in the reserves, and; 2) establishing non-wasting endowments for SKR habitat management, species monitoring, and biological research activities within specific core reserves. The RCHCA, U.S. Department of Interior, BLM, State of California, CDFG, and California Department of Parks and Recreation will ensure that adequate funding for these activities will be provided through funds and in-kind contributions provided by these entities. The proposed habitat management program is described later in this Chapter in C. Conservation, Mitigation, and Monitoring Measures.

Additional information concerning management of conserved SKR habitat in the core reserve system is presented in D. Plan Implementation.

l. Habitat Replacement Requirement Prior to Completion of the Core Reserve System

Until the RCHCA has acquired or otherwise assured the conservation of the 1,153 acres of private property remaining in the core reserve system defined in this HCP, the 1:1 SKR habitat replacement requirement established under the Short-Term HCP will be continued. More specifically, until the RCHCA has completed that core reserve conservation commitment, for every acre of SKR occupied habitat incidentally taken under authority of this HCP, the RCHCA will acquire and conserve an acre of suitable habitat in a core reserve location approved by USFWS. Consistent with the provisions of the RCHCA's existing permit and agreement, "suitable habitat" is defined as follows:

"...lands which are occupied by SKR, as well as lands that are not occupied by SKR but which would benefit SKR if included in a reserve operated and maintained to preserve SKR and its habitat, including, but not limited to potential SKR habitat, wildlife corridors, areas connecting patches of occupied SKR habitat, and areas buffering SKR occupied habitat from adjacent land uses."

During the period prior to completion of the core reserve acquisitions, the RCHCA will ensure that the amount of SKR occupied habitat incidentally taken under authority of the HCP at no time exceeds the amount of replacement suitable habitat acquired. For purposes of this calculation all incidental take and all replacement acreage approved for credit by USFWS and CDFG under both the Short-Term and Long-Term HCP will be included.

After the RCHCA has completed the core reserve system the 1:1 habitat replacement requirement will terminate.

m. RCHCA Funding

Pursuant to the provisions of the HCP implementation budget presented later in this Chapter, the RCHCA will provide $11.7 million to finance HCP implementation activities. Included in this total are existing RCHCA cash assets and sums to be provided by the RCHCA and its member agencies pursuant to the terms of the HCP Implementation Agreement.

n. SKR Incidental Take Records

During the period prior to the completion of the core reserves, the RCHCA and its member agencies will maintain records concerning all incidental take of SKR occurring under authority of this HCP. Those records will be forwarded to the RCHCA by its member agencies on a regular basis and will be reported annually to USFWS and CDFG by the RCHCA. After core reserves have been completed, incidental take will be recorded and reported only for lands within the core reserves.

o. SKR Biological Surveys

In order to document incidental take of SKR occupied habitat in core reserves, the RCHCA and its member agencies will, with the exceptions noted below, require SKR biological surveys prior to issuing permits for activities involving land disturbance in core reserves. Additionally, until the RCHCA has completed the core reserves land disturbance activities occurring in the HCP area but outside of core reserves will be subject to SKR surveys if the most current SKR distribution mapping shows the project location to be within known SKR occupied habitat. Under the provisions of this HCP SKR biological surveys will not be required for the following activities:

i. Actions taken by public agencies in response to emergency conditions will be allowed to proceed without the prior completion of SKR biological surveys, regardless of their location in the HCP area;

ii. Permitted activities which are not subject to CEQA and NEPA and do not authorize land disturbance;

iii. Permitted activities for secondary structures, e.g., garages, "granny units", and swimming pools;

iv. Land disturbance for agricultural purposes, other than the construction of agricultural structures requiring building permits;

v. As detailed below in r. Fire Prevention Activities, clearance of flammable vegetation for fire prevention purposes, and;

vi. Actions taken by public agencies to operate and/or maintain existing public facilities including, but not limited to, roads and transportation facilities, drainage and flood control facilities, public buildings, landfills and appurtenant facilities, water storage, treatment, and transmission facilities, sewerage transmission and treatment facilities, reclaimed water storage and transmission facilities, public parks, and utility pipelines and transmission lines.

After the RCHCA has completed the core reserves as provided herein, SKR biological surveys will not be required under this HCP for activities occurring on lands outside of core reserves. Within the core reserves SKR surveys will be required by RCHCA member agencies for land disturbance activities other than those described above which require permits.

The above exemptions for SKR biological surveys shall not override or in any way alter the requirements of NEPA and CEQA for performance of biological surveys.

p. Issuance of Incidental Take Authorizations

Subject to the exceptions described above, during the period prior to the completion of the core reserve system incidental take will be subject to authorization by RCHCA member agencies. Incidental take authorizations will be issued pursuant to the same procedures currently employed under the Short-Term HCP. Applicants normally are given take authorizations in conjunction with land disturbance permits, e.g., those involving grading, building, surface mining, and mobile home installation.

In cases where an entity exempt from RCHCA member agency permits requests an incidental take authorization under this HCP, the RCHCA will issue such authorizations directly to the requesting entity. This would most commonly arise when water or school districts propose activities resulting in incidental take of SKR. In such cases the RCHCA will have the ability to issue incidental take authorizations directly to the requesting agency.

q. Emergency Response Activities

During the three-year period of the Short-Term HCP RCHCA members experienced severe earthquakes, wildfires, and flooding which resulted in extensive property losses. Since such emergencies likely will continue to occur during the next thirty years, protection of public health, safety, and welfare requires that activities necessary to respond to these conditions must proceed without delay. Accordingly, any incidental take of SKR which may occur as a result of these emergency response activities will be permitted under the terms of this HCP. Such incidental take is authorized by the ESA pursuant to CFR Section 17.21(c)(2).

RCHCA member agencies shall not be prohibited from repairing public facilities damaged or destroyed as a result of any natural or manmade disaster, or be required to provide mitigation for impacts to SKR which may have occurred during any such event.

r. Fire Prevention Activities

As another measure essential to the protection of lives and property, this HCP will provide authorization for property owners to take actions necessary to clear flammable vegetation in order to reduce the risk of fire. All owners of property within the HCP area, including those within core reserves, will be permitted to perform the following flammable vegetation clearance activities deemed essential for protection of lives and property against the threat of fire:

Improved Property

Property owners or their lessees and RCHCA member agencies will be permitted to clear all flammable vegetation up to 100 feet around all improvements using methods, including discing, which expose bare mineral soil. Where the distance from the improvement to the property line of the parcel on which the improvement is located is less than the distance required to be cleared, the adjacent owner, lessee, or RCHCA member agency will be permitted to clear an area on his/her property sufficient to establish the required fire break.

Vacant Unimproved Property

For vacant unimproved property, owners or their lessees and RCHCA member agencies will be permitted to clear all flammable vegetation down to bare mineral soil using methods, including discing, to establish a fire break at the property line of up to 100 feet. Property owners or their lessees and RCHCA member agencies will be permitted to exceed this 100-foot width if such a fire break is deemed necessary by the local fire department to protect public safety and welfare.

Property owners or their lessees and the member agencies will not be required to perform SKR surveys or pay SKR mitigation fees as a condition precedent to performance of these fire protection activities. It is understood that the conservation provisions of this HCP will provide mitigation for incidental take of SKR resulting from these fire prevention activities.

In order to minimize potential impacts to SKR, any weed abatement notice or hazard reduction notice issued for property within an area known or believed to be occupied by SKR will recommend use of shallow discing (i.e., depths of five inches or less) when possible. The above fire prevention activities are more fully described in a separate Cooperative Agreement recently executed among the USFWS, CDFG, and all eight member agencies of the RCHCA.

s. Public Facility Improvements

In order to carry out their responsibility to ensure the health, safety, and welfare of the general public, public agencies in the HCP area must maintain their ability to construct public facilities identified in General Plans, Transportation Improvement Plans, Capital Improvement Plans, and other adopted documents. Accordingly, under the terms of this HCP public agencies will be permitted to construct public facilities including, but not limited to, the following:

i. Construction of public roadways to their ultimate width as identified in adopted General Plans;

ii. Construction of improvements identified in adopted local Transportation Improvement Programs;

iii. Construction of cooperative projects undertaken between public agencies in the HCP area and other cities, counties, water districts, Caltrans, the U.S. Army Corps of Engineers, and any other federal and State agencies, and;

iv. Construction of other public facilities and projects identified in adopted local General Plans or Capital Improvement Programs.

Construction of the above public facilities will be permitted in core reserves provided that the sponsoring agenc(y)(ies) mitigate on a 1:1 basis for all SKR occupied habitat disturbed as a result of the project. Specifically, for each acre of SKR occupied habitat disturbed in a core reserve, the sponsoring agency will acquire and permanently dedicate to SKR conservation a replacement acre of SKR occupied habitat. The location of such replacement acreage will be subject to approval by USFWS and CDFG.

For purposes of this section, public facilities shall include all public improvements, public services, and community amenities.

t. Public Facility Operations and Maintenance Activities

As a final category of public safety and welfare measures, this HCP is intended to allow RCHCA member agencies, MWD and other water agencies, flood control districts, utility companies, and other public entities to conduct those activities necessary to operate and maintain public facilities located throughout the plan area. Such facilities include, but are not limited to: publicly maintained roads and their rightsof-way; flood control facilities; landfills and related operations; public buildings; schools; water storage, treatment, and transmission facilities; sewerage transmission and treatment facilities; reclaimed water storage and transmission facilities; public parks, and; utility pipelines and transmission lines.

This provision includes only public facilities located within the HCP area, and is intended to cover those activities necessary for their operation and maintenance. Such activities include, but are not limited to: grading and paving of public roadway surfaces and road shoulders; regular covering of landfills and appurtenant earth movement; clearance of flood control channels and operation of flood control facilities; regular upkeep of buildings and grounds; monitoring and repair of water storage, treatment, and transmission facilities, sewerage transmission and treatment facilities, reclaimed water storage and transmission facilities, gas and electric distribution lines and operations buildings.

Operation and maintenance of MWD facilities in the Lake Mathews and Lake Skinner core reserves are addressed in detail in the MWD/RCHCA Southwestern Riverside County MSHCP and Lake Mathews MSHCP. Within MWD lands contained in the core reserves, the terms and conditions of those MSHCP's will not be superseded by this HCP.

More detailed information concerning public facility operations and maintenance activities authorized under this HCP is presented in Appendix F.

u. Agricultural Operations

In general, dryland farming occurring in the HCP area has been shown not to be incompatible with SKR. The species is known to coexist with ongoing agricultural operations in several portions of the HCP area. Given that situation and the tremendous importance of agriculture to the economy of western Riverside County, this HCP intends to facilitate the continuation of farming in the plan area. Bona tide agricultural operations located in the HCP area will not be required to perform SKR biological surveys. Additionally, take of SKR occurring incidental to agricultural operations will be permitted under this HCP.

For the purposes of this HCP determinations of bona fide agricultural operations will be made by the Riverside County Agricultural Commissioner.

v. HCP Participation by Land Owners Outside of Plan Area

During the process of developing this HCP the RCHCA was requested to develop a procedure under which individuals in Riverside County who own land outside its boundaries could participate in this HCP. More specifically, it was requested that the HCP include provisions for such individuals to gain access to SKR incidental take permits.

The terms and conditions of this HCP are intended to meet all FESA and CESA criteria by assuring SKR persistence in the plan area and minimizing and mitigating incidental take. The level of conservation provided is considered adequate to meet these criteria within the plan area; it is not designed to assure SKR survival outside the HCP boundaries, or mitigate any incidental take occurring in those areas. Thus, when contemplating a mechanism for facilitating outside participation in the HCP the RCHCA determined that any requests from outside the plan area for incidental take authorizations under this plan must provide full mitigation.

It is the intent of this HCP to allow individual land owners outside the plan area to receive incidental take authorizations from the RCHCA if, and only if, such owners acquire replacement SKR habitat on a 1:1 basis for all SKR occupied acres incidentally taken and convey such acreage to the RCHCA for inclusion in the SKR core reserve system. In such cases the land owner would submit a current SKR biological survey to the RCHCA as the basis for determining the amount of incidental take to be allocated. In order to receive an incidental take allocation the land owner would acquire and convey to the RCHCA, at the land owner's expense, replacement SKR occupied habitat in at least the same amount and quality as that to be incidentally taken. All replacement habitat would be subject to specific approval by the RCHCA, USFWS, and CDFG. Upon receipt of approval from those agencies and execution of a suitable land conveyance agreement, the RCHCA would issue the appropriate incidental take authorization.

w. Credit for Conservation of Biological Resource Values on Lands Acquired Under the Short-Term and Long-Term HCP

As previously noted, following USFWS and CDFG approval of this HCP it is the intention of the RCHCA to expand this document into a habitat and ecosystem based plan that will provide for conservation of many other species. The core reserves designated in this HCP are intended to provide the basis for a regional multiple species reserve system. Accordingly, the RCHCA will seek appropriate conservation credit from the USFWS and CDFG for all natural resource values present on lands acquired pursuant to this HCP and its predecessor Short-Term HCP.

In the Implementation Agreement for this HCP, the RCHCA, USFWS, BLM, U.S. Department of Interior, State of California Resources Agency, and CDFG agree to the following items concerning a RCHCA multi-species/multi-habitat conservation plan (MSHCP):

i. The SKR core reserves established under this HCP shall be credited toward any minimization or mitigation requirement of the MSHCP;

ii. All other lands currently conserved and managed for conservation of species in western Riverside County which are located within MSHCP area shall be credited toward any minimization and mitigation requirement and be accepted as a component of the MSHCP;

iii. No less than 30,000 acres of federal lands currently administered by BLM shall be made available for either conservation or sale and exchange in support of the MSHCP; 148

iv. Technical staff from the BLM, LJSFWS, and CDFG will be readily available to assist in the development of the MSHCP;

v. The RCHCA, U.S. Department of Interior, USFWS, BLM, State of California Resources Agency, and CDFG shall commence immediate discussions and negotiations necessary to prepare and draft the MSHCP for

submission to the USFWS and CDFG, and;

vi. The above parties will expedite any environmental review of the MSHCP and alternatives thereto as may be required under CEQA and NEPA.

It is anticipated that details of the biological resource credits to be applied to a multihabitat/multi-species habitat conservation plan will be defined in agreements among the RCHCA, USFWS, BLM, and CDFG following approval of this HCP.

2. Conservation Value of the SKR Reserve System

Presented in this section is an evaluation of the conservation value of the core reserve system described above. This evaluation includes an assessment of the conformance of reserves to general conservation principles and SKR population viability assessments performed to date.

a. Conformance with General Conservation Principles

As an initial step in the review, the general principles of conservation biology were phrased as questions and applied to individual reserves and the reserve systems a whole. The questions and initial responses are as follows:

Q: Are the reserves well distributed across the species' native range?

The proposed core reserve system includes SKR populations from all portions of its remaining range within the HCP area; this includes seven individual reserve units.

Q: Do the reserves include large blocks of habitat with large populations of the target species?

Two of the proposed core reserves (San Jacinto-Lake Perris and Lake Mathews-Estelle Mountain) each contain more than 3,600 acres of SKR occupied habitat, and two others (Lake Skinner-Domenigoni Valley and Sycamore Canyon-March AFB) encompass more than 1,200 acres of such land. With the exception of Potrero ACEC, all of the other reserves also contain substantial blocks of habitat.

Q: Are the blocks of habitat close together?

Within each of the reserves blocks of SKR occupied habitat generally occur within the known dispersal limits of this species; thus, they may be considered functionally interconnected. As previously mentioned, concerns exist over habitat block connections in the Sycamore Canyon-March Air Force Base and Lake Mathews-Estelle Mountain reserves.

Q: Does the conserved habitat occur in contiguous blocks rather than fragments?

The characteristics of SKR distribution in the HCP area generally reflect some degree of fragmentation; this is not considered an unnatural condition or indicative of habitat inadequacies. Within these constraints, the proposed core reserve system incorporates the largest remaining interconnected blocks of habitat for the SKR known to occur in the plan area.

Q: Do the habitat patches in the reserve have minimal edge-to-area ratios?

Within the constraints of existing land uses and distribution characteristics of SKR occupied habitat, the proposed core reserves are intended to minimize edge-to-area ratios. However, this goal is quite difficult to achieve in certain areas due to the cost of acquiring enough privately held land to absolutely ensure edge ratio minimization. In areas where edge effects may be problematical, core reserve management activities will focus on critical edge areas.

Q: Are there interconnected blocks of habitat, and do the corridors or linkages between such blocks include protected, preferred habitat for the target species?

SKR occupied habitat within each of the reserves is found within a mosaic of native habitats which provides for migration and mixing of animals. A number of desirable habitat connections between SKR core reserves have been identified by the RCHCA and will be pursued within the context of a multi-species HCP.

Q: Are the blocks of conserved habitat essentially roadless or otherwise inaccessible to humans?

Due to the urbanized nature of western Riverside County, no completely roadless areas exist on lands suitable for SKR. For the most part, lands included within the core reserve system encompass areas with the least amount of potential human access in this part of the county.

b. Connectivity to Other Natural Open Space

Empirical data collected during the research studies presented in Volume II indicate that SKR generally are relatively sedentary and genetically homogeneous. No data presently available provide compelling evidence that connections between core reserves are essential to long-term SKR persistence in the HCP area. Accordingly, the reserve design proposed in this HCP places highest priority on establishing individual reserves of sufficient number and size. Given

existing development patterns and the RCHCA's financial resource limitations, this HCP cannot guarantee the establishment of specific connections between individual reserves or from reserves to other public lands. However, the core reserves established for this HCP certainly create a foundation for a multiple species reserve system such as that described in the draft MSHCS (see Chapter 1. Purpose, Scope, and Planning Context).

With the exception of Motte Rimrock, each of the SKR core reserves designated in this HCP offers potential connections to other public lands. The Lake Skinner-Domenigoni Valley reserve is part of a largely contiguous block of potential SKR habitat which extends east to the San Bernardino National Forest, and southeast through the Vail Lake area to the Cleveland National Forest. Habitats found in these areas are predominantly chamise chaparral but also include European annual grassland, coast live oak forest, riparian forest, and desert chaparral. All land within these potential corridors is presently unincorporated, and is under much less development pressure than areas to the north (Hemet), west (State Highway 79/French Valley), and south (Temecula). If adequate funding is available under a future multi-species HCP, significant connections between the Lake Skinner reserve and nearby blocks of relatively undisturbed habitat could be acquired at a comparatively modest cost.

The northeast portion of the San Jacinto-Lake Perris reserve near Mystic Lake extends just east of Oilman Springs Road and abuts the Badlands. The Badlands include numerous patches of SKR occupied habitat, generally in areas of lesser slope. This area also contains relatively large blocks of Riversidean sage scrub, mixed European annual grassland/sage scrub, and chamise chaparral habitats which extend into the San Bernardino National Forest. As previously mentioned, the RCHCA has initiated acquisition of property intended to facilitate conservation of a wildlife corridor between the San Jacinto core reserve and the Badlands.

The Lake Mathews-Estelle Mountain core reserve is part of a contiguous area of mixed European annual grassland/Riversidean sage scrub, Riversidean sage scrub, chamise chaparral, and European annual grassland habitats which extend along the east side of Interstate 15 between State Highway 91 and Interstate 215. Much of this area features relatively steep slopes not subject to development. Accordingly, opportunities exist to acquire land connecting the Lake Mathews reserve with natural open space areas to the southeast and east. The southern portion of this reserve also may be linked to the Cleveland National Forest through the Temescal Wash. The Wash extends to the southwest, crosses under Temescal Canyon Road, an abandoned railroad line, and Interstate 15, and continues into the Cleveland National Forest. Finally, an existing wash adjacent to Indian Truck Trail which flows into Temescal Wash offers another potential connection to the Lake Mathews-Estelle Mountain core reserve. The RCHCA has participated in discussions with USFWS, CDFG, RCROSPD, and the U.S. Forest Service to jointly identify potential wildlife corridor connections between the Lake Mathews-Estelle Mountain core reserve and the Cleveland National Forest.

The Sycamore Canyon-March Air Force Base reserve is part of a continuous stretch of disturbed mixed European annual grassland habitat extending to the northeast across State Highway 60 into the Box Springs Mountains. A potential corridor connection exists between the core reserve and Box Springs Mountain Park. However, actual establishment of the corridor would be quite difficult due to high land acquisition costs and the close proximity of urban development.

As previously noted, Motte Rimrock is the most isolated of the SKR core reserves. Its habitat is not part of a large contiguous block, and is largely surrounded by urbanization. Due to the existing development patterns, extensive parcelization, and relatively high land values, the establishment of a corridor connection between Motte and blocks of open space in the Steele Peak area is deemed infeasible.

c. Potential for Edge Effects

The extensive urbanization of the HCP area makes the establishment of large, isolated SKR reserves virtually impossible. Thus, the outer boundaries of reserve areas potentially are subject to impacts resulting from activities occurring on land located just outside of reserves. This phenomenon, generally referred to as edge effects, is an important consideration in reserve design. To the extent practicable within the HCP area, the RCHCA has designed SKR core reserves in a fashion which attempts to minimize the potential for adverse impacts resulting from edge effects.

As previously noted, SKR occupied habitat in the Lake Skinner-Domenigoni Valley reserve is distributed in patchy fashion with relatively few large contiguous blocks. This tends to increase the potential for edge effects, since larger proportions of each total patch area are exposed to impacts from adjacent lands. The area of this reserve deemed most vulnerable to edge effects is located along the southern border of the reserve south and southeast of the lake. Additionally, the westernmost portion of the reserve is subject to some degree of edge effects from rural residential development; however, given the very low density character of development this is not considered a significant threat.

Most of the SKR occupied habitat in the San Jacinto-Lake Perris reserve occurs west of Davis Road and northeast of the Lake Perris reservoir in the State Recreation Area. The steep and rugged hills along the northwest boundary of the reserve act as a buffer to protect the occupied habitat from development in Moreno Valley. Additional buffering is provided by the Bernasconi Hills to the south, which separates patches of SKR occupied habitat from the Ramona Expressway. Overall, patches of SKR occupied habitat in this reserve are fairly well protected by topographic features or large expanses of land. However, small patches of SKR occupied habitat located along Davis Road are potentially vulnerable to the effects of the roadway and adjacent land uses.

SKR occupied habitat in the southern portion of Lake Mathews-Estelle Mountain reserve is not highly vulnerable to edge effects from adjacent land uses due to paucity of development and steep terrain found in that portion of the reserve. Greater potential exposure exists in the northern portion of the reserve where some areas lie adjacent to low

density rural residential development. The areas most susceptible to edge effects are: 1) the northeastern portion of the reserve where MWD land abuts rural residential development; 2) land within the immediate vicinity of Dawson Canyon rural residences, and; 3) occupied habitat patches within the vicinity of Cajaico Road, a principal thoroughfare in the area.

In its present configuration, Steele Peak embodies a relatively high degree of edge effect potential due to the absence of connections among the five blocks of land which comprise the reserve. Although the intervening properties are in open space, each of these core reserve land blocks would be vulnerable to edge effects if development occurs in these areas. The greatest potential for such development occurs in the southerly portion of the reserve, where two BLM land holdings are surrounded by the North Peak Specific Plan site. However, edge effect potential is somewhat ameliorated by steep terrain which provides significant protection for SKR habitat patches located in flatter valley areas.

Patches of SKR occupied habitat in the Sycamore Canyon-March Air Force Base reserve are among the most vulnerable to edge effects in the core reserves. This is due to the absence of natural (i.e., topographic) protective features and the nearby presence of residential and industrial development. While habitat patches in the central portion of Sycamore Canyon Park are relatively sheltered, those located near the boundaries of the reserve are vulnerable to impacts from surrounding development.

Of all the SKR core reserves Motte Rimrock is probably the most vulnerable to edge effects due to its small size, relatively flat topography, and proximity of development. As noted previously, this situation necessitates a more active management approach to minimize adverse impacts on resident SKR populations. Additional analysis of the potential for edge effects in SKR core reserves is presented in the Joint Environmental Impact Statement/ Environmental Impact Report included as Volume III to this HCP.

d. Minimum Viable Population Assessments

The last major issue to be addressed in the reserve design process involves a determination of the minimum number of individual animals that must be included in the reserve system in order to ensure species survival. This requires an identification of the size of minimum viable populations or set of populations (metapopulation) of the species within the planning area.

The prediction of population persistence for any species outside of controlled laboratory conditions is a difficult undertaking. Since the early stages of the Short-Term HCP planning process several assessments of the minimum viable population necessary to ensure conservation of the SKR have been developed, including the PVA model developed by Dr. Michael Gilpin for the RCHCA. These assessments have been developed with increasing levels of data and sophistication of methodologies.

Technical Advisory Committee Assessment

At the outset of the Short-Term HCP planning process, a Technical Advisory Committee (TAC) comprised of biologists with SKR expertise made some preliminary estimates of the conservation needs of this species in western Riverside County. Based on the limited scientific data available at the time, the TAC contemplated the need for a system consisting of six reserves each encompassing approximately five square miles (3,200 acres). It was assumed that 25% of the total acreage within the reserves would be occupied by SKR. Overall, this reserve system would encompass 19,200 acres, of which 4,800 acres would be occupied by SKR. The TAC assessment of minimum viable SKR population, based more on field experience and intuition than on scientific data, was intended only as an initial point of departure for more scientifically rigorous approaches.

The core reserve system proposed in this HCP consists of seven reserves encompassing 41,221 acres, including 12,460 acres of SKR occupied habitat. Accordingly, it far exceeds the initial TAC criteria in terms of total acreage and the a99"egate amount of SKR occupied habitat. In both categories, the proposed reserve system includes more than twice as many acres as called for in the TAC assessment. In fact, two of the reserves (Lake Mathews-Estelle Mountain and San Jacinto-Lake Perris) each includes almost as many acres of SKR occupied habitat as were thought to be needed in the entire reserve system.

Price and Endo Assessment

In a paper focused on the management implications of the distribution and abundance data available for the SKR, Price and Endo (1989) made several suggestions relevant to ultimate reserve configurations. These scientists approached the question from the perspective of minimum population densities necessary to maintain viable populations. Assuming the need to maintain populations of 100 or more individuals, and that minimum densities should not be lower than three SKR per hectare, they concluded that the minimum conserved area would have to encompass at least 33 hectares of occupied habitat. Taking into account errors inherent in measurement and estimation of climate fluctuation. Price and Endo determined that this area should be increased by a factor of 2 or 3 in order to ensure a conservative approach. That would result in a minimum reserve size of approximately 1 km^2 or 330 acres. They further suggested that several large reserves distributed throughout the range rather than many small reserves would be more effective in conserving of the species.

The proposed SKR core system also far exceeds these criteria proposed by Price and Endo (1989), both in total size and SKR occupied habitat.

Burke et al. Assessment

A more formal assessment of minimum viable population for the SKR was published by Burke et al. (1991) as the result of a class project under the direction of Dr. Michael Soule. This assessment employed a non-spatially explicit metapopulation model. The modeling incorporated currently available mathematical tools and included consideration of environmental, but not demographic, stochasticity. Using an assumption of uniform distribution of SKR at densities of 10 individuals per hectare (based on O'Farrell and Uptain 1989), Burke et al. proposed that a minimum reserve size of approximately 3,300 acres would be necessary to meet a goal of 95% probability of persistence for 100 years. They furthermore suggested that at least three reserves meeting this standard should be established, with one or more located at relatively high elevation. The Burke assessment also suggested that one of these populations should be located in San Diego County i" the vicinity of Lake Henshaw.

The core reserve system proposed in this HCP meets the standards identified by Burke et al. for the western Riverside County portion of the SKR range. Specifically, three of the reserves are larger than 3,300 acres and several more substantial units are established as well. The Burke criterion for inclusion of higher elevation populations is met in the Estelle Mountain portion of the Lake Mathews reserve, and also in portions of the Steele Peak reserve. Within the total known range of the species the only other location where a minimum of 3,300 acres could be feasibly assembled and managed for SKR would be in the Lake Henshaw area of San Diego County, a location well outside of this HCP area.

It should be noted that the actual distribution of SKR in the HCP area is far from uniform as assumed in the Burke et al assessment. This situation would seem to imply a need for larger reserves which include corridor connections between patches of SKR occupied habitat. However, any estimation of the specific changes produced in the Burke MVP assessment by assumptions of non-uniform SKR distribution would be speculative.

Gilpin Assessment

For the purposes of applying the best available tools to the task of optimizing the SKR reserve design process. Dr. Michael Gilpin developed a spatially explicit metapopulation model to be used interactively with other biological and non-biological data (see Report No. 12 in Volume II). As compared with other models available for MVP assessment, the Gilpin approach is more refined in that it:

i. Incorporates environmental and demographic stochasticity;

ii. Assumes densities of SKR actually observed in the field;

iii. Results in persistence probabilities dependent upon both area and configuration of occupied habitat, and;

iv. Allows relative comparisons between alternate habitat configurations.

Salient assumptions incorporated into the Gilpin PVA model include the following: (see Report 12 in Volume II for details)

i. Habitat distribution will remain the same into the future;

ii. Edge effects are minimal;

iii. Other input parameters have inconsequential effects on order, and;

iv. Predicted persistence times are not subject to validation. The fundamental value of the Gilpin model in the reserve design process is that it appears to be biologically intuitive and robust when used in comparative analyses. The model converts basic biological assumptions into a simple set of logical relationships in order to permit their simultaneous consideration throughout the modeled area. As a result, it provides a vehicle for meaningful cost/benefit analysis by assigning biological values to parcels which can be compared to projected acquisition costs and relevant land use considerations.

Notwithstanding the power and value of the Gilpin model, there are several missing biological features which must be recognized when interpreting its results. Specifically, the Gilpin model does not incorporate the following three factors:

i. The potential effects of epidemic diseases on SKR distribution;

ii. Successional characteristics of vegetation, and;

iii. Natural catastrophic events, e.g., floods.

As a result of these omissions the model assumes relative immunity of SKR from the type of catastrophic events which may occasionally occur in the HCP area. It also assumes static vegetation characteristics and therefore does not account for changes in SKR distribution due to modifications in plant cover which could be expected to occur over time. In general, these limitations result in an assumption that habitat distribution or carrying capacity for SKR will remain the same into the future. This was a simplifying assumption employed in the modeling process to allow for

computational ease. What this implies, however, is that monitoring and management activities conducted under this HCP will need to focus on maintaining at least the initial acreage and configurations of SKR occupied habitat within core reserves.

As with other MVP assessments, persistence predictions are not easily subject to validation; each is sensitive to initial assumptions and conditions. The general conclusion reached by repeated runs of the Gilpin model using a lambda value of 1.15 (i.e., assuming an average annual population increase of 15%) is that a system of five of the reserves as configured herein (i.e .. Lake Mathews-Estelle Mountain, Lake Skinner-Domenigoni Valley, Motte Rimrock, San Jacinto-Lake Perris, and Sycamore Canyon-March AFB) has an 80% probability of persistence for 100 years. When run with a less conservative lambda value of 1.2, SKR in two of the core reserves (Lake Mathews-Estelle Mountain and San Jacinto-Lake Perris) and in the reserve system as a whole are predicted to persist for 100 years more than 95% of the time.

Since the addition of the BLM managed Steele Peak and Potrero ACEC reserves occurred only recently, the RCHCA has not had an opportunity to run the Gilpin model using the full seven core reserves. However, common sense would dictate that the addition of two reserves not surrounded by development would serve to increase the probability of SKR persistence in the plan area.

Minimum Viable Populations Assessment Conclusion

The prediction of minimum viable population for SKR is fairly characterized as an inexact science. Empirical data concerning this species has not been collected over an area sufficiently broad, or over a time period of sufficient length, to lend a large measure of confidence to SKR persistence predictions. However, since reserve design decisions cannot await the collection and analysis of such data, the RCHCA must employ the best scientific techniques available at this time. This has been done, and the reserve system SKR persistence probabilities discussed herein must be interpreted as nothing more than the best educated guesses we can make at this time. In reality, the only real test of SKR persistence is time.

The RCHCA has endeavored to develop a proposed core reserve system using the most current conservation theory and predictive tools. If expanded to include 15,000 acres of conserved SKR occupied habitat, the proposed core reserve system achieves a 95% probability of persistence for 100 years, and meets general reserve design objectives and specific MVP objectives. Conservation of 15,000 acres of SKR occupied habitat has been determined by the USFWS and CDFG to constitute an adequate probability of persistence for this species in the plan area.

For the following reasons, this HCP provides additional assurances that this incidental take authorized pursuant to this HCP will not diminish the likelihood of persistence of SKR within the plan area:

i. Not all remaining SKR habitat outside of the core reserves is likely to be incidentally taken;

ii. The probability of persistence will increase due to the BLM's commitment to expand suitable SKR habitat within the reserve system through land trades involving 10,700 acres of federal land;

iii. Monitoring of SKR populations in the reserves will facilitate early identification of problems, and adaptive management practices will be implemented to assure the survival of the SKR in the reserves, and;

iv. The core reserve system encompasses large areas of natural landscape in addition to the SKR occupied habitat, thus providing for conservation of the ecosystem upon which the SKR depends.

3. Permit Period and Plan Area

The permit and agreement sought by the RCHCA would be valid for thirty years and would authorize incidental take of SKR on lands within the HCP area. The HCP area encompasses 533,954 acres within the jurisdictions of the County of Riverside and Cities of Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside, and Temecula. The HCP area encompasses approximately 30,000 acres of SKR occupied habitat (Figure 29). Other lands within the jurisdictions of RCHCA members, and lands within the Cities of Banning, Beaumont, Canyon Lake, Noreo, and San Jacinto will not be covered by the permit and agreement. However, this HCP provides for potential modifications to the plan area and the addition of new RCHCA members, through amendments to the document (see D. Plan Implementation).

The plan area defined in this HCP differs from that covered by the Short-Term HCP due to the inclusion of properties whose owners have requested coverage under the HCP through the existing Short-Term HCP boundary modification process. This HCP area also excludes properties owned by the Lockheed Corporation in and adjacent to the Potrero Study Area pursuant to the factors discussed under Chapter 4. Alternatives Considered.

The HCP area also differs significantly from that of the Short-Term HCP in that it defines no Study Areas or other territories where the authorization for incidental take of SKR would not apply. However, as previously noted, incidental take in core reserves will be restricted to ensure conservation of SKR occupied habitat.

a. Estimated Level of Incidental Take

The total amount of SKR occupied habitat that will be incidentally taken under the permit and agreement will depend on three interrelated factors:

i. Natural changes in the distribution, density, and amount of SKR occupied habitat in the plan area;

ii. The level of economic activity in the plan area, including new construction, the amount of land in agricultural use, and the specific uses to which agricultural land is devoted, and;

iii. The type and amount of habitat incidentally conserved in the plan area for reasons other than those related to this SKR HCP.

Natural changes can increase or decrease the annual and cumulative amount of SKR occupied habitat potentially subject to incidental take due to rainfall patterns, the effects of existing habitat fragmentation, and random natural events such fires or floods. As noted in Chapter 3. Summary Profile of the SKR, the best information available to the RCHCA indicates that species distribution in the plan area has changed significantly since its listing. Even if no incidental take of SKR had occurred in the HCP area, the amount and distribution of SKR occupied habitat would have experienced notable changes due to significant variations in local rainfall patterns. As described in the reports in Volume II, such variations play a very influential role in determining SKR distribution due to their impact on food source availability. Rainfall patterns will continue to vary significantly over the effective period of this HCP, and therefore SKR populations may be expected to expand, contract, and relocate in response to natural conditions.

Natural disasters known to occur in the plan area, most specifically wildfires and floods, have and will continue to produce changes in SKR distribution and thus the potential for incidental take. To the extent that fire is either prevented or quickly suppressed when it occurs, SKR habitat in some areas will tend to develop a density of vegetative cover which does not favor the species. Of course this would tend to depress SKR population levels and thus reduce the potential for incidental take of the species. Conversely, if the region experiences an above average incidence of wildfires in rural areas, SKR distribution is likely to increase, and with it the potential for greater amounts of incidental take.

The level of development activity in the plan area will affect the cumulative amount of SKR habitat conserved as well as the amount incidentally taken. If economic development activity increases in the plan area, the likelihood of SKR habitat removal will grow, as will the indirect adverse effects of urban land uses on patches of SKR occupied habitat.

Agricultural uses may affect SKR incidental take due to the rotation of crops, tilling of fallow fields, or changes in grazing patterns. Based upon experience gained during implementation of the Short-Term HCP, such patterns of agricultural use generally result in only temporary changes to SKR distribution. However, when agricultural lands change to urban development uses, temporary impacts to SKR become permanent.

The temporal nature of SKR incidental take also would be expected to change if lands devoted to dryland farming are converted to crops requiring irrigation.

Conservation of SKR occurring for reasons unrelated to this HCP also is likely to limit cumulative incidental take of SKR habitat. Habitat conserved for other listed species and candidate species (e.g., California gnatcatcher) is likely to include, and thus protect, SKR occupied habitat (see discussion in Chapter 3. Summary Profile of the SKR). Establishment or expansion of regional parks and new dedications of permanent open space also may increase the amount of SKR habitat not at risk of being permanently taken. SKR occupied habitat located in areas constrained from development due to steep slopes, e.g., populations in Estelle Mountain and the Badlands, likely will be conserved even if they are not acquired for a core reserve. In such areas development is extremely unlikely due to land use regulations and the poor profit potential for such investments. It is anticipated that a significant portion of the SKR population in the Badlands will benefit from this type of ancillary conservation.

Such conservation of course does not guarantee protection of SKR habitat in the same way as inclusion in managed reserves, but it does provide benefits to the species in the plan area.

Unfortunately, none of the above factors influencing incidental take of SKR in the HCP area can be readily predicted within the 30 year scope of this plan. Thus, in estimating the amount of incidental take likely to occur it is necessary to adopt conservative assumptions. Accordingly, this HCP assumes that: 1) the 15,000 acres of SKR occupied habitat to be protected in the core reserves will continue to exist over the HCP period, and; 2) the 15,000 acres of SKR occupied habitat existing outside of the reserve system may be incidentally taken.

The RCHCA views this as an inherently conservative assumption, since it is highly unlikely that all 15,000 acres of SKR occupied habitat located outside of core reserves will be incidentally taken over the 30-year permit period. The following factors greatly reduce the possibility that 15,000 acres of SKR occupied habitat will be incidentally taken within the HCP area:

i. SKR occupied habitat located on: a) public lands outside of core reserves which are not subject to development; b) undevelopable lands (e.g., those with slopes exceeding 25%), and; c) lands occupied by other listed species, is not likely to be incidentally taken;

ii. At least a portion of SKR occupied habitat located on lands used for dryland farming is likely to remain in the plan area, and;

iii. Over the 30-year period, cooperative efforts by the RCHCA with other public agencies, ongoing acquisitions by the RCHCA in the context of a future multispecies HCP, and/or mitigation required as a result of Section 7 Consultations will conserve additional SKR occupied habitat.

For these reasons, it is very likely that less than 15,000 acres of SKR occupied habitat will be incidentally taken in the HCP area over the 30-year period of this plan. However, since none of the above factors can be guaranteed to result in conservation of SKR, this HCP assumes that all 15,000 acres of SKR occupied habitat located outside of reserves in the plan area may be incidentally taken under this HCP.

Although the RCHCA is estimating that up to 15,000 acres of SKR occupied habitat may be subject to incidental take under this HCP, due to the unpredictable nature of natural forces and uncertainty of future development activity that figure may not prove accurate over the 30-year duration of the permit. It is the intention of this HCP to establish core reserves of sufficient size and character to ensure, within a reasonable degree of probability, the long-term persistence of SKR in the plan area. Accordingly, the RCHCA is seeking a permit and agreement which would allow incidental take of SKR to occur in unlimited amounts outside of core reserves; within core reserves, such take would be limited by the terms and conditions presented in this HCP.

D. Potential Impacts of Incidental Take

In addition to identifying the area, duration, and level of take, ESA approval criteria for the permit and agreement require that the impacts of the proposed taking be examined. The primary impacts of concern regarding the proposed incidental taking of SKR include:

1. The likelihood of instances of direct harm to SKR;
2. The effects of direct and indirect harm and habitat removal on the long-term viability of the SKR populations in the plan area and elsewhere in the range of this species; and
3. The effects of habitat removal and further fragmentation on the ecosystem upon which the SKR depends.

Outside of the core reserves (as expanded through BLM land trades), this HCP anticipates that incidental take of SKR may occur throughout the plan area. Accordingly, the following types of impacts are considered most likely to result from such incidental take:

1. Potential loss of some existing blocks of SKR occupied habitat of significant size. Of particular note is the potential loss of SKR populations located on privately owned lands in the Steele Peak and Kabian Park Study Areas designated under the Short-Term HCP. Within the Steele Peak area privately held lands encompass approximately 1,390 acres of SKR occupied habitat; of that total, 454 acres are under a single ownership and would be subject to incidental take at one time if the property is mass graded in preparation for development pursuant to its approved Specific Plan. Within Kabian Park, approximately 590 acres of SKR occupied habitat are located on private lands; in this location however, the habitat is spread across a large number of parcels owned by a multitude of entities. Thus, potential development of Kabian Park lands would be expected to occur over a longer period of time, providing greater possibilities for dispersal of resident SKR populations;
2. Some existing SKR dispersal corridors connecting habitat patches may be lost as a result of incidental take occurring outside of core reserves. Empirical evidence defining such corridors in the plan area is extremely limited however, and therefore both the nature and potential importance of such impacts are largely conjectural.

The conservation and mitigation measures proposed in this HCP seek to avoid, minimize, mitigate, and monitor these potential impacts to SKR. In accordance with NEPA and CEQA guidelines, impacts which may potentially result from incidental take and implementation of this HCP are analyzed in detail in the EIS/EIR presented as Volume III of this HCP.

E. Conservation, Mitigation, Monitoring, and Impact Avoidance Measures

To avoid, minimize, mitigate, and monitor the impacts of incidental take of SKR, the RCHCA will implement a conservation program having four primary components:

1. Establishment and ongoing adaptive management of the core reserve system;
2. Expansion of the reserves through conservation of additional SKR occupied habitat;
3. Measures to avoid and minimize incidental take, and;
4. Monitoring of mitigation compliance and plan effectiveness.

1. Establishment and Adaptive Management of the Core Reserves

The establishment and management of the core reserve system described in this chapter is the primary mitigation provided by the HCP for the impacts of incidental take on SKR. This is also the primary means for assuring that the species will persist within the plan area during the period covered by the permit and agreement.

This HCP builds upon existing agreements and arrangements among the agencies responsible for managing public lands in the core reserves, and provides the framework and funding for:

a. Coordinating the management of SKR habitat among individual core reserves;

b. Increasing the amount and quality of SKR habitat in the reserve system through additional core reserve acquisitions and the enhancement and restoration of SKR habitat within those reserves;

c. Regular monitoring of the status of the SKR populations and SKR habitat in the plan area;

d. Sponsoring appropriate biological research where appropriate to guide future SKR habitat management activities;

e. Ongoing performance of adaptive management practices to address changing conditions over the 30 year permit period, and;

f. Helping to sustain the viability of SKR in the reserve system by preserving and enhancing habitat linkages within the reserves, and pursuing the establishment of wildlife corridors connecting the reserves to other natural open space areas.

Upon final approval of this HCP, habitat management for the benefit of SKR would begin on public lands within the core reserve system. Such management will be extended to cover lands added to the reserve system over time via the BLM land exchange program and through land conveyances made to the RCHCA.

a. Habitat Management Goals and Objectives

The primary goals of core reserve management will be to:

i. Maintain viable populations of SKR within the reserve system and each of the core reserves sufficient to ensure the long-term persistence of the species in the HCP area;

ii. Promote the maintenance and enhancement of the ecosystem upon which the SKR depends;

iii. Develop and continually refine management practices which identify and adapt to changing conditions both within the reserves and on lands adjacent to them;

iv. Establish a core wildlife reserve system that is managed to enhance the conservation of biological diversity in western Riverside County;

v. Assist in determining future priorities to add lands that have definable conservation and/or management value to the reserve system, and;

vi. Consistent with the primary goal of ensuring SKR persistence, establish programs which permit human access for activities deemed compatible with SKR habitat conservation by USFWS and CDFG.

Policies and procedures guiding management of the reserve system will be based on the conservation principles discussed earlier in this chapter. In order of relative priority, these include:

i. Maintaining existing habitat values for SKR;

ii. Enhancing habitat values for SKR where not in conflict with other important biological resources;

iii. Maintaining or enhancing values for other species where not in conflict with SKR management goals;

iv. Minimizing the need for active management by allowing natural processes to occur where not in conflict with other management goals, and;

v. Managing the reserve system adaptively by: a) integrating existing knowledge with the results of ongoing experimental management, and; b) refining management techniques in response to changing conditions.

b. Individual Core Reserve Management Programs

Responsibility for and control over SKR habitat management and species monitoring will be maintained by different entities for each core reserve, as described below:

Lake Mathews-Estelle Mountain

As noted previously, the RCHCA and MWD have jointly developed a multi-species HCP encompassing lands owned by both agencies within the Lake Mathews-Estelle Mountain core reserve. Pursuant to the provisions of that plan, overall responsibility for management of conserved habitat in Lake Mathews will be vested in a Management Committee comprised of USFWS, CDFG, MWD, BLM, RCHCA, and the Center for Natural Lands Management. Fire prevention and suppression activities will be provided by the California Department of Forestry and Fire Prevention pursuant to the provisions of the Lake Mathews Fire Management Plan.

Habitat management activities on MWD lands in the Lake Mathews-Estelle Mountain reserve will be funded through $2.5 million paid by the RCHCA for the purchase of conservation easements over SKR occupied habitat on MWD properties. Upon receipt of those funds MWD will establish a non-wasting endowment intended to finance the management of conserved habitat on its properties in the reserve.

Pursuant to the Assembled Land Exchange Agreement included in Appendix A, the RCHCA will trade its property holdings in the Lake Mathews-Estelle Mountain core reserve to BLM. Upon receipt of those lands BLM will assume ongoing responsibility for their management, monitoring, and patrol. Pursuant to the terms of the Implementation Agreement for this HCP, BLM will ensure ongoing management for the benefit of SKR for its portion of the Lake Mathews-Estelle Mountain core reserve. As a member of the Management Committee established under the MWD/RCHCA Lake Mathews MSHCP, BLM will manage its lands for the benefit of SKR and other species pursuant to the terms of the MSHCP.

Specific SKR management and monitoring activities in the core reserve will be conducted pursuant to annual work plans adopted by the Management Committee. Overall responsibility for the conduct of habitat management activities on MWD properties will be assumed by the Center for Natural Lands Management (CNLM), which will operate in consultation with the Management Committee. In developing work plans the Committee will be guided by the following goals:

i. Protect suitable habitat for the MSHCP target species, including SKR;

ii. Enhance or restore suitable habitat for target species through improvement of degraded resources, and;

iii. Ensure that the operation and maintenance of Lake Mathews as a water supply facility and as a significant ecological area are not impaired.

The member agencies of the Management Committee will assume the following responsibilities in the ongoing management of the reserve:

MWD

- Participate in reserve management activities;
- Undertake habitat enhancement and restoration activities;
- Coordinate management of MWD properties with the Management Committee;
- Maintain access roads, fencing, and fire breaks in designated areas

RCHCA

- Provide a $2.5 million payment to MWD for purchase of conservation easements which MWD will dedicate to the establishment of a permanent non-wasting endowment for reserve management on its properties in the Lake Mathews-Estelle Mountain core reserve;
- Expand the reserve through land acquisitions and dedications;
- Coordinate implementation of the Lake Mathews MSHCP with the SKR HCP and alt multi-species HCP's adopted by the agency

BLM

- Pursuant to provisions of the Assembled Land Exchange Agreement with the RCHCA, maintain financial and operational responsibility for management of federal lands in the core reserve.
- Provide biological management, monitoring, and enhancement of SKR and other wildlife habitat on lands under BLM jurisdiction.
- Provide law enforcement services and maintain access roads, fencing, and fire breaks on lands under BLM management.
- In cooperation with the RCHCA, expand the reserve through acquisitions accomplished through the Assembled Land Exchange Agreement.
- Coordinate management of BLM properties with the Management Committee;

- Provide scientific and technical assistance to reserve management activities, with special emphasis on SKR and other federally listed and candidate species

USFWS

- Provide scientific and technical assistance to reserve management activities, with special emphasis on State listed and candidate species

CDFG

- Assume responsibility of "daily management of conserved habitat on MWD lands in consultation with the Management Committee"

CNLM

- Conduct biological monitoring activities on MWD lands under the direction of the Management Committee
- Prepare reports presenting and evaluating management activities

Lake Skinner-Domenigoni Valley

Upon approval of this HCP the RCHCA will add all land under its ownership in the Lake Skinner area to the multi-species reserve established by the Southwestern Riverside County MSHCP. Through this action, conserved habitat on RCHCA lands will be managed by the existing Reserve Management Committee (RMC) consisting of representatives of MWD, USFWS, CDFG, RCHCA, and the Riverside County Regional Parks and Open Space District (RCRPOSD). The RMC establishes policies, procedures, and regulations governing the management of conserved habitat within the reserve. Responsibility for day-to-day operation of the reserve is shared by RCRPOSD and MWD.

Management of SKR habitat in the Lake Skinner-Domenigoni Valley reserve will be guided by the RMC pursuant to the provisions of the MSHCP. On lands dedicated to SKR in the Shipley Reserve, and on suitable habitat contained within RCHCA properties added to the existing multi-species reserve, management will be directed toward maintenance and expansion of SKR populations. In all other areas, land will be managed for biodiversity pursuant to criteria established in the MSHCP and through adaptive techniques approved by the Management Committee.

The RMC has assumed responsibility for an ongoing habitat and wildlife monitoring program within the reserve. Research activities for SKR are being conducted under the direction of Dr. Michael O'Farrell, using funding provided by RCHCA and the RMC.

The multi-species reserve also is the focus of an active and ongoing scientific research program designed and managed by the RMC. To date, research projects have focused on species such as SKR and California gnatcatcher, and habitats such as sage scrub. As a result of the recent burning of approximately 70% of the reserve in the California Fire, a great deal of research is now being conducted concerning fire ecology and re-vegetation of sage scrub habitat.

As part of the MSHCP MWD established a management and research budget of $13.8 million. The RCHCA previously provided $500,000 for management of SKR habitat on the Shipley Reserve, and will supplement those funds with an additional $500,000 to support SKR management plans adopted by the RMC.

Motte Rimrock

Management of conserved SKR habitat in the Motte Rimrock core reserve will be provided by the UCR Natural Reserve System (NRS). Management of biological resources on the reserve is guided by the following goals:

i. Protect and defend contained ecosystems and the associated natural processes that drive those ecosystems and promote their natural biodiversity, and;

ii. Develop and enhance research and educational opportunities by developing comprehensive inventories of biological resources, and by monitoring environmental and ecological processes.

The existing Motte Rimrock Reserve management plan acknowledges the role of this area in the SKR HCP and therefore emphasizes protection of suitable habitat to maintain viable populations of SKR. Regular monitoring of SKR. populations also is deemed an important activity in reserve management.

Representatives of UCR have expressed their intent to prepare a revised SKR management plan for the reserve. Although the specific elements of that plan are still under development at this time, it is anticipated that the following activities will be included:

i. In order to prevent habitat destruction caused by chronic trespassing, it is anticipated that fencing will be erected in the southern portion of the reserve, and surveillance and patrolling activities will be increased;

ii. Regular monitoring of SKR populations will be conducted;

iii. Management programs will be enhanced to ensure the continued availability of sufficient habitat to maintain viable populations of SKR in the reserve, and;

iv. Appropriate biological research will be performed to develop empirical data useful to the design of future management activities.

The RCHCA will provide $300,600 to establish a non-wasting endowment intended to assist UCR in financing ongoing management activities in the core reserve. This endowment will be administered by the RCHCA and funding allocations will be approved by the RCHCA Board of Directors pursuant to work plans developed by UCR.

San Jacinto-Lake Perris

As previously noted, the vast majority of all land within this reserve is owned by the State of California. Responsibility for land management in the Lake Perris State Recreation Area is vested in the Department of Parks and Recreation (DPR), while CDFG manages properties within the San Jacinto Wildlife Area. Existing wildlife and land management plans in these areas currently focus on multi-species habitat protection. However, since the SKR is listed as a threatened species under CESA, both CDFG and the Department of Parks and Recreation have agreed to manage State lands under their control in a manner consistent with the goals of this HCP.

Habitat management plans for lands in the core reserve will be developed by DPR and CDFG. Funding for management activities will be derived from State budget appropriations.

CDFG and DPR representatives will be members of the Reserve Managers Coordinating Committee and will assist in addressing issues of concern to core reserve system.

Sycamore Canyon-March Air Force Base

Land within Sycamore Canyon Park is managed by the City of Riverside Park and Recreation Department. Through an agreement executed during the Short-Term HCP, the City operates and maintains the Park pursuant to a goal of ensuring the continued existence of SKR. As part of the 1988 Sycamore Canyon Park Development Plan, a SKR habitat suitability model was developed to identify the potential limits of suitable habitat within the Park. The Plan recommends appropriate management of those areas to ensure the viability of habitat for this species. Additionally, the Plan calls for regular monitoring of SKR populations.

The RCHCA allocated $100,000 in FY 96 to the Park and Recreation Department to fund the preparation of a SKR management element to be included in an update of the Sycamore Canyon Development Plan. The Development Plan takes into consideration recreational and educational objectives within the Park including the development of trails, an Interpretive Center, and support facilities. The SKR management element of the Development Plan will provide for the retention of consulting biologists to conduct SKR monitoring and habitat management programs. Recommendations for habitat modification activities will be made as appropriate to ensure the continued availability of sufficient habitat to support resident SKR populations. Pursuant to the provisions of this HCP the RCHCA will provide an additional §500,000 to establish a non-wasting endowment intended to assist the City Park and Recreation Department in conducting SKR management activities.

Management of SKR habitat on March Air Force Base (MAFB) is subject to the terms and conditions of two Biological Opinions issued by the USFWS, as well as a Cooperative Agreement executed among MAFB, USFWS, and The Nature Conservancy. Salient features of these three items are summarized below:

USFWS-Federal Highway Administration Biological Opinion

Biological Opinion 1-6-90-P-29 dated June 4, 1990 was issued by the USFWS in conjunction with the improvement of Interstate Highway 215, a portion of which passes through MAFB. As mitigation for the incidental take of SKR occupied habitat the following actions were implemented:

i. The California Department of Transportation (Caltrans) provided a $1.5 million non-wasting endowment to establish a perpetual fund for the management of SKR on MAFB;

ii. As the designated management entity. The Nature Conservancy assumed responsibility for management and enhancement of SKR occupied habitat on MAFB;

iii. In support of the Short-Term HCP, Caltrans provided $507,000 to the RCHCA for land acquisition in the corridor connecting MAFB with Sycamore Canyon Park, and;

iv. Caltrans was to "provide for a crossing for SKR under Alessandro Boulevard to connect the Sycamore Canyon Study Area to habitat on MAFB."

Subsequent to the issuance of the 1990 Biological Opinion, Caltrans performed preliminary engineering studies for the proposed Alessandro Boulevard SKR undercrossing, and the results of those studies were reviewed with USFWS. In a January 1994 letter the USFWS concluded that due to the presence of underground utility pipelines the "construction of the necessary linkage under Alessandro Boulevard would be extremely expensive and of uncertain biological value." Accordingly, USFWS recommended that in place of the undercrossing, Caltrans perform the following tasks:

i. Two privately held parcels of land south of Alessandro would be acquired and conserved as SKR habitat. An amount equal to ten percent of the purchase price would be set aside to finance a "periodic, managed translocation of SKR between suitable SKR habitat areas in Sycamore Canyon Park and March Air Force Base and monitoring of such translocation efforts.", and;

ii. Funding would be provided for a two-year monitoring study of SKR movement between MAFB and Sycamore Canyon Park.

Cooperative Agreement

In November of 1990 the USFWS, MAFB, and The Nature Conservancy executed a Cooperative Agreement providing for the management and restoration of SKR habitat on MAFB. This was intended to implement the terms and conditions of the 1990 Biological Opinion described above.

Under the Cooperative Agreement The Nature Conservancy received $1.5 million from Caltrans and established a non-wasting endowment for the management and enhancement of habitat for SKR. Interest earnings from the endowment are used to finance the activities specified in the Biological Opinion, including: 1) enhancement of a minimum of 108 acres of SKR occupied habitat on MAFB; 2) determining the suitability of all undeveloped lands on MAFB for habitat management and enhancement for SKR, and; 3) developing and implementing a research program designed to determine the ecological requirements of SKR.

The Cooperative Agreement was scheduled to be reviewed by the signatories in November of 1995. At that time the terms and conditions and the performance of all parties were to be evaluated. It should be noted that at any time The Nature Conservancy may, at its sole discretion, withdraw from the agreement. Should that occur, the $1.5 million endowment will be transferred to a party approved by the USFWS and MAPB.

USFWS-MAFB Biological Opinion

On December 4, 1991 the USFWS issued Biological Opinion 1-6-91-F-33 concerning potential impacts to SKR resulting from activities proposed on MAFB. Such activities included mission realignment projects, construction of base housing, an expansion of Air Force Village West, a golf course addition, and a proposal to convey land to a private developer in exchange for construction of, or addition to, buildings located east of 1-215. Those projects were expected to impact approximately 1,200 acres "of potential and sparsely occupied SKR habitat" on MAFB.

The Biological Opinion sets forth the following measures to offset incidental take of SKR:

i. The Air Force shall establish a 1,000 acre SKR Management Area on West March, i.e., west of 1-215;

ii. In coordination with the USFWS and The Nature Conservancy (TNC), MAFB shall develop a long range management plan to protect, manage, and enhance SKR habitat within the Management Area as well as ensure compatible land development within "Open Space" lands (see #4 below);

iii. MAFB shall preclude development and surface disturbance activities incompatible with SKR and its habitat within the 1,000 acre Management Area;

iv. Approximately 1,200 acres of "Open Space" lands on MAFB shall be "protected and managed actively for high wildlife values with a special emphasis on SKR and with ongoing participation by the USFWS through informal consultation." Open Space lands include several blocks of land both east and west of 1-215;

v. MAFB shall provide coordination efforts to ensure that a viable habitat connection is available to the base boundary to support a wildlife corridor between the base and the Sycamore Canyon Study Area.

This HCP includes only the 1,000 acre SKR Management Area within the Sycamore Canyon-MAFB core reserve. Habitat within that site will continue to be managed pursuant to the terms of the Biological Opinions. Unless changes are made when the Cooperative Agreement is evaluated, TNC will have primary responsibility for managing the SKR area on MAFB. The role of the RCHCA will be to coordinate with TNC, MAFB, and USFWS to ensure that SKR management supports the objectives of this plan.

Steele Peak and Potrero ACEC

The Steele Peak and Potrero ACEC core reserves consist almost entirely of federal lands managed by the BLM. Pursuant to the terms of the South Coast Resource Management Plan and the Implementation Agreement for this HCP, BLM will maintain responsibility for management of SKR habitat within these reserves. With assistance from the

USFWS, BLM will conduct annual biological surveys to document the distribution of SKR and its habitat. Appropriate actions will be taken to ensure the continued survival of SKR on federal lands.

Funding for BLM SKR management activities will be derived from annual federal budget appropriations.

c. Reserve Managers Coordinating Committee

To coordinate SKR habitat management and biological monitoring activities among the individual core reserves, the RCHCA will establish a Reserve Managers Coordinating Committee (RMCC). The primary missions of the RMCC will be to promote coordination of SKR management throughout the core reserve system, and address regional management issues of importance to species persistence in the HCP area. The RMCC will be concerned only with inter-reserve coordination and issues of regional importance to this HCP; as an entity it will not be directly involved in the management of conserved habitat within individual core reserves.

Membership of the RMCC will consist of one representative from each of the entities having responsibility for management of lands within the SKR core reserves, as well as the RCHCA, County of Riverside, USFWS, and the University of California Cooperative Extension. The existing core reserve land managers currently include:

i. CDFG (San Jacinto Wildlife Area);
ii. State of California Department of Parks and Recreation (Lake Perris State Recreation Area);
iii. MWD (lands within the Southwestern Riverside County MSHCP and Lake Mathews MSHCP);
iv. The Nature Conservancy (March Air Force Base SKR Management Area);
v. City of Riverside Park and Recreation Department (Sycamore Canyon Park);
vi. Riverside County Regional Parks and Open Space District (Lake Skinner core reserve);
vii. University of California at Riverside (Motte Rimrock Reserve); and
viii. BLM (lands in the Lake Mathews, Lake Skinner, Motte Rimrock, Potrero ACEC, and Steele Peak core reserves).

The California Department of Forestry and Fire Protection and Riverside County and City Fire Departments also will be asked to participate as technical advisors concerning fire management issues. The County of Riverside also will sit as a member of the RMCC in its capacity as the jurisdiction having authority over land use in the vast majority of core reserve properties.

As a group, the RMCC"s primary responsibilities will be to:

i. Coordinate SKR habitat management programs by the individual reserve managers to ensure the achievement of overall HCP management objectives;

ii. Develop recommended regional SKR management goals and programs to the RCHCA Board of Directors;

iii. Within the context of overall HCP implementation, evaluate SKR habitat management and biological monitoring plans conducted within the core reserve system; and

iv. Make recommendations to the BLM and RCHCA concerning potential land acquisitions for expanding the core reserve system.

The RMCC will be chaired on a rotating basis by the reserve managers and staffed by the RCHCA. Its recommendations will be based on the consensus of its members.

State law confers upon CDFG trustee responsibility and authority for the public trust resource of wildlife in California. That responsibility will in no way be abdicated, modified, or delegated by CDFG as a result of its participation in the RMCC. Accordingly, in all issues involving CDFG's trustee responsibilities and authorities over California wildlife the RMCC will act as an advisor to that agency.

d. Annual Core Reserve Work Programs

Within each of the core reserves the responsible management entities will develop annual SKR reserve work programs consistent with the overall management goals of this HCP and the specific management plans adopted for each of the reserves. In general, the work programs will provide guidelines and set priorities for habitat management and biological monitoring activities undertaken to implement this HCP. SKR work activities are intended to supplement, and not supplant, existing conservation plans and programs in the core reserves; the intent is to optimize benefits to SKR and other sensitive species within the funding constraints of the RCHCA's program.

To the extent that RCHCA monies are involved, funding allocations for implementation of the core reserve SKR work programs will be subject to approval by the RCHCA Board of Directors.

e. Reserve Management Activities

The types of reserve management activities to be conducted in the SKR core reserves include the following:

Biological Monitoring

Biological monitoring programs will be carried out in each reserve to evaluate the status and trends of resident SKR populations. The RCHCA will work with reserve managers to arrange for annual monitoring of SKR populations using permanent monitoring plots. The amount, distribution, and characteristics of suitable habitat will be evaluated on a regular basis using appropriately scaled color aerial photography and field data. In addition, the reserves will be ground surveyed on a regular basis by SKR biologists to assess the general status of habitats and to identify areas where vegetation changes are occurring. The monitoring program also will include more intensive examination of potential internal barriers within the reserves such as existing roadways.

The results of SKR monitoring in the core reserves will be reviewed by the RMCC in order to evaluate the overall status of the species and conserved habitat in the HCP area. This group will recommend adaptive management strategies as appropriate for application in individual reserves.

Habitat Enhancement and Restoration

Enhancement and restoration activities will be conducted by qualified biologists as needed to expand SKR habitat within the core reserves and address management issues identified by the reserve managers. Each reserve manager will be asked to maintain a list of potential enhancement and restoration sites within their core reserves. These lists will be reviewed on an annual basis by the RMCC, which will then present recommendations to the RCHCA regarding priority sites for habitat restoration or enhancement. Enhancement and restoration for SKR will be balanced with and integrated into management activities for other biological resources. As previously noted, habitat enhancement and restoration also will be employed as a mechanism for mitigating the impacts of direct harm to SKR.

Access Controls

Fencing, barriers, gates, signage, and security patrols will be used as necessary to control the access of people, vehicles, livestock, and domestic pets to areas of conserved habitat. Fencing and patrols will be especially critical in areas where SKR populations are immediately adjacent to land uses with potentially adverse effects on the managed resources, e.g., the Motte Rimrock Reserve. Ranger patrols in the core reserves will be provided by the RCRPOSD, City of Riverside Park and Recreation Department, BLM, and other reserve managers as appropriate.

Fire Management

Responsible reserve management agencies have adopted fire management plans for each of the core reserves. Responsibility for fire prevention and suppression activities is vested in the California Department of Forestry and Fire Protection (CDF), March Air Force Base, and the fire departments of the City of Riverside, City of Perris, and County of Riverside. These adopted fire management plans include recommendations for fuel break management, fire controls, and fire suppression logistics. The fire management plans for Lake Mathews-Estelle Mountain, Lake Skinner-Domenigoni Valley, and March Air Force Base also provide for the use of controlled burns as a habitat management tool. The RCHCA will work with CDF and the Management Committees of the Lake Mathews-Estelle Mountain and Lake Domenigoni Valley reserves to expand existing fire management plans to specifically incorporate RCHCA properties to be added to those reserves. Additionally, RCHCA will work with municipal fire departments to develop and refine management plans for SKR habitat in the Sycamore Canyon Park and Motte Rimrock reserves.

Grazing

Past experience has shown that prescribed grazing often is an appropriate and effective management tool for SKR. Accordingly, use of grazing for management of SKR habitat will be encouraged if conducted pursuant to a scientifically valid methodology. Within the watersheds of reservoirs in core reserves, grazing will be allowed only if MWD determines such activities to be consistent with water quality standards and objectives.

Recreation

Although the SKR core reserves are established for the purpose of conserving the species and its habitat, these lands also represent open spaces of regional importance. Since these areas were acquired with public funds, the RCHCA is committed to providing citizens with an opportunity to access them for recreational and educational purposes which do not adversely affect SKR and other wildlife habitat values. Accordingly, within core reserves recreation activities will be allowed in areas of conserved SKR habitat if they are: 1) deemed compatible with the maintenance of biological resource values by USFWS and CDFG, and; 2) acceptable to the public entities which own the affected lands.

Consistent with the above provisions, passive recreational activities such as hiking and wildlife observation will be encouraged as managed activities. The adopted management plans of core reserves will define appropriate

recreation activities within core reserves and provide guidelines for ensuring the compatibility of uses. For example, the management plan for the reserve established at Lake Skinner-Domenigoni Valley under the MSHCP for Southwestern Riverside County includes monitoring of the effects of existing recreation activities at Lake Skinner on SKR. Results of this monitoring effort will guide the development of recreational policies and programs at other reserves.

2. Habitat Acquisition and Reserve Expansion

In order to complete the core reserve system defined in this HCP, the RCHCA will continue the land acquisition program it began in 1990. The RCHCA will ensure the conservation of the remaining 1,153 acres currently in private ownership in core reserves through purchases, dedications, voluntary conservation agreements with property owners, and other means. Where possible, the RCHCA also will enter into cooperative agreements with other agencies and private landowners to conserve SKR and other habitats through mutually beneficial arrangements. Such arrangements will include, but are not limited to, multiple species conservation plans that provide authorization for incidental take of other species and mitigation banking agreements.

As described previously in this Chapter, the SKR core reserves will be expanded through BLM land exchanges until the amount of SKR occupied habitat contained within those areas reaches approximately 15,000 acres. This will require the exchange program to secure and permanently conserve an additional 2,540 acres of SKR occupied habitat. Toward that goal, the RCHCA and BLM have executed an Assembled Land Exchange Agreement presented in Appendix A. The RCHCA also will consult with BLM, USFWS, and CDFG to identify SKR occupied land parcels to be targeted for land exchanges.

In consultation with BLM, USFWS, CDFG, and the RMCC, the RCHCA will employ the following criteria to identify and evaluate potential land exchange acquisitions based on the goal of enhancing the effectiveness of the SKR core reserve system:

a. SKR occupied parcels located adjacent to core reserves should receive the highest priority for land exchanges;

b. Parcels containing land suitable for SKR corridors which connect, or buffers which enhance protection of, existing core reserves should also be given high priority for acquisition;

c. Very large parcels under single ownership which contain sufficient SKR occupied habitat to offer significant probability of long-term persistence should be considered for acquisition even if they are not located adjacent to existing reserves, and;

d. Parcels containing land suitable for corridor connections between existing SKR reserves and other conserved public lands (e.g., Cleveland National Forest) should be considered for acquisition.

Additionally, the following general principles of conservation biology will be used in evaluating potential habitat acquisitions:

1. Large blocks of habitat, containing large populations of the target species, are superior to small blocks of habitat containing small populations;

2. Blocks of habitat that are close together are superior to blocks far apart;

3. Habitat that occurs in less fragmented, contiguous blocks is preferable to habitat that is fragmented;

4. Habitat patches that minimize edge-to-area ratios are superior to those that do not;

5. Interconnected blocks of habitat are preferable to isolated blocks, and corridors or linkages function better when the habitat within them is represented by protected, preferred habitat for the target species, and;

6. Blocks of habitat not penetrated by roads, and those having access control mechanisms, are better than blocks of habitat having extensive road networks or unlimited access.

In addition to the BLM land exchange program, the RCHCA will seek to enhance SKR habitat conservation through other means. Specifically, the RCHCA will support efforts by its member agencies to amend local General Plans as appropriate to establish density compensation programs for land owners seeking to develop their property. Through such programs lands featuring sensitive biological resources may be dedicated for habitat conservation purposes at no cost, with property owners being given the right to develop the remaining portion of their land at sufficiently higher density to compensate for the loss of density created by the dedication. In situations where this would result in the conservation of habitat deemed capable of sustaining long-term biological viability of core reserves, the RCHCA will actively support the granting of density compensation. The RCHCA will work with the planning departments of its member agencies to evaluate opportunities for such density compensation.

In addition, the RCHCA will consult with member agencies to establish incentives for private land owners to maintain existing levels of use in areas adjacent to conserved SKR habitat, and within habitat linkages and wildlife corridors connected to the core reserves. Such measures could include mitigation banking agreements and, where consistent with the management goals for the reserve system, assistance in securing authorizations from USFWS and/or CDFG for

incidental take of listed species other than SKR.

Regarding the conservation of linkages and corridors, the RCHCA will promote and participate as a partner in voluntary conservation efforts that build on existing public ownerships and wildlife preserves, including but not limited to the seven core reserves, Santa Rosa Plateau, and other public lands with known habitat values.

3. Project Review and Mitigation Procedures

The RCHCA's permit and agreement will cover incidental take of SKR resulting from lawful actions taken by property owners, farmers, utility companies, public agencies, and other entities within the plan area. In general, authorization for incidental take for an individual project will be given when applicable SKR biological reports have been submitted, habitat replacement mitigation has been approved by the USFWS and CDFG (applicable only to projects in core reserves resulting in incidental take of SKR), and the project is issued a building, grading, surface mining, or mobile home installation permit, as appropriate. Agencies not requiring local permits (e.g., MWD) will receive incidental take authorizations directly from the RCHCA consistent with the terms of this HCP and associated implementation agreements. Unlike the existing permit and agreement, the RCHCA will not apportion incidental take acreage among its member agencies. Instead, the following reporting, review, and documentation procedures will apply to projects covered by the permit and agreement.

a. Reporting of incidental Take and Replacement Habitat Acquisitions

When the new permit and agreement go into effect, the RCHCA will notify each member agency of the amount of habitat acquired by the RCHCA to date in excess of the incidental take authorized under the Short-Term HCP. Until the RCHCA has completed the core reserves defined in this HCP, each year the agency will calculate and report the cumulative totals of incidental take and acquisitions to the member agencies, USFWS, and CDFG. If an annual report indicates that acres of incidental take exceed acres of replacement habitat, the RCHCA will issue a notice to all member agencies requiring an immediate suspension of any further authorization of incidental take. Local authorization for incidental take of SKR will be withheld until the receipt of written notice from the RCHCA that the replacement habitat acquisitions once again exceeds the amount of incidental take acreage.

Under the Short-Term HCP, as of March 1, 1996 the RCHCA had acquired 2,212 acres of replacement SKR habitat in excess of authorized incidental take; if the new permit and agreement took effect on that day, those 2,212 acres would be credited toward the RCHCA's future habitat replacement obligations. The actual amount to be credited toward the long-term permit and agreement will depend on the totals at the time this HCP is approved. The reporting of incidental take and replacement habitat acquisitions will remain in effect until the RCHCA has fulfilled its commitment to complete the core reserves.

b. Core Reserve Review

Other than emergency response, fire prevention, and public facility maintenance and operations activities, RCHCA member agencies will require SKR biological surveys for proposed land disturbance activities within core reserves which may result in incidental take of SKR. Affected project proponents will meet with representatives of the RCHCA, USFWS, and CDFG as needed to determine appropriate methods of avoiding, minimizing, and mitigating impacts to SKR. Where possible, such determinations will be made as part of the CEQA and NEPA processes. Consistent with the provisions of this Chapter, incidental take of SKR in core reserves will be permitted only with the concurrence of USFWS and CDFG and satisfaction of 1:1 habitat replacement mitigation conditions established under this HCP.

4. Monitoring of Plan Compliance and Effectiveness

In addition to the biological monitoring programs conducted within each of the core reserves, the RCHCA will maintain responsibility for monitoring compliance with the terms and conditions of the permit and agreement and evaluating the effectiveness of the conservation and mitigation measures prescribed in this HCP.

a. Annual Reports

The RCHCA will prepare annual reports concerning reserve management and overall plan implementation, and will submit these to USFWS and CDFG. Annual reports will include the following information:

i. During the period prior to the RCHCA's completion of the core reserves, annual reports will contain an accounting of the amount of SKR occupied habitat incidentally taken by RCHCA members, the mitigation measures implemented, and the progress made towards completion of the reserve system;

ii. An overview of core reserve management activities for the previous year, including estimates of SKR occupied habitat within each reserve;

iii. Evaluation of any problems encountered in plan implementation over the previous year and corrective measures taken and planned to address those problems, and;

iv. Expenditures for acquisition and reserve management over the previous year and applicable budgets for the ensuing year.

5. Impact Avoidance and Minimization Measures

Pursuant to the requirements of the ESA, the RCHCA is committed to implement this HCP in a manner which seeks to avoid and minimize impacts to SKR to the maximum extent practicable. The primary means by which this will be accomplished is core reserve land management practice.

Within the core reserves responsible management entities will seek to avoid or minimize impacts to SKR whenever possible. Through coordination with the RCHCA and, as appropriate, USFWS and CDFG, land managers will ensure that land disturbance activities avoid areas of SKR occupied habitat whenever feasible. When avoidance is not possible or practical for emergency response, public facility operation and maintenance, and fire prevention activities, SKR biologists will be consulted to recommend methods of minimizing impacts to the species.

F. Plan Implementation

Implementation of this HCP will be governed by legal agreements executed among the RCHCA, its member agencies, USFWS, CDFG, BLM, U.S. Department of Interior (DOI), State of California Resources Agency, and other agencies as appropriate. The purpose of such agreements is to specify the terms and conditions under which the HCP will be implemented, and define the respective roles and obligations of all parties. The agreements will take the form of contracts which legally bind the all parties to the provisions contained therein. The RCHCA will execute an Implementation Agreement with DOI, USFWS, BLM, CDFG, DOI, and the State of California Resources Agency (Resources Agency). This document:

1. Identifies the roles, responsibilities, and obligations of the RCHCA, RCHCA member agencies, USFWS, BLM, CDFG, DOI, and the Resources Agency in HCP implementation;
2. Describes the institutional arrangements necessary to coordinate core reserve management;
3. Specifies assurances regarding the availability of funding for plan implementation;
4. Identifies procedures for enforcing the terms and conditions of applicable permits and agreements;
5. Prescribes procedures for addressing and responding to unforeseen circumstances, and;
6. Defines procedures for amending the HCP.

1. Roles and Responsibilities

The RCHCA and its members will be responsible for implementation of the HCP, with those parties covered by the permit and agreement sharing responsibility iw compliance with the terms and conditions. The core reserve land managers will be responsible for actual management of resources in the reserves, and their role in plan implementation will be an extension of this function. The role of USFWS and CDFG will be to oversee compliance with the terms and conditions of the permit and agreement. They will also be requested to lend their technical expertise to planning the management and expansion of the core reserves. BLM will participate in HCP implementation through its Assembled Land Exchange Agreement with the RCHCA, and also through its role as manager of federal lands in the core reserves. A summary of the roles and responsibilities of Implementation Agreement parties follows:

a. RCHCA

The RCHCA's primary roles and responsibilities for plan implementation will include:

i. Acquisition and ownership of conserved habitat;

ii. Within the parameters of the permit and agreement, adoption of policies guiding implementation of the HCP;

iii. Provision of funding for habitat acquisition, habitat management and other activities pursuant to the provisions of this HCP;

iv. Development and implementation of financing strategies to maximize funding from federal, state, and other external sources;

v. Management of RCHCA financial resources to ensure their sufficiency for HCP implementation activities;

vi. Ensuring the conduct of financial audits as required by the Implementation Agreement;

vii. Participation in cooperative conservation planning efforts with other public agencies and private property owners;

viii. Formation of and provision of staff support to the RMCC;

ix. Preparation of reports for submission to RCHCA member agencies concerning incidental take and acquisitions of replacement habitat;

x. Coordination with BLM pursuant to the Assembled Land Exchange Agreement to expedite federal land trades undertaken in support of this HCP;

xi. Preparation of reports for submission to USFWS and CDFG concerning the status of SKR populations in core reserves and management activities conducted therein;

xii. Monitoring of mitigation implementation, as required by CEQA and by the permit and agreement;

xiii. For entities exempt from RCHCA member agency permit requirements, review of SKR biological surveys and issuance of incidental take authorizations;

xiv. Submission of requests to USFWS and CDFG for SKR and multi-species credit for biological resources present on lands acquired under this HCP;

xv. As appropriate, submission of requests for amendments to the HCP, permit, and agreement to USFWS and CDFG, and;

xvi. Record keeping, public noticing, and annual report preparation on behalf of the RCHCA members.

b. RCHCA Member Agencies

Primary roles and responsibilities of the RCHCA member agencies will include:

i. Provision of funding necessary to supplement existing RCHCA cash balances to fulfill agency financial commitments in the HCP implementation budget;

ii. Implementation of applicable project review and SKR biological survey procedures;

iii. Development of SKR impact minimization and avoidance recommendations where appropriate for proposed land disturbance activities;

iv. Prior to the completion of the core reserves, reporting and record keeping for incidental take within their jurisdictions;

v. Consistent with the terms of this HCP, provision of notice to the RCHCA, USFWS, and CDFG for projects proposing incidental take of SKR within core reserves;

vi. Subject to the availability of RCHCA member agency staff, participation in cooperative conservation planning efforts with the RCHCA, other public agencies and private property owners;

vii. Where deemed appropriate by local governing bodies, amendment of General Plans or use of individual Development Agreements to permit density compensation arrangements which provide opportunities for conservation of sensitive habitat in a manner which results in no economic loss to property owners and obviates the need for public land acquisition, and; 176

viii. Where city or County owned lands are included in core reserves, development and adoption of management plans and participation in actual reserve management.

c. RMCC Members

As noted, the primary role and responsibilities of the reserve and land managers on the RMCC will be an extension of their current functions as resource managers. Specific roles and responsibilities will include:

i. Adoption of reserve management plans and annual work programs for individual core reserves, and submission of applicable portions of same to the RCHCA for consideration of funding requests for SKR management;

ii. Performance of management activities for SKR habitat within the reserves consistent with this HCP, approved multi-species HCP's, and State and local laws and policies;

iii. Development and implementation of biological monitoring activities to measure SKR populations and evaluate their viability from year to year and over the term of the permit and agreement;

iv. Development of land acquisition priorities and site selection criteria for recommendation to the RCHCA;

v. Identification and recommendation of habitat restoration and enhancement priorities and opportunities within core reserves, and;

vi. Provision of technical assistance to RCHCA staff in the preparation of Requests for Proposals for competitive procurement of biological consulting services and SKR research activities funded by the RCHCA.

d. USFWS and CDFG

Separate from but consistent with their responsibilities to oversee compliance with the terms and conditions of the permit and agreement, USFWS and CDFG will provide technical assistance in planning and providing for the management of SKR habitat. CDFG also is a manager of lands in the San Jacinto and Lake Mathews core reserves, and will participate as such on the RMCC.

In their regulatory capacity, USFWS and CDFG will be responsible for:

i. Review and approval of land acquisitions proposed as replacement habitat for incidental take of SKR in core reserves;

ii. For those cases wherein SKR incidental take authorization on lands outside the HCP area is sought through this HCP, review and approval of land acquisitions proposed as mitigation for SKR impacts;

iii. Review of SKR management activities included in reserve management plans and annual work programs;
iv. Review of RCHCA annual reports concerning SKR core reserve status;

v. Provision of technical assistance in the development and evaluation of SKR monitoring and research activities, and;

vi. Review of and timely action on amendments proposed by the RCHCA to the HCP or the legal agreements governing its implementation.

e. BLM

Pursuant to provisions of the South Coast Resource Management Plan and the Assembled Land Exchange Agreement included as Appendix A, BLM will:

i. Trade properties currently under federal ownership in western Riverside County for RCHCA lands in the Lake Mathews-Estelle Mountain core reserve. These lands will be sold by the RCHCA, with sale proceeds used to acquire additional SKR habitat in locations which support core reserves established in this HCP;

ii. Work cooperatively with the RCHCA, USFWS, and CDFG to identify SKR habitat which could be acquired through the Assembled Land Exchange Agreement;

iii. In cooperation with the RCHCA, administer the Assembled Land Exchange Agreement;

iv. Maintain ongoing responsibility for management of federal lands included within core reserves, including those properties received from the RCHCA, and;

v. Participate as an active member of the RMCC.

f. DOI

Pursuant to the terms of the Implementation Agreement for this HCP, DOI will provide and/or work with Congress to provide $3.6 million in federal financial contributions for implementation of this HCP.

g. State of California Resources Agency

As the State agency having oversight over CDFG and the California Park and Recreation Department the Resources Agency will work with those agencies to ensure that SKR habitat management supports the objectives of this HCP. Additionally, the Resources Agency will ensure, through the California Legislature and cooperative efforts with CDFG and the California Park and Recreation Department, that State funding is available to ensure appropriate SKR habitat management on State lands in the San Jacinto-Lake Perris core reserve.

2. Institutional Arrangements

All of the institutional arrangements necessary for plan implementation are either already in place or can be established through interagency and cooperative agreements. The Joint Powers Agreement which established the RCHCA empowers the agency to: "plan for, acquire, administer, operate, and maintain land and facilities for ecosystem conservation and habitat reserves to implement a habitat conservation plan for the Stephens' kangaroo rat and other listed or candidate threatened and endangered species."

Thus, the RCHCA Joint Powers Agreement already vests sufficient authority in the RCHCA to perform all functions and assume all responsibilities necessary to implement this HCP. The RCHCA has either executed or is in the process of developing several agreements with other agencies which have relevance to this HCP. These are described below.

Southwestern Riverside County MSHCP Cooperative Management Agreement

In 1992 the RCHCA executed a Cooperative Management Agreement with USFWS, CDFG, MWD, RCRPOSD, County of Riverside, and the Riverside County Park Facilities Corporation. This document: a) defines the terms and conditions governing the management of lands included within the Southwestern Riverside County MSHCP; b) establishes a Management Committee to oversee habitat and species management in conserved MSHCP lands, defines its responsibilities, and sets forth procedures for administering Committee activities; c) provides for addition of lands by the RCHCA and others; d) establishes procedures for development and adoption of annual operating budgets and work plans; e) provides for the granting of conservation easements over conserved habitat, and; f) establishes funding for habitat management and monitoring, biological research, and land acquisition activities to be overseen by the Management Committee.

As noted previously, upon the approval of this HCP by USFWS and CDFG, the Cooperative Management Agreement will be amended to formally add all RCHCA lands in the Lake Skinner core reserve to the MSHCP. With that action RCHCA properties will be managed by the Management Committee in accordance with the terms and conditions of the Cooperative Management Agreement.

Lake Mathews MSHCP Cooperative Management Agreement

In December of 1995 the RCHCA executed a Cooperative Management Agreement for the Lake Mathews MSHCP with MWD, USFWS, CDFG. The purpose of that document is to provide for the permanent management of conserved habitat presently owned by MWD and RCHCA in the Lake Mathews core reserve, as well as those lands to be added in the future by these agencies and other parties. The Cooperative Management Agreement: a) establishes a Management Committee comprised of CDFG, USFWS, MWD, and RCHCA; b) designates CNLM as the Reserve Director; c) establishes procedures for development and adoption of annual operating budgets and work plans; d) defines roles and responsibilities for Management Committee members; e) provides for the granting of conservation easements to CDFG over conserved habitat, and; f) establishes a non-wasting endowment to be provided by the RCHCA to finance the perpetual management of conserved habitat on MWD lands in the reserve, as well as biological monitoring, research, patrolling, and necessary administrative activities.

It is anticipated that the Cooperative Management Agreement will be amended to reflect arrangements resulting from the Assembled Land Exchange Agreement recently executed by BLM and the RCHCA. This amendment will provide that BLM will assume ownership and management responsibility for RCHCA properties in the core reserve. Financial responsibility for habitat management on those lands will be maintained by BLM. BLM also will be a member of the MSHCP Reserve Management Committee.

Memorandum of Understanding Among RCHCA Member Agencies

In anticipation of the formation of the RCHCA, in 1989 the County of Riverside and Cities of Hemet, Lake Elsinore, Moreno Valley, Perris, and Riverside executed a Memorandum of Understanding concerning the conservation of SKR. As part of this agreement the City of Riverside established commitments to provide for the ongoing management of SKR habitat in Sycamore Canyon Park. The City agreed to adopt a regional fee to be applied to all new development within its jurisdiction; that fee was to be sufficient to finance the acquisition of properties designated for inclusion in the Park. Additionally, the City documented its commitment to operate and maintain Sycamore Canyon Park ".in a fashion which shall not jeopardize SKR populations within its boundaries and which shall enhance the likelihood of the continued existence of SKR in the wild."

Memorandum of Understanding Regarding Anderson Property

In February of 1994 a Memorandum of Understanding was executed among the RCHCA, USFWS, CDFG, Riverside County Transportation Commission (RCTC), and the County of Riverside. That document established a partnership for the joint acquisition and conservation of 385 acres located adjacent to the San Jacinto Wildlife Area. The agreement provides for the conveyance of that property to CDFG for permanent management as SKR and wetlands habitat.

By means of the MOU the USFWS and CDFG agreed to cooperate with the RCHCA in the establishment of a mitigation bank based initially upon wetlands habitat acquired by the RCHCA as part of the Anderson property purchase. It is the intent of the parties to expand that mitigation bank to encompass other habitat types for eventual application to the multi-species HCP to be adopted by the RCHCA as an amendment to this HCP. The RCHCA is now exploring the potential to add other public agencies as participants in the mitigation bank.

Over the past eighteen months the RCHCA has been working cooperatively with USFWS, CDFG, and the U.S. Army Corps of Engineers to develop a mitigation banking agreement. The agreement has been drafted and is now under review by all parties. It is anticipated that a final agreement can be submitted for approval to all parties in the next six months.

Memorandum of Understanding Between the RCHCA. USFWS. BLM. and CDFG

In 1994 the RCHCA executed a .MOU with the USFWS, BLM, and CDFG which defines a process for cooperative development of an ecosystem based multi-species conservation plan. The MOU provides that following the completion and approval of the SKR, the RCHCA will prepare an ecosystem and habitat based plan intended to cover biological resources in RCHCA member jurisdictions. Through the MOU all of the parties agree to work together in the

development of a plan which will meet requirements of FESA and CESA and ensure consistency with the goals of the NCCP Act.

3. HCP Financing

As required by federal and state approval criteria for HCP's, the RCHCA will assure that adequate funding is available to carry out its responsibilities under this HCP. This assurance will be provided primarily through the commitment of RCHCA cash contributions to HCP implementation. In addition to the $30 million expended as of April 1996, the RCHCA will commit $1 1.7 million toward implementation of this HCP. RCHCA funds will be expended for three purposes: 1) acquisition of land and/or 180 conservation easements necessary to complete the core reserves defined in this HCP; 2) administration of the HCP, and; 3) establishment of non-wasting endowments to provide funding for habitat management activities in the Lake Mathews-Estelle Mountain, Lake Skinner-Domenigoni Valley, Motte Rimrock, and Sycamore Canyon-March Air Force Base core reserves.

Resources from federal and State sources also wilt be instrumental in the financing of this HCP. Direct funding assistance will be supplied by the federal government to assist in land acquisition and habitat management activities. In-kind assistance will be supplied by BLM, CDFG, and DPR to assure appropriate management of SKR habitat in several of the core reserves.
In addition to the above arrangements, the RCHCA will optimize the use of available funds by continuing and expanding its cooperative habitat conservation efforts with other agencies, actively soliciting federal, state, and private sector funding, applying for grant assistance as available, and, where appropriate, using mechanisms other than fee title acquisition to conserve habitat for SKR and other species.

a. Financial Arrangements for Completion and Expansion of the Core Reserves

Between the adoption of the first SKR mitigation fee ordinance by the County of Riverside in December of 1988 and March 1, 1996, approximately $39.8 million was raised for implementation of the SKR HCP. Of that amount, approximately 74% was generated from SKR mitigation fees, with the balance primarily derived from interest earnings, governmental and private sector grants, and payments made to the RCHCA for SKR mitigation under separate Section 7 and Section 10(a) Permit agreements. Following is a breakdown of RCHCA revenues collected as of March 1, 1996:

Riverside County Habitat Conservation Agency
Summary of Revenues
September 1990-March 1996

SKR Mitigation Fees	$29,309,724.49	73.6%
Interest Income	3,950,975.79	9.9%
Federal, State, and Other Grants	3,350,478.87	8.4%
RCTC & TLMA Land Acquisition Payments	1,252,092.00	3.1%
Other Revenues	1,021,043.93	2.6%
SKR Mitigation Payments	667,782.21	1.7%
Contract Income	238,628.00	0.6%
HCP Boundary Modification Fees	35,523.60	0.1%
TOTAL REVENUES	**$39,826.248.89**	

As of March 1, 1996 the RCHCA expended over $29.9 million to implement the Short-Term HCP and develop this HCP. Presented below is a categorical breakdown of RCHCA expenses as of March 1996:

Riverside County Habitat Conservation Agency
Summary of Expenses
September 1990-March 1996

Land Acquisition	$24,037,117.50	80.30%
Biological & HCP Consulting Services	1,441,951.42	4.80%
Management Services Contract	1,076,508.24	3.60%
Legal Services	1,030,317.74	3.40%
SKR Habitat Management	500,380.00	1.70%

Other Expenses	361,927.64	1.20%
Washington D.C. Representation	331,907.32	1.10%
Litigation Expenses	325,576.16	1.10%
RCRPOSD/WRCOG Contract	250,000.00	0.80%
Biological Research Contracts	237,605.10	0.80%
Reimbursable Expenses	225,265.74	0.80%
Audit, Office, and Public Information	82,139.92	0.30%
Travel and Training	23,622.15	0.08%
Insurance	21.912.00	0.07%
TOTAL EXPENSES	$29.946,229.93	

Of the seven core reserves designated in this HCP, four are entirely in public ownership and require no further land acquisition by the RCHCA. However, in the Lake Mathews Estelle Mountain, Lake Skinner-Domenigoni Valley, and San Jacinto-Lake Perris reserves a total of 1,153 acres of privately owned land not subject to project mitigation negotiations exists which must be acquired or otherwise conserved by the RCHCA to ensure the completion of the SKR core reserve system depicted in this plan.

The Lake Mathews-Estelle Mountain core reserve contains 683 acres in private ownership whose acquisition or conservation is planned by the RCHCA. The total projected cost of purchasing that property is approximately $4.07 million; funds available for this purpose include existing RCHCA cash reserves and financial assistance committed to the HCP by DOI.

The Lake Skinner-Domenigoni Valley core reserve contains 316 acres of private property planned for acquisition as part of this HCP. The total projected cost of property acquisition is approximately $1.3 million; funds available for this purpose include existing RCHCA cash reserves and financial assistance committed by DOI.

Finally, the San Jacinto-Lake Perris reserve includes private property which is under exclusive purchase option to the RCHCA for a cost of $2,188,516. The RCHCA has received approval for a $1 million grant under the federal ISTEA program, and these funds were requested specifically for use in the acquisition of this property. In addition, existing RCHCA cash reserves and DOI funds will be available for this purpose.

As previously noted, this HCP also calls for the core reserves to be expanded through the acquisition and conservation of additional SKR habitat in the plan area; this expansion will be accomplished through the use of federal resources. The primary asset involved in this effort will be 8,156 acres of federal land managed by BLM in western Riverside County. Pursuant to the terms of the Assembled Land Exchange Agreement included as Appendix A, these federal properties will provide the resources necessary to secure additional SKR habitat to meet the conservation goal of this HCP.

Beyond the resources provided by BLM, significant federal assets also may be available for SKR conservation if the previously discussed MAFB realignment results in a land trade for portions of property released for civilian use. Since the disposition of this issue is presently uncertain, this HCP will not speculate on the future availability of federal assets for additional SKR habitat conservation. However, if the land trade does occur, it is almost certain that the amount of SKR habitat to be conserved in the plan area will be increased by a significant amount.

b. Financial Arrangements for Ongoing Core Reserve Management Activities

As previously noted, actual management of the individual core reserves will be performed by agencies other than the RCHCA. The primary role of the RCHCA in this process will be to: 1) participate in interagency management committees or otherwise consult with responsible entities to ensure that SKR management complies with the terms of this HCP, and; 2) provide financial support in the form of non-wasting endowments to ensure appropriate SKR habitat management, species monitoring, and biological research.

In the Lake Mathews-Estelle Mountain reserve, the RCHCA and BLM will assume responsibility for financing ongoing management of SKR habitat. On MWD properties within the reserve, management will be funded through a non-wasting endowment established by MWD using $2.5 million received from the RCHCA for purchase of conservation easements over SKR habitat on MWD lands around Lake Mathews. On properties within the reserve which are now owned by the RCHCA, upon exchange of those lands pursuant to the Assembled Land Exchange Agreement, BLM will assume financial responsibility for ongoing habitat management, monitoring, and patrol activities.

In the Lake Skinner-Domenigoni Valley reserve the RCHCA will add $500,000 to the $500,000 it previously provided for management of the Shipley Reserve. That sum will supplement a $13,886,000 management fund provided by MWD and administered by the Reserve Management Committee established under the Southwestern Riverside

County MSHCP. The MSHCP also provides for an annual contribution of no less than $200,000 for habitat management to be derived from revenues from the Domenigoni Reservoir presently under construction.

In the Sycamore Canyon portion of the Sycamore Canyon-MAFB reserve the RCHCA will provide up to $100,000 to the City of Riverside Park and Recreation Department to develop a SKR management plan. In addition, the RCHCA will establish a $500,000 non-wasting endowment to assist the City in financing ongoing SKR habitat management activities.
On the March Air Force Base portion of the reserve, a $1.5 million non-wasting endowment for the SKR Management Area on the western portion of the base already exists. That endowment will continue to provide funding for SKR management activities.

In the Motte Rimrock reserve the RCHCA will establish a $300,600 non-wasting endowment to assist UCR in funding SKR management and monitoring activities. The endowment will be managed by the RCHCA, with funds used only for SKR management purposes in this reserve.

Pursuant to the terms of the HCP Implementation Agreement, in the Steele Peak and Potrero ACEC reserves, financial responsibility for ongoing management of SKR habitat will be assumed by BLM.

Finally, as provided in HCP Implementation Agreement financial responsibility for SKR habitat management on State lands in the San Jacinto-Lake Perris core reserve will be assumed by CDFG and DPR.

The total projected cost to the RCHCA for managing conserved SKR habitat over the 30-year period of the permit and agreement is approximately $3.9 million as detailed below.

RCHCA Contributions to SKR Core Reserve Habitat Management and Species Monitoring Expenses 1996-2026

Lake Mathews-Estelle Mountain reserve	$2,500,000
Lake Skinner-Domenigoni Valley reserve	500,000
Motte Rimrock reserve	300,600
Sycamore Canyon-March AFB Reserve SC:	600,000
MAFB: No cost to RCHCA	0.00
TOTAL RCHCA MANAGEMENT CONTRIBUTIONS	**$3.900.600**

In light of the RCHCA's desire to expand this plan into an ecosystem based multispecies HCP, it should be noted that in all likelihood SKR habitat in each reserve will be managed as a component of an overall multi-species plan. Accordingly, the projected management expenses shown above almost certainly will change depending upon the terms of the multi-species successor to this HCP. It is expected that by shifting to a multi-species approach the RCHCA will realize a much greater level of cost-effectiveness in its habitat management expenses.

c. Additional Funding Sources and Strategies for HCP Implementation

Interagency Cooperative Efforts Since 1990, the RCHCA's cooperative efforts with MWD, WCB, RCTC, Riverside County have facilitated the acquisition and conservation of over 1,660 acres in the plan area. In addition, cooperative efforts by the RCHCA, MWD, and/or the County of Riverside have resulted in the conservation of 9,000 acres of sensitive habitats at Lake Skinner-Domenigoni Valley, a 4,000-acre expansion of the Santa Rosa Plateau reserve, and a 2,500-acre expansion of the State Ecological Reserve at Lake Mathews.

Likely opportunities for future cooperative efforts will focus on use of federal lands to support conservation objectives of this SKR HCP and a successor multi-species HCP. Through the aforementioned commitments from BLM, federal lands will be included in the RCHCA's HCP and managed in a fashion consistent with its terms. Additionally, through the Assembled Land Exchange Agreement the BLM and RCHCA will work cooperatively to identify and complete land exchanges which result in the conservation of habitat valuable to the conservation of SKR and other species.

State and Federal Funding

As previously noted, under the HCP Implementation Agreement DOI and BLM provide a commitment to contribute $3.6 million to the implementation of this HCP. No less than $3.3 million will be made available to BLM within three years for the purpose of acquiring suitable SKR habitat to complete or expand the core reserves. The balance of the federal contribution will be supplied through in-kind habitat management services performed by BLM in the core reserves.

In addition, the RCHCA has received approval for a $1 million grant from the federal Intermodal Surface Transportation Efficiency Act (ISTEA). Receipt of the ISTEA funds has been delayed for a protracted period due to the

absence of necessary Congressional appropriations bills. If these monies ultimately are released, the RCHCA will expend them on land acquisition necessary to complete the San Jacinto-Lake Perris core reserve.

The RCHCA has had some success to date in attracting financial support from the State of California. The State has assisted the implementation of the SKR HCP through a $500,000 grant from the Environmental License Plate Fund, $520,000 from the California Transportation Commission's Environmental Enhancement and Mitigation grant program and most importantly, expenditures of almost $1.7 million by the Wildlife Conservation Board to acquire land for SKR conservation purposes within the Lake Mathews core reserve. All monies expended by the State for SKR conservation have been directed toward land acquisition in the core reserves.

Federal and State funding sources which will be pursued by the RCHCA to assist in the implementation of this HCP include grant programs administered by the following agencies:

i. California Department of Parks and Recreation, under the California Wildlife Protection Act (Proposition 117) and the State Grant-in-Aid Program of the federal Land and Water Conservation Fund;

ii. California Resources Agency and California Transportation Commission, as part of the Environmental Enhancement and Mitigation grant program;

iii. Riverside County Transportation Commission and California Transportation Commission, under the ISTEA grant program, and;

iv. CDFG, through the Environmental License Plate Fund.

Other Mechanisms for Habitat Conservation

In addition to cooperative efforts and grants, the RCHCA also will seek to optimize the use of its available funds by protecting habitat through mechanisms other than fee title acquisition. Such mechanisms include conservation easements, life estates, charitable donations, and implementation of density compensation and transfer programs through the General Plans of RCHCA member agencies.

d. Projected Budget for HCP Implementation

Based upon the projections and assumptions presented in this section, following is a summary budget for implementation of this HCP:

EXPENSES	
Core reserve management	$3,900,600
Management of additional SKR habitat [1]	$1,800,000
Land acquisitions	$7,600,000
HCP administration	$2,000,000
TOTAL EXPENSES	**$15,300,600**
REVENUES	
RCHCA Contributions	$11,700,600
Federal Contributions	$3,600,000
TOTAL REVENUES	**$15,300.60**

[1] Total expense for management of additional SKR habitat in expanded core reserves.

The above budget does not include the estimated cost of expanding the SKR core reserves through the Assembled Land Exchange Agreement, since the expenses incurred for acquisition of property will be limited to the revenues received from sale of BLM properties.

4. Changed or Unforeseen Circumstances

To ensure that corrective actions can be taken in response to changed or unforeseen circumstances, the RCHCA will include in its annual plan implementation reports an assessment of the following factors:

a. Any significant adverse change in SKR populations within core reserves or the amount and distribution of SKR occupied habitat within the reserve system;

b. Any significant adverse change in the assumptions regarding the availability of funding for plan implementation, and;

c. Any significant new information relevant to the HCP that was unforeseen at the time the plan was approved.

In the event that significant unforseen, extraordinary, or changed circumstances have occurred or significant new information becomes available, appropriate amendments to the HCP may be proposed. Notwithstanding the foregoing however, so long as the RCHCA and its member agencies have fully implemented the conservation requirements set forth in this HCP, any such proposed amendment or amendments shall not require or provide for the imposition of additional land restrictions or financial compensation requirements on the RCHCA, its member agencies, or non-federal land owners. In the event it is determined that additional habitat should be acquired or that additional funding is required to meet and deal with unforseen, extraordinary or changed circumstances, the USFWS or any other governmental agency will, from its own funds, provide for such additional acquisition or funding. The purpose of this provision is to recognize that Congress intended, even in the event unforseen, extraordinary, or changed circumstances, that additional mitigation requirements not be imposed upon a HCP permittee who has fully implemented the conservation requirements of the HCP.

5. HCP Amendment Process

The following types of amendments to this HCP are anticipated by the RCHCA:

a. Administrative changes to the text of the HCP, Section 10(a) and Section 2081 permit, and Implementation Agreement;

b. Changes to the terms and conditions of the permits and Agreement;

c. Changes to the boundaries of the plan area and reserves, and;

d. Changes to the authorizations provided by the permits and Agreement.

a. Administrative Amendments to the HCP

RCHCA requests for administrative amendments to the text of the plan, permit, or agreement will be submitted in writing to USFWS and CDFG and will take effect upon receipt of written approval from those agencies. Administrative amendments generally will include those minor changes not requiring formal NEPA or CEQA processing.

Pursuant to the terms of the Implementation Agreement, modifications to configurations of the core reserves will be processed by USFWS and CDFG as administrative amendments, as long as the amount of SKR occupied habitat within the reserve is not diminished. In approving core reserve configuration modifications USFWS and CDFG will make written findings that the revised configuration better addresses the overall conservation needs of the SKR.

b. Changes to HCP Terms and Conditions

Over the course of the 30-year HCP implementation period, it is anticipated that the terms of the permit and agreement may be modified to allow needed refinements and respond to changed conditions. Any amendments to the terms and conditions of the permit and agreement proposed by the RCHCA will be submitted in writing to USFWS and CDFG, and will be accompanied by environmental documentation as required under NEPA and CEQA.

c. Changes to HCP Boundaries

Since this HCP includes a commitment by the RCHCA to expand the core reserves designated in this document, the boundaries of those areas certainly will be modified over time. Such changes will not require formal amendments to this HCP; instead, they will be documented through written notice to USFWS, CDFG, and other interested parties. The RCHCA's GIS maps and data base also will be updated as land is added to the core reserve system.

Over time it is likely that the area covered by this HCP will be modified. This could occur through: 1) the addition of new unincorporated lands; 2) expansion of the RCHCA to include additional cities, or; 3) participation by individual land owners in areas not previously covered by this HCP. It is also possible that lands will be removed from the plan area due to annexations by non-member cities and/or incorporation of new cities do not join the RCHCA.

With the exception of changes to core reserve boundaries resulting from land acquisitions or dedications approved by USPWS and CDFG, all proposed changes to the plan area will be submitted in writing and subject to USFWS and CDFG concurrence. Such requested changes will be supported by environmental documentation as required under NEPA and CEQA.

d. Changes to Authorizations Provided Under the Permit and Agreement

As previously noted, the RCHCA intends to amend this HCP into a ecosystem based conservation plan covering all sensitive habitats and species in RCHCA member jurisdictions. As part of that process the RCHCA may choose to

seek authorization for incidental take of other federally or State listed species occurring in the plan area, and may also seek pro-listing agreements covering non-listed species. All changes sought by the RCHCA to the authorizations provided under the permit and agreement will be processed as an amendment to the HCP and its implementing agreements, and will be accompanied by environmental documentation as required under CEQA and NEPA.

6. Procedures for Addition of New RCHCA Member Agencies

As noted above, the addition of new cities to the RCHCA is anticipated during the term of this HCP. The following procedures will be employed in the addition of new member agencies to the RCHCA:

a. The governing body of the affected jurisdiction will send a written request for agency membership to the RCHCA Board of Directors;

b. The RCHCA Board of Directors will consider the request, and if it decides to pursue the matter, will direct staff and legal counsel to draft proposed amendments to the RCHCA Joint Powers Agreement, Memorandum of Understanding, HCP implementation agreements with USFWS and CDFG, and other pertinent documents;

c. Upon approval by the RCHCA Board of Directors, amended agreements will be forwarded to RCHCA member agencies, USFWS, CDFG, and other parties for approval;

d. Upon execution by all parties and satisfaction of all initial membership obligations which may be specified in the agreements, the affected jurisdiction will become a member of the RCHCA. Upon execution by USFWS and CDFG of permit amendments and HCP implementation agreements, the new agency will be covered by the federal and State take permits.

For new cities wishing to join the RCHCA, membership will also involve an agreement which specifies mutually acceptable arrangements for ensuring that the new member city contributes a fair share toward implementation costs of the SKR HCP. Such agreements will be subject to approval by the new member city and the governing bodies of all existing RCHCA jurisdictions.

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References

A. Citations

Burke, R. L., J. Tasse, C. Badgley, S. R. Jones, N. Fishbein, S. Phillips, and M. E. Soule

1991 Conservation of the Stephens' Kangaroo Rat (Dipodomys Stephensi); Planning for Persistence. Bull. Southern

California Acad. Sci. 90(1), 1991, pp. 10-40.

Center of Continuing Study of the California Economy

1991 1991 Cities Database

Knecht, A. A.

1971 Soil Survey of Western Riverside Area, California. Washington, D.C.; U.S. Department of Agriculture.

O'Farrell, M. J. and C. Uptain

1989 Assessment of Population and Habitat Status of the Stephens' Kangaroo Rat. Nongame Bird and Mammal Section Report, July 1989. State of California. Department of Fish and Game, Wildlife Management Division.

Onaka, Jun

1993 Report for the City of Carlsbad's Habitat Management Plan, presented at September Advisory Group Meeting.
Price, M. V. and P. R. Endo

1989 Estimating the Distribution and Abundance of a Cryptic Species, Dipodomys Stephens! (Rodentia: Heteromyidae), and Implications for Management. Conservation Biology 3:293-301.

Southern California Association of Governments

1991 Regional Growth Forecast.

1992 1990 Regional Land Use Inventory.

Thomas, J. W., E. D. Forsman, J. B. Lint, E. C. Meslow, B. R. Noon, & J. Verner

1990 A conservation strategy for the northern spotted owl. Interagency Scientific Committee to Address the Conservation of the Northern Spotted Owl, U.S. Department of Agriculture, Forest Service, and U.S. Department of the Interior, Bureau of Land Management, Fish and Wildlife Service, National Park Service, Portland, Oregon, 427pp.

U.S. Department of the Interior, Fish and Wildlife Service

1993 Draft Recovery Plan for the Desert Tortoise (Mojave population). U.S. Fish and Wildlife Service, Portland, Oregon. 170 pages plus appendices.

RCHCA Studies References

Gilpin, Michael

1993 A Viability Model for Stephens' Kangaroo Rat in Western Riverside County

Kelly, P. A., and Price, M. A.

1992 Home Range Use of Stephens' Kangaroo Rats: Implications for Density Estimation
McClenaghan, Jr., R. L" and E. Taylor

1991 Temporal and Spatial Patterns of Demography in Populations of Dipodomys Stephens! from Riverside County, California

McClenaghan, Jr., R. L., and H. D. Truesdale

1991 Genetic Variability within and among Populations of Dipodomys Stephens! in Riverside County
Minnich, R. A. and Y. Chou

n.d. A Geographic Information System Database for the Stephens' Kangaroo Rat

Olson, Todd

1993 The Habitat Transaction Method: A Market-based alternative for HCP Implementation

Price, M. V., and R. M. Ascanio

1992 Effect of D. agilis on Home Range and Habitat Use by Stephens' Kangaroo Rat {Dipodomys Stephens!)'A Preliminary Report of Progress-to-Date

Price, M. V., and R. L. Goldingay

1992 Temporal Stability of Space Use by Dipodomys Stephens! and D. agilis in a Habitat Mosaic. Managing Habitat for Stephens' Kangaroo Rat: Effects of Shrub Removal

Price, M. V., and P. A. Kelly

1992 Demography of Two Stephens' Kangaroo Rat (Dipodomys Stephens!) Populations in Riverside County, California Monthly and Lifetime Movement Distances of Stephens' Kangaroo Rat (Dipodomys Stephens! Merriam)

Price, M. V., P. A. Kelly, and R. L. Goldingay

1992 Distinguishing the Endangered Stephens' Kangaroo Rat (Dipodomys Stephens!) from the Pacific Kangaroo Rat (Dipodomys agilis)

RECON

1991 Stephens' Kangaroo Rat Literature Review

1993 A Population Viability Analysis of the Stephens' Kangaroo Rat Core Reserves in Riverside County, California

1993 Methodology of Surveying for Stephens' Kangaroo Rat Habitat and Evaluating Suitability of Lands as SKR Permanent Reserves

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B. Glossary

Glossary abbreviations and Acronyms

ACEC	Area of Critical Environmental Concern
BIA	Building Industry Association
C1	Category 1 Candidate (for federal listing)
C2	Category 2 Candidate (for federal listing)
C3c	Category 3c Candidate (for federal listing)
CA	California
CALTRANS	California (Department of) Transportation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFP	California Fully Protected
CFR	Code of Federal Regulations
CHP	Chaparral
CNPS	California Native Plant Society
CPI	Consumer Price Index
CR	California Rare (species status)
CRMP	Core Reserve Management Plan
CSC	California Species of Special Concern
CSS	Coastal Sage Scrub
DIS	Disturbed (habitat)
DU	Dwelling Unit
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FE	Federal Endangered (species)
FPE	Federal Proposed (for listing). Endangered
FT	Federal Threatened (species)
FWM	Fresh Water Marsh
G	Grassland
G/CSS	(Mixed) Grassland and Coastal Sage Scrub
GIS	Geographic Information System
HCP	Habitat Conservation Plan
JPA	Joint Powers Agency

JW	Juniper Woodland
LC	(Species of) Local Concern
LM-EM	Lake Mathews-Estelle Mountain
LS-DV	Lake Skinner-Domenigoni Valley
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Agreement
MRR	Motte Rimrock Reserve
MSHCS	Multiple Species Habitat Conservation Strategy (Riverside Co.
MVP	Minimum Viable Population
MWD	Metropolitan Water District of Southern California
NCCP	Natural Communities Conservation Plan(ning)
NEPA	National Environmental Policy Act
OF	(Live) Oak Forest
OW	Open Water (shoreline)
PKR	Pacific Kangaroo Rat
PVA	Population Viability Assessment
RCHCA	Riverside County Habitat Conservation Agency
RF	Riparian Forest
RMCC	Reserve Managers Coordinating Committee
RMP	Resource Management Plan
RSA	Regional Statistical Area
SC-MAFB	Sycamore Canyon-March Air Force Base
SJ-LP	San Jacinto-Lake Perris
SKR	Stephens' Kangaroo Rat
SM	Salt Marsh
SRP	Scientific Review Panel
TAC	Technical Advisory Committee
USFWS	United States Fish and Wildlife Service (Department of Interior)
VP	Vernal Pool
WCB	(California) Wildlife Conservation Board

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C. Definitions

Agricultural Preserves:
Designated areas of existing, viable, and productive agricultural land within which contracts can be enforced under the provisions of the Williamson Act to stay in agricultural use for a designated period of time. Under this contract, land is granted certain property tax advantages for continuation of agricultural use. (State of California Government Code Section 51200)

Area of Critical Environmental Concern (ACEC):
An area within federal lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic value, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

Biodiversity:
A general term for species, habitats, and genetic diversity; the distribution and abundance of different plant and animal communities and species within an area.

Category I Land Use:
Defined in the Riverside County Comprehensive General Plan as "heavy urban" characterized by high densities and intensive land uses. Examples of heavy urban land uses are large commercial centers, heavy industry, and residential land uses with a density range of 8 to 20 or more housing units per acre. These land uses require the full level of public services, such as community water systems, sewer service, complete road improvements, fire and police protection, and garbage collection. Heavy urban land uses are generally located at the center of a community and within access of a major transportation corridor.

Category II Land Use:
Defined in the Riverside County Comprehensive General Plan as "urban," characterized by a broad mix of commercial, industrial, and residential uses,
Glossary with residential density ranging from two to eight housing units per acre. These land uses require high levels of public services such as community water systems, full road improvements, sewer service in most cases, fire and police protection, and garbage collection. Urban land uses generally are located in communities or city spheres of influence.

Category III Land Use:
Defined in the Riverside County Comprehensive General Plan as "rural," characterized by low densities and fewer public facilities and improvements. Rural communities may have a variety of different land uses, including agricultural uses, small-scale commercial uses, residential uses with lot sizes of one-half acre to five acres, and industrial uses such as railroads. Water and sewer service may be provided by community systems, or may be dependent on wells and septic systems. Road systems are generally not well developed or improved.

Category IV Land Use:
Defined in the Riverside County Comprehensive General Plan as "outlying area," where development is the least dense with parcels of five acres and greater in size. Outlying areas may be located close to large tracts or publicly owned land. Outlying area land uses are often tied to agriculture, mining, industry, or residential uses. Public facilities are required where they are necessary to protect the public health, safety and welfare, but further improvements are generally not required for outlying area developments.

Category V Land Use:
Defined in the Riverside County Comprehensive General plan as a unique category for planned communities. Planned community developments are large-scale projects which offer a variety of residential, commercial, and industrial land uses. These projects are designed to "stand alone" as self-supporting communities, and must provide the highest level of public services consistent with an urban type of development. The large scale of these projects is necessary in order for them to have the ability to finance both on-site and off-site public facilities and services which are needed to support the community.

Conservation:
Methods and procedures necessary to recover an endangered or threatened species, including research, census, law enforcement, habitat acquisition, habitat protection, habitat maintenance, species propagation, and live trapping and transportation.

Corridor:
A defined tract of land, usually linear, through which a species must travel to reach habitat suitable for reproduction and other life-sustaining needs.

Critical Habitat:
Defined in the federal Endangered Species Act (1973) to include the area occupied by a species at the time it is listed, specific areas in the vicinity of the occupied habitat, and specific areas away from the occupied habitat considered essential for the conservation of the species.

Cumulative Impact:
The incremental environmental impact of an action together with impacts of past, present, and reasonably foreseeable actions (regardless of the source of the other actions).

Discretionary Project:
A project which requires the exercise of judgment or deliberation when the public agency of body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations (CEQA Guidelines 1986).

Dispersal:
The movement, usually one way, and on any time scale, of plants or animals from their point of origin to another location where they subsequently produce offspring.

Ecosystem:
A complex ecological community and environment forming a functioning whole in nature; a complex interaction among plant and animal species and their physical environment.

Endangered Species:
Any plant or animal species in danger of extinction in all or a significant part of its range.

Endangered Species Act:
Federal act of 1973, as amended, 16 U.S.C. Sections 15311543; and California Act of 1984, as amended, California Fish and Game Code, Sections 2050-2098.

Environmental Assessment (EA):
A concise public document prepared in compliance with NEPA, which briefly discusses the need for an action and alternatives to such action and provides sufficient evidence and analysis to determine whether to prepare an environmental impact statement or a finding of no significant impact.

Environmental Impact Statement (EIS):
Document prepared in accordance with the National Environmental Policy Act to describe, analyze, and consider mitigation of the significant environmental effects of a project, plan, or action.

Extinct:
Disappeared as a species due to failure to reproduce sufficient numbers to maintain succeeding generations.

Finding of No Significant Impact (FONSI):
A document prepared in compliance with NEPA, usually supported by an environmental assessment, that briefly states why a federal action will not have a significant effect on the human environment and for which an environmental impact statement, therefore, will not be prepared.

Floodplain:
The land adjacent to a river which is subject to inundation during high water flows when the river's water level rises above its established banks. The 100year floodplain refers to that area of land which will be inundated during a flood of a severity that may only take place once every 100 years.

Forb:
Any nongrass-like plant having little or no woody material on it.

Habitat:
The combination of environmental conditions of a specific place occupied by a species or a population of such species.

Habitat Conservation Plan (HCP):
An implementable program for the long-term protection and benefit of a species in a defined area; required as part of a Section 10(a) permit application under the federal Endangered Species Act.

Historic Habitat:
Areas that have supported a species in the past and may or may not continue to do so.

Historic Range:
The known general distribution of a species or subspecies as reported in current scientific literature.

Home Range:
The area to which the activities of an animal are confined during a defined period of time.

Incidental Take:
The taking of a federally listed wildlife species, if such taking is incidental to, and not the purpose of, carrying out otherwise lawful activities.

Land Use Planning Areas:
Geographic subdivisions of Riverside County utilized in the General Plan Land Use Element. The boundaries of the Land Use Planning Areas correspond to the boundaries of the Regional Statistical Areas (RSAs) within the County.

Lead Agency:
The public agency which has the principal responsibility for carrying out or approving a project.

Ministerial Decision:
A governmental decision involving little or no personal judgment by the public official as to the wisdom or manner of carrying out the project (CEQA Guidelines 1986).

Mitigation:
Measures undertaken to diminish or compensate for the negative impacts of a project or activity on the environment, including: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or (e) compensating for the impact by replacing or providing substitute resources or environments.

Monitoring:
The process of collecting information to document implementation of mitigation measures and to evaluate whether or not the objectives of the habitat conservation plan are being realized.

Open Space:
Land on which no structural improvements are permitted.

Population:
A collection of individuals that share a common gene pool.

Population Density:
Number of individuals of a species per unit area.

Population Viability Analysis (PVA):
A general term to describe a planning process wherein all threats to a population, natural and human-caused, are identified and a determination is made whether these threats endanger the continued existence of the population. Virtually all aspects of the biology of a species affect the viability of a real population.

Raptor:
A bird of prey (e.g., eagle, owl, hawk, or falcon).

Rare Species:
A species of plan or animal which has limited numbers and/or distribution.

Recovery Plan:
A plan to ensure the conservation and survival of endangered and threatened species. Recovery plans give priority, to the extent feasible, to those endangered or threatened species that are or may be in conflict with construction or other development projects or other forms of economic activity.

Section 7:
A section of the federal Endangered Species Act that provides for consultation between federal agencies and the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species.

Section 9:
A section of the federal Endangered Species Act that prohibits the "taking" of any endangered species.

Section 10(a):
An amendment to the federal Endangered Species Act that allows for incidental takings of an endangered species if the permit for the proposed activity is accompanied with a habitat conservation plan that will demonstrably benefit the species.

Sensitive Species or Species of Concerns
Species which are rare, which have preternaturally small or declining populations, or whose probability for long-term survival is in question.

Species:
Any distinct population of wildlife that interbreeds when mature.

Species of Special Concern:
Species designated by the California Department of Fish and Game as being rare, having preternaturally small or declining populations, or whose probability for long-term survival is questioned.

Stephens' Kangaroo Rat:
Small, nocturnal mammal related to squirrel family of rodents, native to flat grasslands and coastal sage habitat of western Riverside County and northern San Diego County.

Study Area:
Locations within western Riverside County that were identified in a Short-Term HCP as potential sites for permanent SKR reserves in western Riverside County.

Take:
As defined in the federal ESA, take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a species [listed as threatened of endangered], or attempt to do so." "Harass" and "harm" are further defined in federal regulations and case law as follows:

> "Harass" means an intentional or negligent act or omission which creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.
>
> "Harm" means an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.
>
> As defined in the California ESA, take means "to hunt, pursue, capture, or kill or attempt the same;" the terms "harm" or "harass" are not used.

Territory:
The area that an animal defends, usually during breeding season, against intruders of its own species.

Threatened Species:
Any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Viability:
The ability of a population to persist. The converse of a vulnerability or the propensity of a population to go extinct.

Zoning:
A legal device used by local jurisdictions to control use of land and development density and to ensure that land uses are properly situated in relation to one another.

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D. Board Members

RCHCA Board of Directors
(As of March 7, 1996)

Chair	Vacant
Laura Pearson Vice Chair	Councilwoman City of Riverside
George Alongi	Councilman City of Lake Elsinore
Bob Buster	Supervisor, First District County of Riverside
Bonnie Flickinger	Councilwoman City of Moreno Valley
Steve Ford	Councilman City of Lake Elsinore
Lenwood Long	Councilman City of Perris
Andrea Puga	Councilwoman City of Corona
Robin Reeser-Lowe	Councilwoman City of Hemet
Jack van Haaster	Councilman City of Murrieta

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E. RCHCA Advisory Committee and Ad Hoc Working Groups

Advisory Committee

Chair	Gary Wanczuk Property Owner
Vice Chair	Richard D. Friesen, Ph.D.
Agricultural Interests	Bob Perkins Riverside County Farm Bureau
	Jules Wesselink Dennis Hollingsworth (Alternate) Riverside County Farm Bureau
Biological Interests	Richard D. Friesen, Ph.D.
	Bob McKernan San Bernardino County Museum
Development Interests	Rod Hanway Building Industry Association
Environmental Interests	Scott White Audubon Society
	Anne Dennis Sierra Club
	Jane Block Dan Silver, M.D. Endangered Habitats League
Property Owners	Bill Sullivan Lockheed Corporation
	Cindy Domenigoni Property Owner
	Dennis Hansberger Riverside County Property Owners Association
Public Utilities	N. Gregory Taylor Metropolitan Water District
	Jack Wyatt Southern California Edison
University of California	John Rotenberry, Ph.D. Natural Reserve System
Other Members	Lindell Marsh Siemon, Larsen & Marsh
	Bob Nelson Riverside County Waste Resources Management District
	Shelton Douthit Riverside Land Conservancy
	Carolyn Syms-Luna Riverside County Transportation and Land Management Agency
Federal and State Agencies	Jeff Newman/Michelle Shaughnessy U.S. Fish and Wildlife Service

Kevin-Barry Brennan
California Department of Fish and Game

Biology Working Group

Julie Alpert	Metropolitan Water District
Ronald Baxter	Baxter Consulting
Phillip Behrends	Dudek and Associates
John Bradley	U.S. Fish and Wildlife Service
Art Davenport	U.S. Fish and Wildlife Service
Larry Eng	California Department of Fish and Game
Richard Friesen	Biodiversity Consulting
Paul Fromer	RECON
John Gustafson	California Department of Fish and Game
Patrick Kelly	U.C. Riverside (formerly)
Karen Kirtland	LSA Associates
Earl Lauppe	California Department of Fish and Game
Leroy McClenaghan	San Diego State University
Tony Metcalf	San Bernardino Valley Audubon Society
Steve Montgomery	SJM Biological Consultants
Michael O'Farrell	O'Farrell Consulting
Mary Price	U.C. Riverside
John Rotenberry	U.C. Riverside
Gina Shultz	RECON
Peter Stine	U.S. Fish and Wildlife Service

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