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via electronic mail (letter and exhibits A-C only)
via next-day air (letter and exhibits in paper form plus Appendices on CD-ROMs)

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Re: Comments on Draft Tehachapi Uplands Multiple Species Habitat Conservation Plan, Draft Environmental Impact Statement and Draft Implementing Agreement (74 Fed. Reg. 6050)

Dear Ms. Grim:

Thank you for the opportunity to comment on the Draft Tehachapi Uplands Multiple Species Habitat Conservation Plan ("DHCP"), Draft Environmental Impact Statement ("DEIS"), and Draft Implementing Agreement. (74 Fed. Reg. 6050).

The comments that follow first address issues applicable to both the Endangered Species Act ("ESA") and National Environmental Protection Act ("NEPA") legal standards, then address issues specific to each statute in turn.

These comments are submitted on behalf of the Center for Biological Diversity, Wishtoyo, and Wishtoyo's Ventura Coastkeeper program.

TABLE OF CONTENTS

I. INTRODUCTION / FOUNDATIONAL ISSUES

The Center for Biological Diversity ("Center") is a non-profit conservation organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 220,000 members and e-activists throughout California and the western United States, including residents of Kern and Los Angeles counties and within the local communities adjacent to Tejon Ranch. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and the overall quality of life for people in the Tehachapi Mountains region.

Wishtoyo is a non profit organization in Ventura County with over 700 members composed of Chumash Native Americans, Ventura County residents, and Los Angeles County residents. Wishtoyo's mission is to preserve, protect, and restore Chumash culture, the culture of all of Ventura County's diverse communities, and the environment. Wishtoyo shares traditional Chumash beliefs, cultural practices, songs, dances, stories, and values with the public to instill environmental awareness and responsibility for sustaining the health of our land, air, and water for the benefit of future generations. Wishtoyo's Ventura Coastkeeper program protects the ecological integrity and water quality of Ventura County's inland and coastal waterbodies and their watersheds through watershed monitoring and studies, law, policy, and restoration projects. As evidenced by condor pictographs, condor ceremonies, and condor dances, the Chumash people have a long history of interaction with the California condor for a variety of purposes, including religious and ceremonial ones. The Chumash people resided in villages, conducted cermonies at sacred sites, and buried their dead in and around the proposed Tejon Ranch project site for over 10,000 years.The Chumash people and the Wishtoyo Foundation have a strong cultural interest in the recovery of the California condor and the protection of Tejon Ranch.

This proposed HCP is unprecedented in allowing for (non-lethal) take for the California condor. As you are well aware, this species was literally at the brink of extinction when extreme intervention was put in place at the cost of millions of dollars in public and private funds. It is inappropriate and legally indefensible that California condors would be considered for even non-lethal "take" under this permit.

The DHCP must meet the legal standards set forth in the ESA, 16 U.S.C. §§ 1531 et seq., and provide for not only the protection of the covered species but also the conservation (recovery) of those species. As with numerous other approved multi-species HCPs, this DHCP and associated documents utterly fail to provide for either adequate protection or recovery of the covered species. Therefore, as described in more detail below, the proposed DHCP fails to meet the statutory requirements of the ESA as well as the other applicable statutes.

Importantly, as described in more detail in Section II.B., below, the Center believes that the entire public review process has been fatally harmed by the FWS's failure to make relevant documents publicly available as is required by Section 10(c) of the ESA. Unless and until the FWS makes all documents available, the review process cannot proceed. The Center therefore submits these comments out of an abundance of caution only and by doing so in no way waives any rights or claims it may have for the FWS's failure to comply with the ESA.

A. Inconsistent and Inaccurate Project Description

As a threshold matter, the DHCP and the DEIS both suffer from inconsistent project descriptions and inaccurate mapping. The effect of these numerous inconsistencies, errors, and omissions is to confuse the reader and make any reasonable assessment of the project impossible.

The DHCP contains numerous inconsistencies regarding the acreage totals for its various development components and fails to use a uniform system for describing these components throughout the document. One example concerns the development envelope of the Tejon Mountain Village ("TMV") project itself. Numerous references are made to a 7,860 acre "development envelope" (DHCP p.2-2, n.2), a 7,800 acre "disturbance area envelope" (DHCP p.4-60), and a 7,900 acre "CEQA envelope" (DHCP App. C p.4). These various acreage totals are repeated throughout the DHCP. However, the total figure is never defined. The most important and prominent description of acreage totals for the document is contained in Section 2: Project Description. Yet Table 2-1 does not include the 7,800-7,900 acre figure, nor any figures that clearly add up to that total.

Also problematic is the DHCP's extremely inconsistent adherence to the assertion that the analysis will assume that the 7,800-7,900 acre development envelope will be 100% impacted (DHCP p.2-2, n.2). Rather than consistently using the 7,800-7,900 acre figure when analyzing the impacts of the TMV development, the DHCP uses a figure of 5,082 acre figure with far greater frequency. For example, within the Project Description itself the DHCP admits that "[t]he net development disturbance area associated with the TMV project is approximately 5,082 acres," (DHCP p.2-11). Similarly, the DHCP's analysis of the project's impacts to condor critical habitat explicitly states that only "5,082 acres will actually be impacted," resulting in a lower calculation of impacted critical habitat (DHCP p.4-60).

Compounding the problem of inconsistent acreages for the TMV development is a lack of adequate description of how those figures were derived and what components of the project are included in each figure. For example, one paragraph of the Project Description discusses at least four different TMV-associated planning boundaries: a "TMV Planning Area," a "TMV Specific Plan," a "TMV project," and "TMV." (DHCP p.2-11). Only "TMV" apparently includes the 3,450 residences, up to 160,000 sq. ft. of commercial development, two golf courses, equestrian center, 750 hotel rooms, and up to 350,000 sq. ft. of support uses. These various uses need to be adequately described, with estimated development disturbance areas clearly defined for each use so that the total disturbance area of the project is adequately described. That total figure must then be used consistently throughout the document.

As described in more detail in Section II.E.3.a., below, the maps provided in both the DHCP and the DEIS fail to accomplish their informational purpose, instead sowing confusion and misinformation. A representative sampling of these inconsistencies was described in a detailed report published in the pages of the Mountain Enterprise, which concluded that "[r]ecall and reissue, after proofreading and correction, may be needed" for the DHCP and DEIS (Hedlund and Penland 2009). We join in these comments, and the analysis by the Mountain Enterprise is hereby incorporated in full to these comments.

The inaccuracies and omissions in the DEIS render the description of the baseline conditions unusable in violation of NEPA. FWS is required to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit states that "without establishing…baseline conditions…there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA."

Inconsistencies such as those described above are repeated throughout the document, making an accurate analysis of the impacts of the project impossible for the public and decision-makers. The DEIS and the DHCP should be withdrawn and all errors and omissions corrected before any re-issuance.

II. VIOLATIONS OF THE ENDANGERED SPECIES ACT

A. LEGAL FRAMEWORK

Section 9 of the ESA and its implementing regulations prohibit any person from "taking" a threatened or endangered species. 16 U.S.C. § 1538(a)(1); 50 C.F.R. § 17.31. A "person" includes private parties as well as local, state, and federal agencies. 16 U.S.C. § 1532(13). "Take" is defined broadly under the ESA to include harming, harassing, trapping, capturing, wounding, or killing a protected species either directly or by degrading its habitat sufficiently to impair essential behavior patterns. 16 U.S.C. § 1532(19). The ESA not only bans the acts of parties directly causing a take, but also bans the acts of third parties whose acts bring about the taking. 16 U.S.C. § 1538(g). The section 9 "take" prohibition does not apply to listed plants species, but the ESA prohibits, among other things, the destruction, damage, or removal of listed plants in knowing violation of state law. 16 U.S.C. § 1538(a)(2)(B).

Congress created two "incidental take" exceptions to section 9's take prohibition. One of these exceptions is found in section 10 of the ESA. Section 10(a)(1)(B) authorizes the Fish and Wildlife Service ("FWS") to issue Incidental Take Permits ("ITPs") to private parties and state and local governmental entities for "any taking otherwise prohibited by section 1538(a)(1)(B) [section 9] of this title if such taking is incidental to and not the purpose of the carrying out of any otherwise lawful activity." 16 U.S.C. § 1539(a)(1)(B). There is no incidental take exception for actions prohibited by section 9 involving listed plants.

An applicant for an ITP must prepare and submit to FWS an HCP. 16 U.S.C. § 1539(a)(1)(B). The HCP must contain specific measures to "conserve," or provide for the recovery of, the species. At a minimum, the ESA and implementing regulations require all HCPs to include the following: (1) a complete description of the activity sought to be authorized; (2) names of the species sought to be covered by the permit, including the number, age and sex of the species, if known; (3) the impact which will likely result from such taking; (4) what steps the applicant will take to monitor, minimize, and mitigate those impacts; (5) the funding that will be available to implement such monitoring, minimization, and mitigation activities; (6) the procedures to be used to deal with unforeseen circumstances; and (7) what alternative actions to

such taking the applicant considered and the reasons why such alternatives are not being utilized. 16 U.S.C. § 1539(a)(2)(A)(i)-(iv); 50 C.F.R. §§ 17.22, 17.32. FWS cannot issue an ITP if the HCP does not contain this information. 16 U.S.C. § 1539(a)(2)(A).

Upon reviewing an HCP and before permit issuance, the FWS must find that (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) any other measures FWS requires will be met. 16 U.S.C. § 1539(a)(2)(B); 50 C.F.R. §§ 17.22, 17.32. Should FWS make positive findings under section 10, FWS must issue the applicant an incidental take permit. 16 U.S.C. § 1539(a)(2)(B). Failure to comply with the mandatory terms and conditions of an incidental take permit constitutes a violation of the section 9 "take" prohibition. 16 U.S.C. § 1539(a)(2)(C).

Federal agencies have an affirmative duty to promote the conservation (*i.e.*, recovery) of threatened and endangered species. Section 2(c) of the ESA provides that it is "…the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." 16 U.S.C. §1531(c)(1). Section 7(a)(1) also establishes an affirmative duty to conserve. 16 U.S.C. § 1536(a)(1). If FWS grants a permit on the basis of this HCP without requiring additional minimization and mitigation of impacts to species, it will be in violation of its duties under Sections 2 and 7 of the ESA.

In addition to section 10 "take permits," the ESA also provides for incidental take statements that, among other things, may exempt federal agencies from section 9's take prohibition. 16 U.S.C. § 1536(o)(2). Upon concluding the Section 7 consultation process on the HCP, FWS may issue a "take statement" after rendering a "no jeopardy" biological opinion. *Id*. at § 1536(b)(4)(A). An incidental take statement must (1) specify the impacts on the species, (2) specify the reasonable and prudent measures that the FWS considers necessary to minimize such impact, and (3) set forth terms and conditions that must be complied with by the federal agency to implement these reasonable and prudent measures. 16 U.S.C. § 1536(b)(4). Failure to comply with the mandatory terms and conditions of a take statement renders the agency's action in violation of the take prohibition.

Consultation under Section 7(a)(2) on the HCP's covered activities will result in the preparation of a Biological Opinion ("BiOp") by FWS that determines if the proposed action is likely to jeopardize the continued existence of a listed species or adversely modify a species' critical habitat. While FWS has not yet issued the BiOp on the HCP, the BiOp must include a summary of the information on which it is based and must adequately detail and assess how the action affects listed species and their critical habitats. 16 U.S.C. § 1536(b)(3). Additionally, if the BiOp concludes that the agency action is not likely to jeopardize a listed species or adversely modify its critical habitat, it must include an Incidental Take Statement which specifies the impact of any incidental taking, provides reasonable and prudent measures necessary to minimize such impacts, and sets forth terms and conditions that must be followed. 16 U.S.C. § 1536(b)(4). If FWS's action may affect a listed species, the absence of a valid BiOp means that

the action agency has not fulfilled its duty to insure its actions will neither jeopardize a listed species nor adversely modify the species' critical habitat.

The BiOp must include an evaluation of the direct, indirect, and cumulative effects of the action on listed species. 16 U.S.C. § 1536(a)(2); 50 CFR §§ 402.02, 402.12, 402.14(d), 402.14(g)(3). In addition to effects of other federal actions, "cumulative effects" include "effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation." 50 C.F.R. § 402.02.

Throughout its analysis, the BiOp must utilize the "best scientific and commercial data available." 16 U.S.C. § 1536(a)(2); 50 C.F.R. §402.14(d). FWS must consider all the relevant factors and articulate a rational connection between the facts and its ultimate conclusion.

If an action's impact on a species' habitat threatens either the recovery or the survival of a species, the BiOp must conclude that the action adversely modifies critical habitat. The ESA defines critical habitat as areas which are "essential to the conservation" of listed species. 16 U.S.C. § 1532(5)(A). The ESA's definition of "conservation" includes the recovery of species. *See* 16 U.S.C. § 1532(3).

FWS has not yet issued a BiOp for the HCP. However, we hope it will comply with all of the above-listed requirements. As it stands, the HCP does not demonstrate that it prevents jeopardy (survival and recovery) and adverse modification.

Under Section 10(a)(2)(C), FWS must revoke any ITP issued if "the permittee is not complying with the terms and conditions of the permit." However, the availability of permit revocation does not remedy the flaws of an HCP relying on highly speculative conservation measures. Nor should permit revocation be the only enforcement tool available for ensuring implementation of the HCP.

B. ESA SECTION 10(C): DUTY TO PUBLICLY DISCLOSE INFORMATION

Under Section 10(c), "[i]nformation received by the Secretary as a part of any application shall be available to the public as a matter of public record *at every stage of the proceeding*." 16 U.S.C. § 1539(c) (emphasis added). FWS has to date refused to provide documents related to this HCP / ITP that were repeatedly requested by the Center pursuant to the Freedom of Information Act. The denial of these requests has resulted in information germane to the HCP being withheld from the public, violating Section 10(c) and necessitating the withdrawal of the application.

Tejon Ranch filed a lawsuit against FWS on December 30, 1997, attempting to halt the release of California condors near Tejon Ranch and to have any released condors in California be classified as experimental under ESA Section 10(j). Although the lawsuit was virtually meritless, it was minimally defended by a compliant FWS, who agreed to a stipulated stay of the case in October of 1999 with no substantive briefing having been filed. The stipulation states that:

> [Tejon's] primary objective in this action is to obtain meaningful and binding assurances from the Service that its releases of Condors in California will not result in undue constraints on the management and operations of the Ranch. For its part, FWS has stated that it understands Tejon's desire in this regard and would like to satisfy it…

(Tejon Ranch 1999).

The Center submitted its first request under the Freedom of Information Act ("FOIA") for documents related to Tejon Ranch and any HCP or ITP in January, 2002. The Service subsequently provided approximately 430 pages of responsive documents. One of the released documents is the 1999 "Memorandum of Agreement," which, although not signed by the FWS, is apparently the final draft of the agreement between FWS and Tejon Ranch that directly led to this HCP (US FWS 1999). This document, not disclosed as part of the HCP application, describes the specific agreement between FWS and Tejon Ranch including the scope and terms of the future ITP and HCP. It is strikingly pre-decisional, making clear that the subsequent review process will protect Tejon's future development goals over the conservation of the species.

Soon after the Center's FOIA request, Tejon Ranch filed a motion in its lawsuit to place a protective order on all documents related to the settlement of its lawsuit. In December, 2002, the district court granted this motion, unopposed by FWS. The protective order, still active, states:

> Except for any Habitat Conservation Plan and accompanying documents that are formally submitted to the U.S. Fish and Wildlife Service in an application for the issuance of an incidental take permit pursuant to Section 10 of the Endangered Species Act, 16 U.S.C. § 1539, all documents and records created and produced in relation to and for the purposes of settlement of the instant action shall be treated as confidential and not be disclosed to any person other than the plaintiffs and the defendants or used in any other litigation.

(Tejon Ranch 2002).

Citing this protective order, FWS has refused to disclose documents in its possession that would otherwise be matters of public record and required to be disclosed by Section 10(c) and that are likely related to the permit application and HCP submitted by Tejon Ranch. Through multiple FOIA requests the Center has sought all information that has been received by the Secretary and all underlying documents that regard the proposed MSHCP, among other documents. Other than re-releasing the documents that had been provided in 2002, FWS has repeatedly denied these requests, releasing only some documents that were not in conflict with the court protective order while withholding others (US FWS 2009a).

Communications between Tejon Ranch and FWS concerning Tejon's management plans have clearly taken place that directly relate to the proposed HCP and that likely contain information relevant to the proposed HCP. The secret back-room agreement, evidence of which is now cloaked in darkness by the gag-order placed in Tejon's lawsuit, raises the question of

whether the agency has predetermined the outcome of its decision-making process for the proposed HCP and ITP. The only way this question can be answered, and for the public to have any confidence in the action of its public agencies, is for all communications between Tejon Ranch and FWS to be made public prior to any decision being made concerning this application.

FWS's contempt for Section 10(c) has also prevented the public from obtaining compelling evidence concerning the importance of Tejon Ranch to the California condor and FWS's own scientists' thoughts on that issue. For example, the Center has received, from various sources, documents that are believed to be drafted by FWS and/or are in the agency's possession that discuss the importance of Tejon Ranch to the California condor (US FWS 2009b, US FWS 2009c, US FWS 2009d, and US FWS 2009e). They have not been provided to the Center in response to its numerous FOIA requests and are not part of any document associated with the HCP application. Many of these documents are important as they directly contradict the conclusions presented in the DHCP. One of these documents, apparently withheld by FWS, is entitled "The Significance of Tejon Ranch to the Conservation of the California Condor," dated July 8, 2002 (US FWS 2002b). It is believed that this document is an official report created by FWS. It contains an extensive review of the evidence available at that time documenting the historical use of Tejon Ranch by condors—evidence that is germane as it calls into serious question the conclusions made in the DHCP.

By not including these and similar documents in the HCP application, and by not providing them in response to repeated requests under FOIA, FWS risks the appearance of intentionally trying to hide them from the public. Section 10(c) is part of the HCP process for exactly this reason: all evidence possessed by the agency must be provided to the public in order for the agency's decision to have any legitimacy. For this reason, Tejon's application must be rejected and not considered until all impediments to disclosure of all documents are removed and the public has the opportunity to know the full spectrum of the agency's knowledge and actions.

C. "NO SURPRISES" POLICY

The HCP purports to provide assurances for listed and unlisted species without providing for increased protections and alterations of the HCP in the face of changed circumstances. In other words, no additional mitigation lands, financial compensation, or land restrictions could apparently ever be required regardless of circumstance or species' needs. This provision of the HCP contradicts the ESA's requirements that HCPs minimize and mitigate impacts to species and provide for the survival and *recovery* of species. As the Ninth Circuit recently noted, when issuing a biological opinion and Incidental Take Statement the agency must take into account both the survival and recovery of the species "[b]ecause a species can often cling to survival even when recovery is far out of reach." *National Wildlife Federation v. NMFS*, 524 F.3d 917, 931 (9th Cir. 2007). Other courts have reached the same conclusion, noting that any action for which an incidental take permit is issued should provide for recovery as an integral part of species conservation and maintain the flexibility to adequately protect both species recovery and survival. *See Southwest Center for Biological Diversity v. Bartel*, 470 F. Supp. 2d 1118, 1139 (S.D. Cal., 2006) (enjoining ITP issued for San Diego area HCP and agreeing that the structure of the no surprises assurances created a "'shell game' in which FWS effectively eliminates the ESA protections for vernal pools by promising to protect them in the future at the same time it

restricts its authority"). The HCP's "Adaptive Management" program, despite the title's indication to the contrary, does nothing to protect species from harm in the future if the HCP does not provide sufficient measures to protect species from survival and recovery and to require additional measures be taken for such protections in the face of changed circumstances or relevant new information. Instead, it leaves species highly vulnerable because the HCP virtually forecloses management changes that are necessary in any long-term plan to incorporate new scientific data or address changed circumstances.

FWS and NMFS issued the "No Surprises" rule in 1998, 63 Fed. Reg. 8,859 (Feb. 23, 1998). That rule revised Part 17 of the Code of Federal Regulations and provides that as long as the HCP is being properly implemented, the federal government will not require any additional mitigation from the permit holders in the even of unforeseen circumstances. Additional measures deemed necessary to respond to changed circumstances, including the listing of new species, designation of critical habitat, development of recovery plans and unexpected stochastic events, will be limited to those measures specifically identified in the HCP and only to the extent of the mitigation specified. Unfortunately, the Service's new so-called Permit Revocation Rule does not cure the invalidity of the No Surprises rule. The No Surprises rule has been in almost continuous litigation from its inception, has been revised several times, and will likely once again be struck down by the courts. The HCP must not include this illegal provision.

D. COVERED SPECIES GENERALLY

An HCP is, first and foremost, a conservation planning document. The purpose of conservation planning includes not just maintaining species on the landscape but contributing to their biological recovery (Noss et al. 1997). Proper goals of a science-based conservation plan are: a) increasing habitat value, b) increasing population size and viability, c) addressing on-going threats, and d) developing a reserve design. In general the DHCP fails in providing a scenario for the first three of these important foundations of conservation biology.

The DHCP will ultimately result in a net loss of habitat to the covered species, and in some instances a significant loss of the species. This is hardly a conservation scenario in support of species recovery as purported in Section 1 of the DHCP: "the MSHCP includes… measures that contribute to Covered Species conservation and recovery" (DHCP at pg. 1-1). The failures in the DHCP are so sweeping that, if any HCP is to be approved for this property, a revised DHCP would need to be prepared that would include radical changes in the purpose and scope of the document.

This section describes our general concerns of the analyses of covered species in the DHCP. Specific concerns regarding each species are then discussed in the two sections that follow, first for the California condor (Section II.E.) and then for the other covered species (Section II.F.).

1. Inadequate Habitat Models

With regards to modeling of habitat, the model developed and used to evaluate habitat for the species is inadequate. The spatial scale of modeling (Tejon Ranch only) is too small to fully

understand a given species potential suitable habitat. The number of presence points of many of species is small and additional information needs to be provided enough about the species for a complete analysis of suitable habitat. Additional data sets are available that were not used to inform the modeling effort. To remedy these conclusions the entire range of a species should be modeled and all occurrence points should be included in the models (Krause 2009, *attached here as Exhibit A*). These basic flaws make the analysis of conservation and impacts from development disputable, and require remodeling of the habitat and re-evaluation of the conservation and development scenario.

The DHCP fails to provide any evaluation of the efficacy of the modeling by field checking the results to verify that in fact the models do identify appropriate habitat. As identified below, based on habitat requirements, numerous species modeled habitats appear to be over-estimated in size. Based on the large habitat areas identified by the modeling, and the very few (if any) target species that were located in the areas, suggests the effectiveness of the modeling is sub-optimal. The DHCP fails to discuss the refinement of models based on field verification or other iterative process as identified in other scientific based modeling approaches (Brooks 1997).

2. Reserve Design Fails to Use Available Science

No actual data is presented that was used as the basis of the reserve design. Conserved areas appear to be based on where development was not buildable or desired, not conservation biology. Too many books and articles have been written on reserve design to be comprehensively mentioned here, so instead, a few recent key papers are included (Abbit et al. 2000, Burgman et al. 2001, Chave et al. 2002, Moilanen and Wintle 2007, Vandergast et al. 2008).

Additionally, no population viability analysis was presented to justify the effectiveness of the proposed conservation scenario over the requested 50 year permit duration. Population viability analysis (PVA) is a scientifically recognized process of identifying the threats faced by a species and evaluating the likelihood that it will persist for a given time into the future (Machinski et al. 2007, Akcakaya and Sjogren-Gulve 2000, Brooks et al. 2002, Reed et al. 1997, Boyce 1992) and it is often oriented towards the conservation and management of rare and threatened species (Morris et al. 2002), with the goal of applying the principles of population ecology to improve their chances of survival. PVA has been used on a variety of species including but not limited to in California, the California gnatcatcher (Akcakaya and Atwood 1997) and Stephen's kangaroo rat (Price and Kelly 1994). We strongly suggest that the data sets be collected in support of providing PVA for each of the proposed covered species' and their conservation scenario.

If in fact the model was reliable, the analysis of the direct and indirect impacts fails to provide the detailed analysis necessary in order to evaluate the impacts to species. The range of impacts is woefully of inadequate based on the developments proposed. Impacts are mischaracterized as "non-permanent", when in fact many of these impacts are permanent. Even the short-term impacts include a minor subset of the actual impacts.

3. Unequal Values of Conservation Lands

All of the "conserved lands" are treated equally under the conservation scenario, when in fact there are significant differences between them. While the text relies on identifying conservation areas within the Established Open Space and the TMV Planning Area Open Space as well as the Potential Open Space. However, none of the maps in the DHCP identify the boundaries of these areas. Therefore it is impossible to identify where the actual location of conservation for each species is proposed to occur. This is particularly important when evaluating the true conservation value of the set-asides.

From the maps that are provided, significant "mitigation lands" (DHCP Figure 1-5) or "open space" (DHCP Figure 1-3) within the TMV Specific Plan boundary are proposed fragmented islands of habitat within a sea of proposed development. This proposal violates very basic tenets of conservation biology and conservation planning, which require large blocks of habitat, habitat in contiguous blocks not fragmented blocks, interconnected blocks, and blocks that are roadless or otherwise inaccessible (Noss et. al. 1997). Fragmented landscapes can have significant detrimental genetic implications (Vandergast et al. 2007) by lowering migration rates and genetic connectivity among remaining populations of native species, reducing genetic variability and increasing extinction risk. Therefore much greater analysis of the actual conservation values of the TMV Planning Area Open Space for species conservation needs to be included. No description of the activities that will be allowed in this area is described. For example, "fuel modification" is proposed to take place in this area, but the actual location of where the habitat modification in support of fuel modification is not identified. Based on the covered species habitat and needs, this type of activity could be a significant impact in these areas. In fact, upon closer examination, the science may indicate that very little long-term conservation is provided by some of these lands for certain species.

The "Established Open Space" areas' activities present the same challenge. This area currently has roads, other infrastructure and activities within it. The DHCP indicates that additional road work, trails and other infrastructure could potentially be implemented as a covered activity, but lacks the details on the type of activity and the proposed location. In order for a full analysis of the potential impacts, the activities must be identified.

Included in the conservation scenario are Potential Open Space areas. These areas need to be deleted from the proposed conservation scenario because they are just that: potential. As such they are not assured for species conservation at this time and therefore cannot be considered as part of the conservation scenario. Including them in the calculations of areas to be conserved is confusing at best, and misrepresents the proposed conservation scenario. If the Potential Open Space acreage is required to conserve the species to the level that is being proposed in this DHCP, they need to be unequivocally included by Tejon Ranch as part of the mitigation scenario, not analyzed as a separate acquisition deal. Tejon Ranch owns a vast majority of the property under consideration, and if that acreage is needed for conservation purposes, then its conservation should not rely on "buyout" by conservation groups in order to preserve it.

4. Key Plans Not Available for Public Review

Many of the "mitigation measures" identify other plans that need to be developed. They include the Grazing Management Plan, the Integrated Pest Management Plan, the European Starling Management Plan, and the Public Access Plan. These plans will affect the biological resources proposed for conservation under the DHCP. Therefore, the plans also need to be included for review and determination of consistency with the DHCP as part of the DHCP/DEIS for public review.

A fire management plan also needs to be developed, not only to protect human life and habitation, but also covered species life and habitation. Severe impacts to habitat have occurred not only from fire, but from "fuel management", so a clear plan of action needs to be identified and included for its effects on species management. The "Fuel Management Plan" which is part of the Tejon Ranch Conservation and Land Use Agreement (DHCP at pg. 2-5) is too myopic to cover the slate of issues associated with fire prevention and protection. The simple caveat that "fuel management programs will be required to comply with the MSHCP and are subject to FWS review and approval for consistency with the MSHCP and the FESA" (DHCP at pg. 2-6) does not adequately cover the potential impacts to the covered species. Habitat clearance for fire safety can significantly degrade habitat, encourage exotic plant invasions, which can exacerbate fire threat, and significantly impact species. A thorough analysis of what is proposed and how it will impact each covered species needs to be disclosed and analyzed. Only snags removal around Castac Lake is mentioned regarding potential impacts to bald eagle. All of the other species can be impacted by fire clearance activities as well, and we recognize that this clearance is a necessary component when a sprawling new city is proposed in a high fire zone.

The fragmenting and large edge to area ratio of the Tejon Mountain Village project is particularly problematic for any conservation value of the "TMV Planning Area Open Space", considering that 1,772 acres of "fuel modification" is already planned within the "open space" (DHCP at pg. 2-10).[1] The identified acreage actually seems quite conservative in its estimate of the amount of fuel modification, however, absent any plan, we can not provide additional comments.

Lastly, a weed management plan also needs to be developed. Exotic invasive plant species is listed as a threat to most of the covered species and their habitats. A comprehensive strategy to deal with invasive species also needs to be included for public review.

The failure to identify much less analyze the impacts from these omitted plans make any evaluation of the adequacy of mitigations impossible.

5. Inadequate Field Surveys and Mapping

In many of the species accounts in Section 5, the actual number of years of presence/absence surveys is unclear. For some species, for example the western spadefoot, only

[1] The "edge effects" of the TMV development design are not addressed at all in the DHCP, other than to highlight how much open space will supposedly be conserved. Edge effects are well studied and invariably lead to destruction of habitat values and ecosystem values (Soule 1991, Soule et al. 1992, and Crooks and Soule 1999).

a single year of presence/absence surveys were completed, and then only in the "modeled" habitat. For a project that affects rare and endangered species and is proposed to be in place for fifty years for compliance with the Endangered Species Act, a single year of surveys for species is inadequate. Because of the lack of adequate biological surveys, it is impossible to evaluate the project impacts, avoidance opportunities, minimization of impacts opportunities, adequacy of mitigations, or adequacy of proposed conservation scenarios. For this complex of a plan, additional surveys need to be done and included as a basis for modeling, developing conservation scenarios and evaluating "take".

Additional data sets are known from TRC lands for numerous years and these publicly available data need to be included. For instance, a series of recent science-based documents were completed on conservation values and opportunities of Tejon Ranch (CBI/SCW 2006, CBI 2003a, CBI 2003b, SCW 2003). Other non-public data sets maybe available from TRC, who require confidentiality agreements between the company and the contractors. These types of arrangements often do not allow for full public disclosure of the on-the-ground resources, which is imperative in this case where take permits are proposed to be in place for fifty years. Presenting a single year of surveys as the basis for an HCP this controversial and of such great scope clearly could not include all the best available science – or if it does, the DHCP is premature.

None of the maps included in the DHCP identify where the covered species actually have been documented to occur. These data, along with a delineation of where surveys have actually taken place are essential to understanding the completeness of the information upon which the DHCP has been based. As stated above, the lack of data points to the significant inadequacy of the DHCP in complying with the Endangered Species Act.

6. Inadequate Baseline Surveys / Long-Term Monitoring / Adaptive Management

The DHCP fails to put in place any long-term monitoring of the covered species and their habitats. The DHCP in many of the objectives states that "[e]nvironmental baseline surveys of the Ranch will be conducted to determine the presence or absence of …" species. These baseline surveys should have been done as a basis for the HCP. Evaluating adequacy of the proposed impacts and mitigations is impossible without those essential data sets. Setting aside acres of land provides no conservation value if the covered species is not present on or does not utilize those lands.

Long-term monitoring of the conserved resources is also not proposed. Regular long-term monitoring is essential to documenting changes that occur on the landscape. In light the variety of changes that could occur because of development, exotic species invasions, fire, drought, global climate change and others factors, it is imperative that regular long-term monitoring be implemented. Stemming from those long-term monitoring data, a framework of adaptive management must also be included, including identification of thresholds and triggers for management actions to maintain the integrity of the conserved areas. These requisite parts that are included in most HCPs are a glaring omission.

7. Conservation Must Occur "Up-front"

All conservation easements in support of the conservation set-asides identified in the DHCP need to be recorded prior to any ground disturbance. The proposed phasing of dedication (DHCP at pg. 2-10) does not provide the requisite assurances and undermines the ability of the proposed HCP to effectively secure adequate conservation over the long-term and that the terms of the DHCP would ever be met.

8. Covered Species List Inappropriate

Of the 27 species proposed for incidental take coverage under the DHCP, seven of them were not documented as occurring on the project site: spadefoot toad, least Bell's vireo, southwestern willow flycatcher (while flycatchers were identified on site, the document indicates that they were not southwestern willow flycatcher [DHCP at pg. 5-94]), yellow-billed cuckoo, valley elderberry longhorn beetle, ringtail and the Tejon poppy. Based on the data presented, it is unclear how the "biological working groups" determined that these species will benefit from coverage under the DHCP. These species need to be dropped from the revised DHCP, until the time that they can be located on the project site.

9. Additional Inadequate Analyses

No analysis of toxic materials associated with development is discussed. For example the area in and around the Tejon Ranch is a known hotspot for bubonic plague (http://psbweb.co.kern.ca.us/EH_Internet/EH_BillsBlog.aspx). The vector for this sometimes-deadly bacteria is fleas. Infected fleas are commonly found on mammals including the California ground squirrel (*Spermophilus beecheyi*), which is an abundant prey item on the Tejon Ranch for a variety of raptors including the condor. Once additional humans are introduced into the proposed project site, there is increased potential for human exposure to bubonic plague. Rodenticides may be used to reduce the exposure level, however the rodenticides can cause toxic buildups in higher level carnivores that eventually cause death (Shore et al. 1999). This and other potential indirect impacts are simply not discussed in the DHCP.

The "conservation objectives" in Section 7 are actually best management practices for construction projects not really conservation plan objectives.

For the species where a mitigation strategy of relocation or translocation or moving is proposed, we note that the scientific literature indicates that these efforts generally result in failure (Fischer 2000, Wolf 1996, Dodd and Siegel 1991). If this experimental strategy is to be implemented, it should be recognized to be experimental, and therefore not a mitigation or minimization measure.

E. CALIFORNIA CONDOR

1. Importance of Tejon Ranch to the Condor

The successful recovery of the California condor, especially its recovery in its historical habitat, depends on the future of Tejon Ranch. The ranch is the linchpin of the species' historical habitat, as the Tehachapi Mountains provide crucial connectivity for condors between habitat in the southern coast ranges and the southern Sierra Nevada. The area has long been regarded as essential foraging grounds for the species and for this reason a large portion of Tejon has been designated as condor Critical Habitat.

The ranch's importance to the condor has been known from the earliest days of scientific study of the species and its protection has been a priority from the beginning of the condor recovery program. Numerous documents produced by the FWS over the years have expressed these findings and goals. Once such document, titled "The Significance of Tejon Ranch to the Conservation of the California Condor," dated July 8, 2002, provides a useful summary of this history along with a succinct argument for the ranch's importance to the species (US FWS 2002b).[2] In 2007, forty-two members of the scientific community signed a "Declaration on the Conservation Significance of Tejon Ranch," which observed that Tejon was "currently the target of development proposals that could irretrievably degrade" the conservation values of the ranch (White et al. 2007).

The DHCP and DEIS mostly recognize the general importance of Tejon to condors. Unfortunately, in their zeal to provide take coverage for the ranch's development plans, the documents improperly downplay the importance of the TMV site to the species, ignore impacts of the project, fail to provide adequate mitigation measures for those impacts, and ultimately endorse and enable a development plan that will result in the reduction of the likelihood of the recovery of the species.

2. Tejon Ranch Company's History of Hostility to California Condors

For most of its history, Tejon Ranch has been an ally of the condor. Its ranching operations, hunting program, and lack of development maintained essential habitat features that the diminishing condor population needed for its survival. As urbanization destroyed other available foraging habitat for the species, Tejon Ranch remained an excellent source for food for virtually the entire species. Ranch managers cooperated with biologists to enable scientific study of the species on the property and the company even sponsored condor censuses. These facts are properly described in the DHCP, but what is not described is that this cooperation effectively ended when the last wild condors were trapped on Tejon Ranch in 1987. From that point on, roughly coinciding with purchases of stock in the company by real estate investment funds, Tejon became outright hostile to the recovery program, limiting its cooperation with condor scientists and taking actions that would ultimately threaten the survival of the species.

[2] We believe that this document was produced by the FWS and is in the agency's files, although it has not been provided to the Center in any of the Center's document requests and is not believed to have ever been made public (see discussion in Section II.B.).

The most significant of these hostile actions was the filing of a lawsuit in 1997 that sought to compel the FWS to designate condors as a "nonessential experimental population" under Section 10(j) of the ESA, which would strip them of most of their endangered species protections. The suit also sought to limit the release of condors near Tejon and to alter the boundaries of designated critical habitat on the ranch. This suit is briefly discussed in the Introduction of the DHCP, but not discussed in the section on condor impacts.

Based on settlement discussions between Tejon and the FWS, the parties entered a Memorandum of Agreement in 1999 (US FWS 1999). In this Memorandum of Agreement, Tejon agreed to stay the lawsuit in exchange for the FWS' proposed issuance of an ITP and HCP covering the California condor. Pursuant to the agreement, the FWS was obligated to provide condor take coverage for future Tejon Ranch development (only vaguely described in the agreement) for a term of 75 years.

Because the DHCP–and FWS's potential approval of the HCP and its acquiescence to Tejon's development goals–are direct products of Tejon's lawsuit, all aspects of this suit must be made public, including all documents filed in court and all communications exchanged between the parties. The only thing preventing disclosure to this date is the protective order filed in the litigation. *See* Section II.B, above. An example of a document that has not been produced due to the protective order in the lawsuit but which is referenced in the DHCP is an October 31, 1994 letter to FWS. The DHCP appears to selectively describe this letter, stating that in it Tejon agreed to provide the FWS access to ranch lands. DHCP, p.1-13. But a copy of the first page of this letter, obtained from an anonymous source and not publicly released by FWS, suggests that this offer of access came with strings: the access needed be "reasonable," and Tejon Ranch was quick to point out that:

> We would like to be of assistance. However, we are a publicly held company and have a fiduciary duty to our shareholders to preserve the long term value of the Ranch. As much as we would like to help the Recovery Program, we cannot do so if we believe there is a material risk that such assistance would contribute to the uncompensated diminution of that value.

(US FWS 1994).

As Robert Mesta later described the letter, Tejon only offered the Service "*limited* access to Ranch lands," (US FWS 1998, *emphasis added*)[3]. Tejon's statement begs the question: if it was willing to limit access to the ranch in the early days of the reintroduction program, when the released birds were likely most vulnerable, how is it to be trusted to have the condors' best interests in mind with its proposed HCP? How are Tejon's concerns for its shareholder value expressed in the DHCP and its analysis? Do other documents, as-of-yet undisclosed to the public, shed light on this question?

[3] This document was obtained by CBD through a 2002 FOIA request that was made just prior to the protective order being filed.

Also curious is the second page of the Mesta memo, which contains the document's only redacted section, immediately following this sentence: "On December 31, 1997(7) the Ranch sued the Service, and you know what happened after that." *Id*. Neither the Center, nor presumably any other member of the public, knows what happened after Tejon filed its lawsuit. Why was this paragraph redacted? Subsequent document requests have not revealed the redacted portion of this letter, nor any other information germane to this "agreement" with Tejon Ranch.

This is but one example of Tejon's history of hostility to the condor and the condor program, but it is instructive. Tejon actively fought the reintroduction of condors and took actions that, if successful, might have doomed the species to extinction. Once reintroduction began, the FWS struggled to gain access to Tejon Ranch. Tejon apparently used this access as trade-bait first for its 10(j) demands and now, apparently, for its desired take coverage. Tejon's attempts to gloss over this history in the Introduction to the DHCP should be rejected, and an accurate description of the relationship of Tejon and the FWS should be required. Furthermore, this contentious relationship must also be described in the "Tejon Ranch History" portion of Section 4, which currently makes no mention of the lawsuit at all, while again trumpeting Tejon Ranch's "long history" of assisting efforts to save the species. DHCP, p. 4-29. To fully inform the public, and to fully comply with both the ESA and NEPA, all documents related to the relationship between the ranch and FWS, including all documents related to Tejon's lawsuit, must be made public before any decision is made on this HCP application.

3. Problems with Condor Data Analysis in the DHCP and DEIS

a. Maps

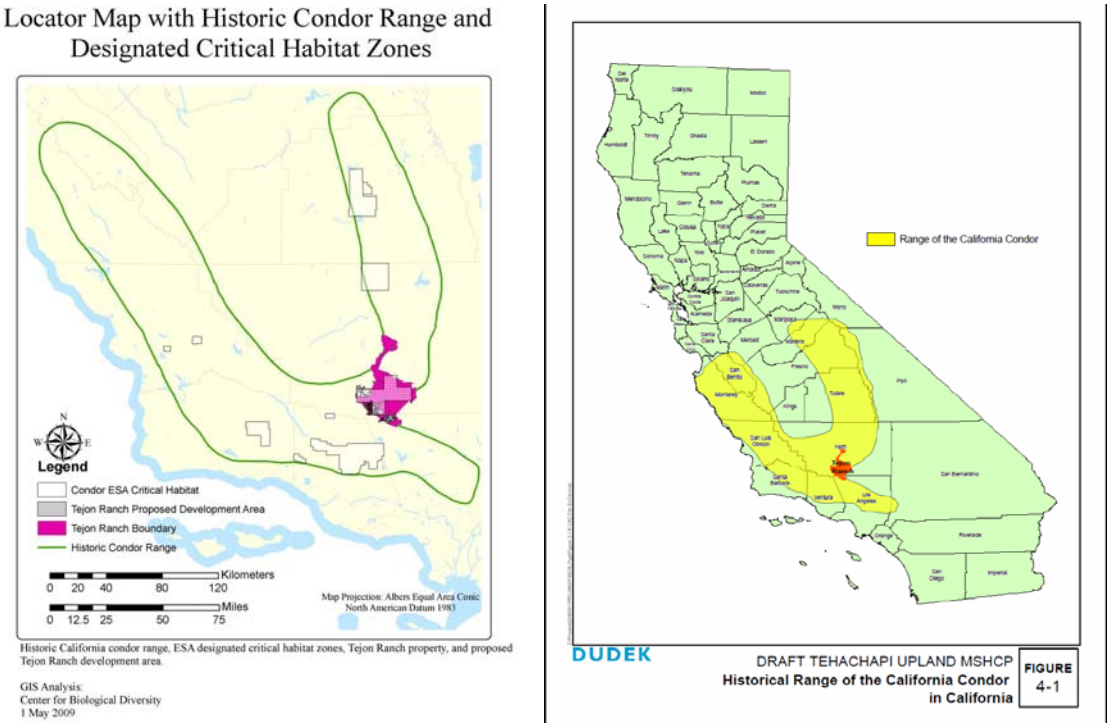
The DHCP and the DEIS both fail as informational documents because their most important information tools for describing condor use of Tejon Ranch—maps—fail. The maps in both documents contain inaccurate information, are inconsistently labeled, and omit crucial information. Collectively, these errors and omissions lead to a flawed conclusion regarding the usage of Tejon Ranch by condors. Rather than TMV avoiding most of the high-use areas of Tejon Ranch, as is suggested by the maps in the DHCP and the DEIS, accurate mapping demonstrates that TMV is in fact an area of high condor use.

In an effort to verify the data presented in the DHCP, the Center commissioned a report by Dr. Christopher Cogan (Cogan 2009, *attached here as Exhibit B*). Dr. Cogan has extensive experience with various data sets of condor use patterns in the Tejon Ranch area (indeed, some of his past work is referenced and relied on in the DHCP). The maps in this report represent all data made available to the Center through various FOIA requests. These maps stand in stark contrast to those presented in the DHCP and DEIS, as described below.

The maps in both the DHCP and the DEIS demonstrate their bias when portraying TMV in relation to condor point data. In the few maps that emphasize the TMV planning area, the data is selected to show minimal data points (excluding certain date ranges or excluding aerial points, for example) (DHCP, Figures 4-7 and 4-8). In contrast, the maps that are more inclusive, or that merely represent more data points, take the strategy of including an overly large spatial extent, leading the reader to see TMV as an insignificant portion of a larger area (DHCP, Figures 4-2, 4-

3, and 4-10). The one map containing condor point data in the DEIS, Figure 3.1-7, fails to show the outlines of TMV at all. These maps should be compared to the maps provided in the Cogan report, especially Figure 7, which provide much greater detail and are much more useful for assessing the relationship of these data points to the proposed development project.

The selective bias of the DHCP and the DEIS is also apparent in the map showing the historic range of the condor (DHCP Figure 4-1, DEIS Figure 3.1-6). Tejon Ranch is represented here as occupying only a small portion of the core, or linchpin, of the "wishbone" of historic condor habitat. Yet this representation of condor habitat is inaccurate: it suggests condor use far into the floor of the San Joaquin Valley. The DHCP itself admits that condors have not, and do not, utilize the valley floor to any significant extent (DHCP pp. 4-9 and 4-66). An accurate portrayal of historic condor habitat, as is found on page 3 of the 1996 Condor Recovery Plan and in Figure 1 of the Cogan report, reveals a far closer relationship between Tejon Ranch and the center of the "Y" of historic habitat:



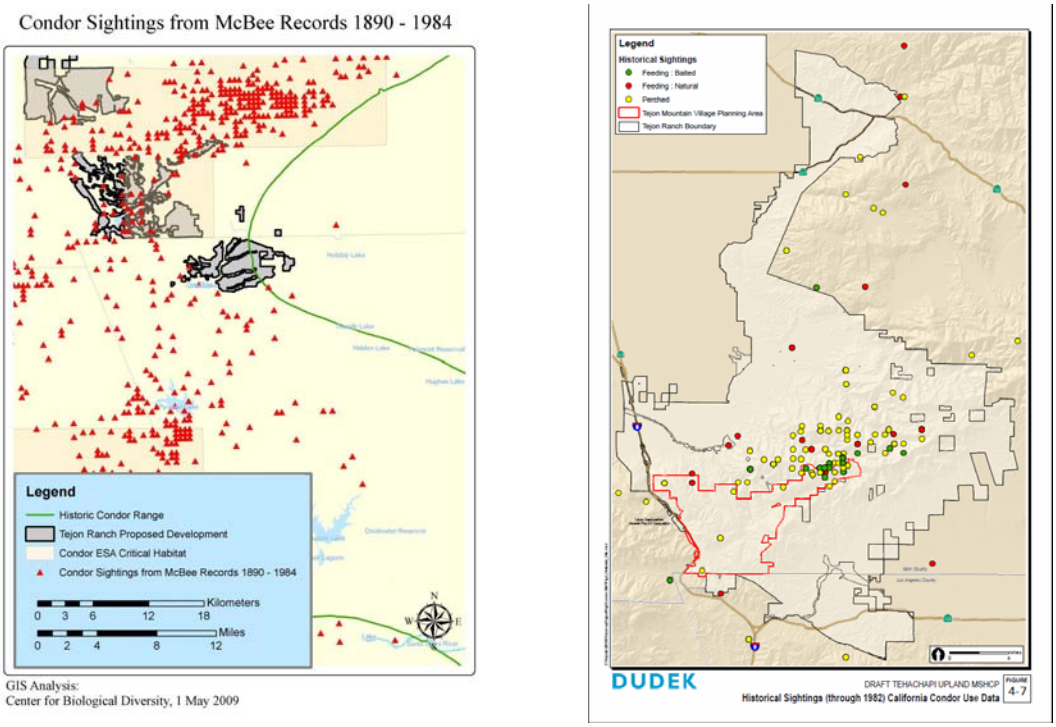
Cogan Figure 1 on left; DHCP Figure 4-1 on right.

Rather than the apparently-insignificant relationship represented in the DHCP and the DEIS, the ranch actually spans the entire habitat range—it is the entirety of the core connecting property. And the three development proposals, not shown in Fig. 4-1, substantially block the entire span of habitat (Cogan 2009, Figure 1).

The linchpin role of Tejon Ranch is further demonstrated in Figure 2 of the Cogan report, which again shows historic condor habitat but additionally overlaid on terrestrial ecoregions (Cogan 2009, Figure 2). Tejon Ranch's critical position at the convergence of several major ecoregions is represented here, while not represented in any of the maps in the DHCP. Tejon Ranch spans the entire width of the Tehachapi Range. While this is conveyed in the DHCP and

DEIS in several figures which show geographic relief such as Figures 4-2 and 4-3, better portrayals can be found in Figures 10, 11, and 12 of Cogan's report (Cogan 2009, Figures 10, 11, 12).

Other potential sources for the misinterpretation of data can be found in the various attempts to convey the condor point data. The interpretation of this data, and the conclusions drawn from it, are discussed in more detail below, but some discussion of the mapping in the DHCP and the DEIS itself is warranted here. First, only one of the figures in the DHCP that contains condor point data also shows the boundaries of critical habitat (Figure 4-10). Considering the legal and scientific importance of designated critical habitat, all maps in the DHCP and DEIS dealing with condors must include the boundaries of its critical habitat. Second, little to no detailed information is provided regarding the data represented in the maps. Although the reader is informed that some points represent aerial, perched, or roosting condors, more detailed information is generally not provided, such as the total number of birds represented in the data and the specific mechanisms of data collection. This information is critical to understanding the differences in mapping results within the DHCP and the DEIS, as well as comparing these results with those in the Cogan report. For example, Figure 4-7 in the DHCP appears to show very little historical use of the TMV area, at least through 1982. Although the legend states that the points represent feeding and perch activity, no further details are provided. This map stands in significant contrast to Figure 3 of Cogan's report, which shows heavy use of the TMV area through 1984, using virtually the same set of data:



Cogan Figure 3 on left; DHCP Figure 4-7 on right.

It is possible to conclude that the difference between these two maps may be the result of the exclusion of condor flight observations from Figure 4-7, although this is not clear because of the lack of explanation and information of the data set presumably used in Figure 4-7. In addition,

there is no explanation why the data set used in the DHCP only goes until 1982, when the data set obtained by the Center covers through 1984.

b. Biases and Limitations of Existing GIS and Telemetry Data

The greatest failure of the DHCP and DEIS with regards to condor point data is the assumption that this data alone can be used as the basis for making significant land-use decisions for Tejon Ranch. As a foundational argument, existing historical condor point data is useful only to prove what those specific condors did and where they were at a given point in time. Any interpretation of this data and application of it to future behavior of the species requires the making of significant assumptions. And these assumptions must fully consider the inherent limitations of the existing data before any conclusions can be drawn. The DHCP fails to properly consider the many limitations of the existing data in its many conclusions concerning condor use of Tejon Ranch.

The first limitation of the data is its very limited sample size. Even at the highest available historical population levels, the available data of condor use in the Tejon Ranch region only represents perhaps as many as 40 or so condors (from the mid-20th century historical data), and likely far less. (DHCP, App. C, p.3). This activity is best portrayed in Figure 3 of Cogan's report, but unfortunately the total number of birds was not recorded in this data set (likely because of a lack of ability in those years to differentiate one bird from another) (Cogan 2009, Figure 3). Some of the more modern records, including most of the GPS and telemetry data, describe the total number of condors represented by the data. The numbers are invariably small: 11 individuals in the 1982-1987 visual records (Cogan 2009, Figure 4); six individuals in the 1982-1986 flight line data set (Cogan 2009, Figure 5); and up to 17 individuals in the GPS records portrayed in Figure 6 (Cogan 2009, Figure 6).

Of course, this data is nonetheless tremendously useful—to show where condors have used Tejon Ranch in the past and to disabuse any notion that these lands are in any way unsuitable as habitat. But it is simply not scientifically defensible to use this data as proof of the inverse: to show that an area is not suitable habitat and never will be. The limited sample size represented in these data sets seriously challenges the DHCP's conclusions regarding usage, as the recovery plan envisions a minimum population of 150 condors in California (to get the species to "threatened" status), of which perhaps at least half, if not all, would actively use Tejon Ranch. Much can be learned from 30, 11, and even 6 birds, but based on numbers alone one has to conclude that usage of Tejon Ranch will expand, as it will for all condor territory, including those areas not currently sporting high data point counts but that otherwise contain constituent habitat elements.

The current behavioral limitations of condors in California also suggest increased use of suitable habitat as the species increases in number. Due to the high potential for lead poisoning, condors are currently supplied with food at artificial feeding stations. This undoubtedly affects their behavior, a point appropriately revealed throughout the DHCP (e.g., p. 4-8). Condors concentrate at these feeding stations and much of their movement involves flying between their nest sites, roost sites, and the feeding stations. Once the danger of lead poisoning ceases to be a

concern and artificial feeding stations are discontinued (certainly a primary goal of any legitimate recovery effort for the species), condor foraging activity will increase and their usage patterns will change. Rather than a relatively limited and predictable pattern between set points, natural foraging behavior will result in increased use of greater areas of habitat. The DHCP fails to consider this.

Additionally, much of the available point data represents juvenile condors, less than a year old, which do not yet forage far from their release sites (DHCP p.4-9). Perhaps the best example of the abnormality of current condor behavior is the near-total lack of use of the eastern portion of their historic range, with little to no use of the southern Sierra Nevada to date. Some of this can perhaps be attributed to the lack of mature adults with "memory" of those areas but some must be associated with a lack of need to explore, given the ready availability of plentiful food supplies at existing feeding stations. Presumably, a mature, recovering population consisting of many wild-born condors, no longer dependent on artificial food supplies, will rediscover this habitat in the future. Tejon's location at the linchpin of condor range will no doubt result in an increase in its use, and its demonstrated importance.

Other biases are apparent when one digs deeper into the data, as is done in the Cogan report. As discussed on page 4, in reference to Figure 3, the earliest historic records, aka "McBee Records," reflect visual condor sightings (Cogan 2009, Figure 3). This type of data comes with inherent observer bias, including inconsistency in time-of-day and time-of-year observations (especially over the long period this data represents) and the preferences for some areas over others, like those within visual ranges of accessible roads and trails. Sightings are limited in this sample to those birds within the line-of-site of the observer and do not differentiate between individual birds. (Figure 4-7 of the DHCP, relying on this data, thus improperly suggests that the TMV area is not suitable foraging habitat). Similarly, the data from the 1980s represented in Figure 4 of Cogan's report, while often using radio telemetry to differentiate between individual birds, still has some of the same observer bias present in the McBee records (Cogan 2009, Figure 4).

Another problem with the use and dependence on historic and recent usage patterns as reflected in the DHCP's maps is that data points are just *points*. They represent just one instance of use by a species—a bird—that obviously is not stationary and faces impacts from a variety of surrounding sources at various distances. Points are thus of limited utility in determining boundaries of usage areas (and especially invalid in assessments like "*x*% of points exist within TMV"). A proper analysis of usage of an area, utilizing data points as a starting point, would turn those points into circles—buffers—that would reflect the mobile nature of the species and the variety of impacts surrounding those areas. Such an effort has been made in Figure 14 of the Cogan report (Cogan 2009, Figure 14). When the individual data points are assigned buffers, in this case ½ mile buffers surrounding each point, TMV is virtually covered by the usage of the few birds from 2003 to 2008.[4] Similarly, development areas require buffers, too. Figure 15 of the Cogan report suggests two such buffers, at ½ mile and 1 mile, that both demonstrate a much more accurate impact of the TMV project than the mere delineation of its project impact zones.

[4] Cogan provides support for the ½ mile buffer in literature (see Text Box 1, p.21), but many of these references admittedly regard guidelines for avoidance of condor nests, which are not (currently) present on Tejon Ranch. Still, the ½ mile buffer appears reasonable considering the available guidelines.

This is especially true, as described in Cogan's report, in a fragmented development scheme like TMV (Cogan 2009, Figure 15). The DHCP's failure to consider buffers for either the individual data points or for the development area thus renders its analysis and conclusions fatally flawed.[5]

It is apparent that valuations of habitat qualities in the DHCP are made primarily on historic and current usage patterns, with potentially some contribution from the personal experiences of the three scientists who comprise Tejon's condor panel (DHCP p.4-36). For example, the DHCP describes how "[l[ess than 3% of the data points…occur[] within Tejon Ranch" and "[l]ess than 1% of the data points are within TMV," (DHCP p.4-35). Also described is how TMV was modified to preserve "areas that have been historically used and currently used as condor foraging and feeding areas as well as overflight areas" and how it will now "impact only 1,337 acres of suitable condor foraging habitat…and avoid and permanently preserve the most important condor foraging habitat within TMV." (DHCP p. 4-43). *See also* p.4-51:

> [I]n light of the preservation of habitat…that represent[s] the higher quality and more frequently used habitat areas for condors…the loss of a small amount of foraging habitat associated with the current configuration of TMV is not considered an impact that will significantly adversely affect this species…

See also p. 4-61:

> In fact, based on the analysis conducted on GPS-transmittered condors from 2002 to 2008, condors generally only used those areas within the Tejon Ranch critical habitat boundary that historically contained, and currently contain, animal carcasses and supplemental feeding areas...

The DHCP and DEIS are replete with other examples; it is ultimately clear that the single most important piece of evidence considered in these documents in assessing the project's impact on the condor is the historic and recent use data as expressed by the mapped data points.

Appendix D to the DHCP ("Habitat Suitability Criteria Methods") should provide information regarding condor habitat modeling that should have been relied on in the condor data analysis. Unfortunately, this section contains little information regarding the criteria methods used while the information that is provided is either invalid or appears to have not been relied on in the condor analysis. For example, Section 1.2.2 on p. D-5 refers to a 1-acre scale vegetation map created for high priority vegetation communities. This map is not provided in the DHCP however (Figure 5-1 is referenced, but this map is a rough, low-scale map with most categories combined together because of the scale). The result is confusion as to what specific portions of Tejon Ranch are considered condor habitat (under the narrow parameters of the DHCP) and what are not. The DHCP never clearly maps these areas, showing only the designated condor study area (which apparently does not consider vegetation mapping at all) (DHCP Figure 4-11). The best description of suitable condor habitat is given in Appendix D, but the description contains rather constrictive and confusing parameters: "only vegetation communities that also have 0-10% canopy cover or 10-40% canopy cover or grass, not-a-part, and chaparral were included in the final model due to the need for condor [*sic*] to forage in open habitats." (DHCP p. D-17).

[5] The DHCP does include buffers for one species: the ringtail (*see* DHCP Figure 5-19).

No explanation, authority, or literature citations are given for the "need" for condors to forage in open areas (which are well-documented to use heavier canopy covers) or for any other limiting of condor habitat suitability.

Taking these various factors into consideration, the DHCP's analysis of the importance of Tejon Ranch relative to other regional lands is invalid. While it is impossible for the DHCP to outright deny the importance of the ranch lands, it takes great pains to minimize that importance as much as possible, and especially to minimize the impact of TMV. Because of the inherent biases of the historic and current use data, all of the DHCP's conclusions are invalid when used to determine that an area is not used by condors, not suitable perching or roosting habitat, or in general not of high value to the species (again, it is certainly useful in demonstrating that an area *is* or *could be* of value). These conclusions violate the express dictates of the ESA, which require the designation of critical habitat for both survival and recovery of the species. *Gifford Pinchot Task Force v. United States Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2002) ("the purpose of establishing 'critical habitat' is for the government to carve out territory that is not only necessary for the species' survival but also essential for the species' recovery.").

A proper analysis of the habitat qualities of Tejon Ranch and TMV, taking into consideration the recovery of the species, would likely engage in a modeling of a healthy, *fully recovered* population of condors (free of the current limitations to the species like food subsidies and captive breeding and considering scientifically determined buffers around species activity), a current assessment of the habitat qualities of all *potential* habitat, and then consideration of all other data like historic usage patterns and data points, historic designated ranges, individual observer experience, and scientifically determined buffers around development activities. The importance of a solid, thorough habitat modeling is obvious considering the permanent alteration of any habitat associated with housing developments. That such alteration is proposed for designated critical habitat for an endangered species makes such thoroughness all the more necessary.

4. Impacts on California Condor / Anticipated Take of Condors

a. Loss of Foraging Habitat

The DHCP inexplicably declares that the "loss of foraging and [*sic*] habitat is not considered an important factor with respect to the recovery of the condor," citing the 1996 Recovery Plan (DHCP, App. C, p. 39). This grossly misstates the Recovery Plan. What the Recovery Plan actually states is the exact opposite, devoting four pages to the issue of habitat loss and is impacts on the species and particularly highlighting the importance of Tejon Ranch as foraging habitat (Recovery Plan, pp. 27-30). The general assertion that habitat loss is not important to the species is repeated throughout the DHCP (primarily through citations to past findings that habitat loss was not a principle cause of decline of the species, especially compared to other mortality factors). *See, e.g.*, DHCP pp. 4-44, and 4-48. Although habitat loss was likely not the principle factor in the modern decline of the species, it simply does not follow that habitat loss is not a limiting factor in the recovery of the species or will not be an important mortality factor in the future. In fact, as other mortality factors are addressed, most importantly lead

poisoning, habitat loss will likely become the most important factor limiting the successful recovery of the species, especially if prime habitat like that found in TMV is lost to housing development (Mee and Snyder 2007).

On the issue of habitat loss as a limiting factor, the DHCP compares condors to several raptor and vulture species, observing that:

> none of these species suffered in any major way from habitat loss, and all except the Asian vultures have rebounded once the contaminants were identified and removed. It is the opinion of the Condor Panel that the California condor will respond similarly if current contaminants such as lead and microtrash are eliminated and that no amount of habitat preservation since fragmenting lead bullets were first developed would have had any effect in halting the decline of the California condor without the elimination of lead from its diet.

(DHCP p. 4-44). This is a confusing statement, in that it mixes an opinion about the condor's future recovery (it "will respond similarly"), with a purely speculative opinion about the role of habitat loss in the condors past decline ("no amount of habitat preservation…would have had any effect in halting" its decline). This strongly suggests that the Condor Panel is of the opinion that habitat loss will never be a limiting factor in the recovery of the species. This is an unnecessarily risky assumption, considering that there likely exists adequate natural habitat for a recovered population of condors in its historic range now—but perhaps just barely. It is unsupported by the natural history of the species, which no longer inhabits or even frequents urbanized areas that were likely part of its former range (DHCP p. 4-65, Snyder and Snyder 2005). And it is contradicted by the known behavioral characteristics of the species, which, despite its known curiosity, exhibits an unflagging aversion to human beings and human activities (Snyder and Snyder 2005, pp. 217-222). Furthermore, it ignores the fact that the condor, in its natural state (and not dependent on food subsidies) is a scavenging bird, ranging over large areas to find suitable food sources (Snyder and Snyder 2005, pp. 57-58). It is perhaps possible that the condor *could* survive huge losses of foraging habitat (by adapting to urban environments in a similar way as the peregrine falcon, for instance), although nothing in the history or biology of the species suggests that this is likely. Certainly, destroying essential habitat—designated critical habitat—with a massive housing development is no way to test such a speculative hypothesis.[6]

In addition to unreasonably minimizing the importance of foraging habitat to the species in general, the DHCP misleadingly describes the amount of foraging habitat that will be lost with the plan. The DHCP declares that 1,337 acres of "suitable condor foraging habitat" will be lost due to the proposed development of TMV (DHCP p. 4-43, *see also* p. 4-51). This is nonsensical. The habitat suitability model described in Appendix D of the DHCP apparently rules out large portions of the TMV area due to condors' apparent need to forage in open habitats only (DHCP,

[6] Given the incredibly contentious history of the condor recovery program to date, which includes numerous intense debates within the scientific community over everything from the cause of the decline of the species to how captive-born condor chicks should be reared, it is surprising that the Condor Panel, composed of just three individuals with relatively few published articles or known research on either condor habitat modeling or condor behavior adaptability, would first propose such a risky and as-of-yet-untested hypothesis in the form of a commissioned development proposal without any participation by or debate within the larger condor conservation community.

App. D, p. D-17). But this limitation is simply not supported in the scientific literature. As the DHCP itself admits, "[l]ike most scavenging birds, California condors are opportunistic" and "may be expected to take advantage of local abundance of food almost anywhere within their normal range." (DHCP p. 4-7, citing 1996 Recovery Plan). Indeed, habitat excluded by the habitat suitability model was designated as critical habitat *because* of its value as foraging habitat.

Even if one were to accept some aspects of the habitat suitability model, however, it is difficult to see how the DHCP could arrive, based on the data and maps provided, at a figure as small as 1,337 acres of suitable condor habitat being lost by the project. Not only is this figure not adequately supported or described, but it begs credulity given the size of the TMV project, which calls for at least 7,860 acres of impacted lands out of a total 26,417 acres of the TMV Specific Plan.[7] DHCP pp. 2-2 and 2-11. Furthermore, it fundamentally understates the actual impact of the development project on foraging habitat: rather than being limited to the actual square footage and acreage of buildings, driveways, swimming pools, tennis courts, etc…, the impacted area *must* include a buffer; condors are simply not going to forage in the grass strips alongside driveways and roads and other lands (even naturally vegetated) just across property lines. And even if they were, they are extremely unlikely to find any carcasses within sight—or smell—of a residence or other human activity (Cogan 2009, Figure 15).

b. Loss of Food Supply (hunting and grazing)

The DHCP completely fails to consider the consequences of the elimination of hunting and grazing from the TMV Specific Plan and nearby areas. In an analysis of impacts to foraging habitat that is remarkable for its errors and omissions, this may rank as the most significant. In the absence of other functioning predator-prey relationships in condor habitat, both hunting and perhaps to a lesser extent grazing are clearly essential to the species (p. 4-23, 4-39, 4-62). While the DHCP admits that "regular hunting activity will be reduced in scope within the TMV Specific Plan area," (p. 4-62), exactly how much either will be curtailed is not described. One must presume, given the nature of the development, that hunting will be completely eliminated within the TMV Specific Plan area and that grazing will be significantly curtailed (even where continued, carcasses will be removed rather than left out as a food source for condors), as neither is compatible with the proposed residences, roads, golf courses, commercial uses, etc. Thus, rather than declaring that just 1,337 (or even 7,860) acres of foraging habitat would be lost, the DHCP needs to analyze the total acreage removed from hunting and grazing: something far closer to the total 26,417 acres of the TMV Specific Plan. The loss of this amount of habitat would be a massive impact on the foraging behavior of the species.

This number could be greater, however, depending on the exact restrictions of hunting that will be imposed outside of the TMV Specific Plan area. Will hunting be allowed within earshot of residential homes? Within the maximum potential distance a bullet can travel? Will hunters be allowed or denied access to the backcountry through TMV (so will hunting in the surrounding areas perhaps increase or decrease?). The DHCP needs to determine and disclose

[7] This 7,860 acre figure is itself extremely hard to believe, as it obviously ignores the heavily fragmented nature of the development and almost certainly is too optimistic in its projections for what percentage of each lot will be "impacted."

these details before any assessment can be made regarding a) how many acres of foraging habitat will be lost and b) what the impact of this HCP would be on the species.

5. Destruction and Adverse Modification of California Condor Critical Habitat

Pursuant to Section 7(a)(2) of the ESA, before granting the application for an ITP, FWS must "insure" that the HCP ITP "is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species . . . determined . . . to be critical . . ." 16 U.S.C. § 1536(a)(2). To fulfill this mandate, FWS must engage in self-consultation on its action, which "may affect" listed species. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

The interagency ESA regulations define "destruction or adverse modification" as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical." 50 C.F.R. § 402.2. However, in *Gifford Pinchot Task Force v. United States Fish and Wildlife Service*, 378 F.3d 1059, 1069 (9th Cir. 2004), the Ninth Circuit held that this definition was unlawful because it provides that an action constitutes adverse modification only if it diminishes the value of critical habitat for *both* survival and recovery. Accordingly, the regulation, which has not been rescinded, must be interpreted as defining adverse modification as an alteration that diminishes the value of critical habitat for *either the survival or the recovery* of a listed species.

There is another problem with the regulatory definition – contrary to the plain language of the ESA, it equates "destruction" of critical habitat with "adverse modification" of critical habitat. The terms are not synonomous. Section 7(a)(2) of the ESA uses the disjunctive "or" between "destruction" and "adverse modification" indicating Congressional intent that the terms mean different things. Thus, the FWS must ensure that the HCP is not likely to result in *either the destruction or the adverse modification* of designated critical habitat for the California condor.

The DHCP permits activities that will manifestly destroy and adversely modify condor critical habitat. The Tejon Mountain Village development will directly destroy some of the physical and biological features that are the basis for the critical habitat designation, including essential condor foraging habitat. In addition, TMV will directly and indirectly diminish the value of designated critical habitat for recovery of the condor by eliminating, degrading, and fragmenting condor foraging habitat.

The DHCP admits that it was "designed…without regard to the precise boundaries of the large Township blocks that have been designated as critical habitat" (DHCP p. 4-19). This is disturbing and very revealing. The essence of critical habitat as defined in the ESA is that habitat that is "essential to the conservation of the species." 16 U.S.C. § 1532(5)(a)(i). Federal agencies are then prohibited from taking actions that "result in the destruction or adverse modification" of designated critical habitat. 16 U.S.C. § 1536(2). Regardless of the DHCP's

belief that the existing condor critical habitat designation "may not meet current standards," designated critical habitat has the force of law and may not be simply disregarded.[8]

Critical habitat on Tejon was specifically designated to protect the prime foraging habitat that exists on Tejon Ranch, arguably some of the best and most important foraging habitat available to the species (DHCP p. 4-58). But the DHCP concludes that the project will not result in destruction or adverse modification of critical habitat for several reasons:

- The project will not affect the substantial majority of critical habitat on Tejon;
- Foraging habitat is not as location dependent as nesting or roosting;
- Tejon will create artificial feeding stations that will provide lead-free food sources
- Hunting will continue in the majority of Tejon Ranch critical habitat; and
- Tejon will undertake other mitigation measures, including implementing the Tejon Ranch Conservation and Land Use Agreement.

The proposed mitigation measures, including the proposed artificial feeding stations supplying lead-free carcasses and the implementation of the Conservation Agreement, are discussed in detail in Section II.E.6., below. This section addresses the remaining grounds cited by the DHCP in support of its conclusion that the project will not result in the destruction or adverse modification of condor critical habitat. Taken together, it is clear that the DHCP's assertions are inaccurate, overstated, and/or inapplicable and the conclusion that the project will not destroy or adversely impact critical habitat is decidedly wrong.

a. The Project's Effect on the Substantial Majority of Critical Habitat

The DHCP's critical habitat analysis starts by observing that the project will not affect the substantial majority of Tejon Ranch critical habitat. This is irrelevant and misstates the legal standard for determining impacts to critical habitat. *National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d 917, 934-35 (9th Cir. 2007); *Gifford Pinchot Task Force*, 378 F.3d at 1069, 1074. The important question in determining whether critical habitat will be destroyed or adversely modified is not how much designated critical habitat will be destroyed out of the whole—all critical habitat is equally protected, after all—but rather what are the impacts of the project on any and all designated critical habitat. Critical habitat on Tejon Ranch was designated for its importance as foraging habitat for condors. As the DHCP acknowledges, TMV will destroy or adversely modify that quality of the designated habitat: condors will cease to forage on designated critical habitat for the condor, and will have diminished foraging opportunities on other portions of designated critical habitat. The fact that this portion of critical habitat represents a minority of the total designated critical habitat on the ranch does not change the fact that it will be destroyed or adversely modified by the project.

[8] Even Tejon Ranch were to advance an argument that designated critical habitat for the condor is not scientifically defensible, the argument would fail immediately based on existing data. As the 1996 Recovery Plan states: "not until we have a larger number of condors in the wild, including breeding pairs, will we be able to fully evaluate the contribution critical habitat areas will make to the recovery of the California condor." (1996 Recovery Plan, p. 20-21).

Moreover, the DHCP is inaccurate in its description of how much critical habitat will be destroyed or adversely modified. The DHCP ultimately concludes that only 4% of the critical habitat within Tejon Ranch will be affected by the project "even if it is assumed that condor foraging activity would no longer occur within the entire portion of critical habitat located in the TMV Planning Area boundary." (DHCP p. 4-60). Yet the DHCP states that approximately 19,091 acres of designated critical habitat are within the TMV Planning Area, or 14.5% (not 4%) of the total critical habitat on Tejon Ranch.[9] The DHCP argues that far less critical habitat will actually be impacted, observing that just approximately 4,800 acres of the "total disturbance area envelope" of approximately 7,800 acres are designated critical habitat, presumably referring to the actual impacted acres associated with each house, yard, road, tennis court, and swimming pool, and that only 1,337 acres of this critical habitat is even "suitable" foraging habitat.[10] (DHCP p. 4-60). Regardless, as discussed above, the impacted acreages of the TMV project are not limited to the directly disturbed acres. Buffering either the data points or the project boundaries reveals a far greater impact zone than admitted in the DHCP, and the impacts associated with the elimination of hunting and grazing from the TMV Planning Area (and likely beyond) would result in even more impacted acres. The 7,800 acre figure should therefore be taken as the minimum extent of designated condor critical habitat that will be directly destroyed, and the HCP and DEIS must further disclose the extent of additional critical habitat that will be impacted.

In addition, the impact of a large housing development plopped in the middle of both current foraging habitat and current flyways between other vital habitats (including nesting and roosting sites) is improperly disregarded in the DHCP. Although there may be evidence of condor flight routes over other developed areas, the DHCP fails to distinguish these areas from the TMV project, which will be significantly larger, located in a far more significant pinch-point for the species, occupy higher ridges than the other nearby residential areas, and closer to (even within) prime foraging habitat. This portion of the analysis also suffers as it fails to consider the cumulative impact of the TMV project in relation to the other two development projects on Tejon Ranch and the other proposed development projects in the immediate area, especially Frazier Park Estates. It is entirely possible that these developments collectively will result in a near-wall of urbanized landscapes with grave impacts on condor movements.

b. The Location Dependence of Foraging Habitat

It is difficult to understand how the observation that foraging habitat is not as location dependent as nesting or roosting provides any support for concluding that the project will not destroy or adversely impact critical habitat (DHCP p. 4-60). Curiously, the DHCP quotes from the 1976 critical habitat designation approvingly for this proposition, but the language quoted appears instead to *highlight* the importance of protecting those areas that actually do contain the necessary constituent elements for foraging, particularly Tejon Ranch: "[s]ubstantial areas of open range, with adequate food, and limited development and disturbance would have to be preserved…in order to maintain the species." (DHCP p. 4-61, quoting 41 Fed.Reg. 41914).

[9] Left unsaid is that this figure, if accurate (it is impossible to verify given the data provided), represents over 67% of the TMV Planning Area's 28,253 acres of designated critical habitat.

[10] The DHCP is unfortunately quick to abandon the promise made in Section 2, Project Description, that the HCP will assume a "100% impact of the 7,860-acre development envelope." DHCP p.2-2 FN2

Ultimately, the designation of critical habitat on Tejon Ranch affirms, rather than diminishes, the importance of the ranch as important foraging habitat. Rather than being a fungible commodity, it is in fact highly location dependent, and the proposed action will result in a net loss of functional foraging habitat.

It is apparent that the DHCP's conclusions regarding the importance of foraging habitat are based on an acceptance of a perpetually subsidized feeding program for the species ("Compared with…nesting and roosting, foraging, particularly with today's captive released population, is much more subject to management through the provision of clean food sources (carcasses) in suitable locations.") (DHCP p. 4-61). The DHCP errs in making this assumption and therefore fails to properly analyze the impact the loss of prime foraging habitat will really have on designated critical habitat and on the species in general once food subsidies have been removed (as the threat of lead poisoning diminishes). *See* Section II.E.6.a., below.

c. The Continuation of Hunting on Tejon Ranch

As discussed above, hunting provides a crucial source of carcasses for condors engaging in natural foraging behavior. Rather than observing and analyzing the massive *reduction* in hunting (and therefore reduction in available carcasses) that will occur on Tejon Ranch as a result of the development of TMV (the DHCP merely admits that regular hunting will be "reduced in scope within the TMV Specific Plan area," DHCP p. 4-62), the DHCP highlights the continuation of hunting elsewhere on Tejon Ranch lands, including within other portions of condor critical habitat. Far too little information is provided regarding this hunting, however, such that it fails to act as valid support for concluding that the project will not destroy or adversely modify critical habitat.

The assertion that hunting will continue in the "substantial majority" of condor critical habitat on Tejon omits any details of where exactly it will be allowed or restricted. Other projects are planned for designated critical habitat which will also presumably be incompatible with hunting, and these should be revealed and discussed. Furthermore, current actions by Tejon suggest that hunting may cease to be as beneficial as it has been in the past, or as it should be in the future: anecdotal reports from hunters on Tejon Ranch indicate that hunters are now being required to completely remove gutpiles from some areas of the ranch. This policy, if true, raises the serious question of whether Tejon Ranch is attempting to manipulate, through the availability of food supplies, the usage of the ranch by condors (although such an attempt is futile: as discussed above, the fact that TMV is prime foraging habitat cannot be taken away). The DHCP needs to fully disclose any such actions and adequately explain how such actions may be related to Tejon Ranch's development interests. Ultimately, the DHCP fails to answer the most important question regarding the continuation of hunting if it is really to be considered as a mitigation measure in any way: to what extent will carcasses and/or gutpiles be available in the future for foraging condors, throughout the ranch? Also missing is any enforceable mechanism to make sure that hunting remains a legitimate beneficial impact.

6. Proposed Avoidance, Minimization, and Mitigation Measures

a. Supplemental Feeding Stations

Quite incredibly, the core mitigation measure proposed in the DHCP is the creation of artificial feeding stations located on Tejon Ranch with the express purpose of altering and controlling the natural behavior of the species. According to the DHCP, the feeding stations would accomplish two goals: minimizing condors' exposure to potential threats from the homes and people of TMV and minimizing condors' exposure to potential lead poisoning (*See* DHCP, p. 4-85 and App. C, p. 43). Even if either goal was achievable, they would come at tremendous cost: dooming the condor to an eternal existence as a virtual zoo animal in its historic range by replacing its natural foraging grounds with artificial feeding stations. The DHCP's assertion that such feeding stations "will contribute to the conservation and recovery of the California condor" is scientifically indefensible (DHCP p. 4-85).[11] Rather than mitigation for the destruction or adverse modification of critical habitat, the artificial feeding stations *would themselves constitute* both take of the species and adverse modification of critical habitat. They thus completely fail to minimize and/or mitigate the impacts of the taking to the maximum extent practicable and they would reduce the likelihood of survival and recovery of the species in the wild. They thus fail as mitigation measures and cannot be included in this HCP. 16 U.S.C. § 1539(a)(2)(B); 50 C.F.R. §§ 17.22, 17.32.

Specifically, artificial feeding stations fail as mitigation for the loss of foraging habitat because they would: 1) condemn the species to dependency on artificial feeding in perpetuity, preventing its full recovery; 2) mitigate the project's impact through manipulation of the behavior of the species; 3) potentially lead to greater ingestion of microtrash because of associated behavioral modification and 4) mitigate a threat (lead poisoning) that other measures, external to the project, will make obsolete regardless. These points are addressed in order as follows.

1. Eternal Dependence

The DHCP acknowledges that "it is not expected that free-flying California condors will continue to feed on proffered food indefinitely." (DHCP p. 4-85). But huge portions of currently-utilized critical foraging habitat would be permanently lost to development under the DHCP, not to mention the additional adjacent acreages that would stop being viable foraging grounds because of the likely cessation of hunting and/or grazing. With this loss of foraging habitat, condors would become even more dependent on artificial feeding stations than they already are—especially as the population increases in number and approaches its recovery goal. In a tacit admission of this point and its impact on condors, the DHCP reveals that "supplemental feeding can permit the reintroduction and maintenance of California condor populations in areas where the supply of natural food resources is too variable to support the birds over the entire annual cycle," (DHCP p.4-85). But it fails to admit that it is TMV itself that would make these food resources so variable. And the DHCP has no contingency for this inevitability: what

[11] The assertion that this conclusion is "based on the best available science" is patently absurd. Importantly, it is made without any support whatsoever.

happens to the artificial-food-addicted condors once the 50-year term of the ITP expires, the feeding stations close, and insufficient habitat remains for condors to find food "naturally"?

Although the 1996 Recovery Plan recognizes that some condor populations may require continued artificial feeding "to supplemental natural food resources and/or to protect birds from exposure to contaminated carcasses," it is important to note that this apparent acceptance of artificial feeding "should not preclude reclassification" of the species from "endangered" to "threatened." (1996 Recovery Plan p. 22). The Recovery Plan does not anticipate an eternal dependence on artificial food supplies, and in fact such dependence would almost certainly require the species to remain on the Endangered Species List (as "threatened," perhaps, if all other recovery goals were met).

2. Manipulation of Natural Behavior

Condors in California have demonstrated an ability to become accustomed to and fairly dependent on artificial feeding stations. This is nothing to celebrate, of course, and the goal of full recovery of the condor must include the elimination of all such supplemental feeding, which by its very nature is a manipulation of the natural behavior of the species. Artificial food subsidies affect almost all aspects of condors' existence: influencing where the birds forage (if at all, as "[e]vidence is beginning to emerge…that birds fed exclusively at the same site over a long period of time may lose their initiative to seek food elsewhere." (Grantham 2007)), influencing where they roost, altering their diet (their diet being overly represented by provisioned cow carcasses), reducing their defenses to predators (feeding stations being relatively protected areas which foster an unnatural lack of awareness of potential threats), and even detrimentally altering the frequency of the feeding of chicks (Grantham 2007, Mee et al. 2007). Artificial feeding stations, while quite evidently essential to the recovery of the species to date due to the continued threat of lead poisoning, should therefore not be part of any long-term strategy for the full recovery of the species (Hall, et al., 2007).

In fact, such disruption of the natural foraging behavior of condors constitutes "take" of the species under Section 9 of the ESA. ("Harass…means an intentional or negligent act or omission which creates the likelihood of injury to 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." 15 C.F.R. § 17.3, emphasis added). No take permit has ever been issued for any artificial feeding of the condor, even the artificial feeding arguably necessitated by the lead poisoning threat. But the artificial feeding proposed by Tejon in the DHCP is something entirely different from existing artificial feeding programs: rather than a temporary bandage designed to carry the species until the lead threat is eliminated, Tejon's plan would be a permanent condition imposed on the species as mitigation for the destruction and adverse modification of critical foraging habitat.

Such a plan is scientifically unsupportable, cursing the species to be eternally dependent on humans and preventing their ever being self-sustaining (and potentially directly harming the species by increasing its exposure to microtrash, as described below). It also violates the law. Artificial feeding stations, rather than minimizing and mitigating to the maximum extent practical the take caused by the project, increase and exacerbate that take. They also reduce the

likelihood of survival and recovery of the species in the wild. 16 U.S.C. § 1539(a)(2)(B); 50 C.F.R. §§ 17.22, 17.32. Furthermore, if the measures enacted to mitigate permitted take in an HCP may themselves result in take, FWS must expressly authorize this take. *Loggerhead Turtle v. County Council of Volusia County*, 148 F.3d 1231, 1242 (11th Cir. 1998). Here, the problem is essentially the reverse of that described in *National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d at 935, and consequently, even more egregious; in that case, NMFS failed to consider short-term effects on salmon, while here the HCP ignores the long-term harm to condors associated with maintaining artificial feeding stations in perpetuity. As the artificial feeding stations in the DHCP are designed to mitigate the loss of foraging habitat, they cannot stand. No permit may therefore be issued that includes artificial feeding as mitigation for any impacts to the species or critical habitat.

3. Ingestion of Microtrash

The DHCP identifies exposure to microtrash as a potential mortality factor for the condor (and potential form of take) but fails to clearly identify the role that artificial feeding sites can play in increasing exposure of the species to microtrash, or even in causing the problem to begin with. What little data exists strongly suggests a connection between feeding programs and microtrash ingestions:

> Conceivably the [microtrash] problem could also be related to the current absence in the southern Californian population of the more typical wide-ranging foraging behavior of this species (see Meretsky and Snyder 1992), which has resulted from the condors' dependence on food provided at a single, predictable feeding station. Thus, the time available to condors for non-essential activities, coupled with their attraction to areas of human activity where such trash is abundant and obvious, may promote their propensity to search for and ingest trash (Mee and Snyder, 2007).

The HCP must fully explore this potential mortality factor, and determine its relationship to artificial feeding stations. If, as is likely, the stations themselves are culpable in the problem, they again would fail to minimize or mitigate the take of the species to the maximum extent practicable, would reduce the likelihood of the survival of the species in the wild, and would themselves result in take under Section 9 of the ESA.

4. Food Subsidies an Obsolete Mitigation Measure for Lead Poisoning Threat

As discussed in Section II.E.6.c., below, the threat of lead poisoning on Tejon Ranch, like all condor habitat in California, is waning. Although compliance is far from perfect, it is expected to improve over time so that lead poisoning will eventually cease to be a threat to the species. The DHCP's food subsidy program, therefore, is a permanent mitigation measure for a temporary threat, and as such will soon become obsolete. Although useful in the short term, the problem, as discussed above, is that the food subsidy program will permanently – and adversely – alter the condors' behavior, and the foraging habitat currently in the TMV vicinity will be permanently destroyed.

b. Condor Study Area

It is abundantly clear that the DHCP's reconfigured Condor Study Area ("CSA") was designed with the goal of best accommodating the development of the TMV project—not with accurately identifying and protecting the most important condor habitat on Tejon Ranch. Starting with the initial concept as described by Bruce Palmer, Tejon Ranch used updated condor point data and conversations with FWS personnel to reconfigure the CSA so that it "encompasses the core area of California condor activity on the Ranch." DHCP p. 4-84. While it is heartening that conversations with FWS personnel factored into the reconfigured design, the existing condor point data still plays far too important a role in determining its boundaries, as discussed in Section II.E.3.b, above. Moreover, the conclusion is not even supported by existing condor point data, as both Figures 6 and 7 of the Cogan Report demonstrate large use by condors of areas outside of the CSA (Cogan 2009). Most importantly, however, is the fact that the plan, by focusing on a CSA, ends up ignoring designated critical habitat for the species (DHCP p. 4-19). Rather than being a measure that contributes to the conservation and recovery of the species, the CSA operates a mechanism to deprive designated critical habitat of its force and effect. It should not be used as cover for destruction of critical habitat.

c. Lead Ammunition Ban

The DHCP takes great credit for the ranch-wide banning of lead ammunition that supposedly commenced in 2008, citing it as a primary mitigation measure for the impacts of the TMV project (DHCP p.4-87). The problem with this action, as laudable as it was for a few months in 2008, is that it was made entirely irrelevant on July 1, 2008, with the start of enforcement of the Ridley-Tree Condor Conservation Act and subsequent regulations by the California Fish and Wildlife Commission that banned the use of lead ammunition in all condor habitat. Tejon's ban, purely repeating the legal ban, thus is now nothing greater than compliance with state law. It is thus irrelevant and unusable as proper mitigation for both the take of the species anticipated by the project and for the destruction and adverse modification of critical habitat.

Furthermore, anecdotal evidence regarding lead poisoning incidents of southern California condors in 2008, subsequent to the official start of Tejon Ranch's ban, as well as statements made by Tejon Ranch biologist Holly J. Hill during her presentation at the "Ingestion of Spent Lead Ammunition: Implications for Wildlife and Humans" conference in Boise, Idaho in May of 2008, suggest that neither enforcement of nor compliance with the lead ban on Tejon Ranch has been complete. Unfortunately, requests for these and other documents related to this issue, including the results of lead toxicity tests and lead isotope analyses of the poisoned birds, and including documents produced by Tejon and shared with the FWS, have been rejected due to the protective order discussed in Section II.E.2., above. Evidence of Tejon's compliance with its own mitigation measure, and compliance with state law, including all evidence of lead poisoning incidents related to Tejon Ranch must be made public before any approval of this HCP can be given.[12]

[12] This suggests yet another motive for Tejon's desire to keep relevant documents from public scrutiny: evidence of Tejon's culpability in lead poisoning incidents could conceivably result in civil and/or criminal penalties under the

F. OTHER COVERED SPECIES

1. Amphibians

Mirroring the worldwide decline in amphibians, the San Joaquin Valley has also been documented to show an unambiguous pattern of decline in amphibian populations (Fisher and Shaffer 1996). Because this noted decline was reported over a decade ago, careful evaluation of the impacts and effective avoidance, minimization and mitigate must be incorporated for this suite of rare amphibian species.

Many local extirpations of amphibians are due to disease outbreaks (USFWS 2005). Small or fragmented populations, such as the modeled habitats included in the DHCP, may not be able to survive a disease outbreak. The document fails to include the guidance provide by the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* – Appendix H (USFWS 2005) with respect to minimizing the spread of disease by humans from site to site. This guidance needs to be included for the project to minimize the potential of disease spread throughout the project site in amphibian habitat.

a. *Tehachapi Slender Salamander*

3,797 acres of potential modeled habitat exist within the project area (DHCP at pg. 5-14) and 108 acres will be permanently impacted affecting 216 salamanders (DHCP at pg. 6-6). Conservation areas include 2,717 acres in the potentially unfragmented Established Open Space and another 790 acres in the fragmented TMV Planning Area Open Space according to Section 6, which totals 3,507 acres (92%). However, total proposed conservation in Section 7 is 3,687 acres (DHCP at pg. 7-2). The discrepancy in these acreages needs to be clarified. Furthermore, the document contends that an additional 3% of the conserved area may possibly be impacted by construction (DHCP at pg. 7-3). Pre-construction surveys and animal removal must be required, to achieve avoidance and minimization. This cannot be at the discretion of the project biologist as proposed in the DHCP (at pg. 7-4)

Additionally, in order to avoid and minimize impacts to the Tehachapi slender salamander, much more comprehensive mitigations need to be proposed and implement under Goal 5. Long-term (operational) impacts. Major impact results on other salamander species when roads have been built through their habitat (Marsh et al. 2005, Marsh 2007). Roadkill of salamanders is also a threat, and tunnels with drift fences that have been designed into road construction and has been somewhat successful in reducing mortality (Jackson 1996). Run-off from roads, not just urban run-off, also pose a significant problem for amphibians of all sorts (Forman and Deblinger 2000). None of these significant potential impacts were addressed in the DHCP. In fact, the mitigations proposed (DHCP at pg. 7-4) leave operational impacts to be mitigated by unidentified "design features will be incorporated at the boundary between modeled suitable habitat and development areas". First, the DHCP fails to actually identify the impacts to the Tehachapi slender salamander by the proposed development. Because of the failure to analyze the impact, the document then relies on future "design features" to avoid, minimize and

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ESA, which in turn could prevent Tejon Ranch from being eligible for a take permit. 50 C.F.R. § 13.21. Of course, the failure itself to disclose material information is also grounds for denial of a permit. *Id*.

mitigate impacts. Because these "design features" are not included, it is impossible to identify if they are adequate to avoid, minimize and mitigate impacts.

Likewise, Goal 6 offers that the "effects of cattle-related impacts in suitable habitat for Tehachapi slender salamander will be avoided and effects that cannot be avoided will be minimized to the extent practicable." (DHCP at pg. 7-4). Once again, the impacts to the salamander from grazing are not identified. Because of the failure to analyze the impact, the document then relies on future "grazing management plan", which is not included, making it impossible to identify if the unidentified impacts would be adequately avoided, minimized and mitigated.

While Goal 7 states that "The effects of human recreation and pet activities in suitable habitat for Tehachapi slender salamander will be avoided and effects that cannot be avoided will be minimized to the extent practicable." Again, the impacts to the salamander from human recreation and pet activities are not identified. The mitigation proposed to avoid, minimize and mitigate the unidentified impacts is educational information provided to homeowner's associations. While the Center supports educational activities regarding sensitive and common plants and animals, it is not a mitigation measure. Domestic pets have been documented to impact native wildlife including amphibians on a significant scale (Mitchell and Beck 1992, Woods et al. 2003). Meaningful mitigations that reduce potential predation by domesticated animals and animals that benefit from human development (ravens, coyotes, and skunks for example) are needed. Domestic pets must be confined to preclude "take". Felines must be kept indoors. Domesticated canines must be confined to a yard when unattended, or leashed and not allowed in salamander habitat.

Goal 8 is basically confusing and inappropriate: it references "non permanent covered activities" and then includes inappropriate activities (DHCP – pg. 7-5). First surveys for the Tehachapi slender salamander are not a mitigation strategy. Surveys should have been done, and the data used as a basis for the HCP, and to refine the inadequate modeling effort. Absent any meaningful adaptive management strategy (as per our previous comments), the usefulness of these surveys is unclear. The "installation of infrastructure" and "the selection of appropriate locations for access, trails, and facilities" are permanent activities. The DHCP fails to identify what infrastructure, access, trails and facilities are proposed in the areas identified in Tehachapi slender salamander habitat, making an evaluation of the impacts impossible, much less mitigation requirements.

While the DHCP recognized as suite of threats that are known to cause declines including feral pigs, road construction, mining, logging, cattle grazing, and flood control projects (DHCP at pg. 5-12), only one of these threats, road construction) is partially analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats still remain yet, the DHCP still fails to identify the potential impacts to the Tehachapi slender salamander, and propose ways to avoid, minimize or mitigate those impacts.

b. *Western Spadefoot*

Of the 1,174 acres of suitable habitat were modeled within the project area (DHCP at pg. 5-20), 30 acres will be permanently eliminated. Conservation areas include only 292 acres in the potentially unfragmented Established Open Space and another 417 acres in the fragmented TMV Planning Area Open Space according to Section 6. Total proposed conservation is 709 acres (60%). The document contends that an additional 10% of the conserved area may possibly be impacted by construction (DHCP at pg. 7-5) in the riparian/wetland habitats. Unfortunately, this analysis fails to evaluate the impact to the species outside of the riparian/wetland areas. As noted in the Natural History section on page 5-17 of the DHCP, "The western spadefoot is almost completely terrestrial, entering water only to breed (Jennings and Hayes 1994)" indicating that impacts to its reproductive habitat (riparian/wetlands) is only part of the potential impacts to the western spadefoot. Because adult toads spend most of their time outside of the riparian/wetland areas, the document fails to adequately evaluate the impact to the non-riparian areas of the toad's habitat.

Pre-construction surveys and animal removal as proposed in Objective 3.1 must be *required*, to achieve avoidance and minimization. This cannot be at the discretion of the project biologist as proposed in the DHCP (at pg. 7-6). Additionally, the proposal states "If western spadefoots are detected (including egg masses, larvae), activities will be avoided until larvae have metamorphosed." It is unclear how this will effectively avoid or minimize impacts to the species, based on the fact that once the tadpoles metamorphose, they will move out of the water and onto the construction site. A more comprehensive plan for avoiding and minimizing impacts must be included.

As with the Tehachapi slender salamander, in order to avoid and minimize impacts to the western spadefoot much more comprehensive mitigations need to be proposed and implement under Goal 4. Long-term (operational) impacts. Major impacts result on other amphibian species when roads have been built through their habitat (Marsh et al. 2005, Marsh 2007). Roadkill of amphibians is also a threat, and tunnels with drift fences that have been designed into road construction and has been somewhat successful in reducing mortality (Jackson 1996). Run-off from roads, not just urban run-off, also pose a significant problem for amphibians of all sorts (Forman and Deblinger 2000). Use of agricultural chemicals and herbicides are known to cause reproductive failure in amphibians (Rohr et al. 2008, Relyea 2005). None of these significant potential impacts are addressed in the DHCP. In fact, the mitigations proposed (DHCP at pg. 7-6) leave operational impacts to be mitigated by unidentified "design features will be incorporated at the boundary between modeled suitable habitat and development areas". With the DHCP failing to actually identify all of the impacts to the western spadefoot by the proposed development, it is impossible to analyze the impacts. Relying on future "design features" to avoid, minimize and mitigate impacts is totally inadequate. These "design features" are not included in the DHCP or the DEIS, so it is impossible to identify if they are adequate to avoid, minimize and mitigate impacts.

Likewise, Goal 5 offers that the "effects of cattle-related impacts in suitable habitat for western spadefoot will be avoided and effects that cannot be avoided will be minimized to the extent practicable." (DHCP at p. 7-7). Once again, the impacts to the spadefoot from grazing are

not identified. Because of the failure to analyze the impact, the document then relies on future "grazing management plan", which is not included, making it impossible to identify if the unidentified impacts would be adequately avoided, minimized and mitigated.

While Goal 6 states that "The effects of human recreation and pet activities in suitable habitat for western spadefoot will be avoided and effects that cannot be avoided will be minimized to the extent practicable." As with the Tehachapi slender salamander, the impacts to the toad from human recreation and pet activities is not identified. The mitigation proposed to avoid, minimize and mitigate the unidentified impacts is educational information provided to homeowner's associations. While the Center supports educational activities regarding sensitive and common plants and animals, it is not a mitigation measure. Domestic pets have been documented to impact native wildlife including amphibians on a significant scale (Mitchell and Beck 1992, Woods et al. 2003). Meaningful mitigations that reduce potential predation by domesticated animals and animals that benefit from human development (ravens, coyotes, and skunks for example) are needed. Domestic pets must be confined to preclude "take". Felines must be kept indoors. Domesticated canines must be confined to a yard when unattended, or leashed outside of yards at all times and never allowed in toad habitat.

Goal 7 is basically confusing and inappropriate - it references "non permanent covered activities" and then includes inappropriate activities (DHCP p. 7-7). First surveys for the western spadefoot are not a mitigation strategy. Surveys should have been done, and the data used as a basis for the HCP, or to refine the inadequate modeling effort. Absent any meaningful adaptive management strategy (as per our previous comments), the usefulness of these surveys is unclear. The "installation of infrastructure" and "the selection of appropriate locations for access, trails, and facilities" are permanent activities. The DHCP fails to identify what infrastructure, access, trails and facilities are proposed in the areas identified in western spadefoot habitat, making an evaluation of the impacts impossible, much less mitigation requirements.

One important potential impact was identified in Section 5, but not addressed in secion7 of the DHCP, regarding low frequency noise/vibration and western spadefoot. As noted on page 5-19, "Dimmett and Ruibal (1980b) showed that the vibration caused by an electric motor consistently induced 100% emergence from dormancy under very arid conditions; therefore, construction-related noise could result in the premature emergence of the western spadefoot toad from burrows". The DHCP failed to discuss this issue at all in Section 7, and this important factor, which could be a significant impact to western spadefoot needs to analyzed for its potential impacts, avoided, minimized and mitigated.

While the DHCP recognized as suite of threats that are known to cause declines including direct loss of aquatic and upland habitat; mosquito fish; predators (e.g., bullfrogs, crayfish, and fish) and the spread of these or other predatory species into breeding sites; artificial lighting, urban-related predators such as cats and dogs; noise; urban-related predators (pets, strays, feral cats and dogs); grazing; off-road vehicles; exotic plants; alteration of hydrology; other human related degradation of habitat; insecticides that reduce insect prey; and rodenticides that reduce the number of burrowing animals and consequently the burrows for spadefoots (DHCP at p. 5-19), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these

threats still remain yet, the DHCP still fails to identify the potential impacts to the western spadefoot toad in its various lifecycles, and propose ways to avoid, minimize or mitigate those impacts.

c. Yellow-blotched Salamander

35,213 acres of suitable habitat for yellow-blotched salamander were modeled within the project area (DHCP at pg. 5-27) and 1,001 acres will be permanently impacted (DHCP at pg. 6-9). Conservation areas include 27,679 acres in the potentially unfragmented Established Open Space and another 4,961 acres in the fragmented TMV Planning Area Open Space according to Section 6. The total proposed conservation is 32,640 acres (93%) of the modeled habitat. The document indicates that an additional 3% of the conserved area may possibly be impacted by construction (DHCP at pg. 7-8). Unfortunately, this analysis fails to evaluate the impact to the species and ways of avoiding, minimizing any impacts. As noted in the natural history section, one of the major threats to this relatively local endemic species is "development and the cutting of oak woodland in the Tehachapi Mountains (Jennings and Hayes 1994)" (DCHP at pg. 5-26). The DEIS identifies that 1,923 acres of oak savannah and 2,458 acres of woodlands will be developed (DEIS Table 4.1 at pg 4.1-27-28), but fails to analyze how that correlates w/the yellow-blotched salamander habitat.

Pre-construction surveys and animal removal as proposed in Objective 4.1 must be *required*, to achieve avoidance and minimization. This cannot be at the discretion of the project biologist as proposed in the DHCP (at pg. 7-9). A more comprehensive plan for avoiding and minimizing impacts is required.

As with the previous amphibians, in order to avoid and minimize impacts to the yellow-blotched salamander much more comprehensive mitigations need to be proposed and implemented under Goal 5. Long-term (operational) impacts. Major impacts result on other amphibian species when roads have been built through their habitat (Marsh et al. 2005, Marsh 2007). Roadkill of amphibians is also a threat, and tunnels with drift fences that have been designed into road construction and has been somewhat successful in reducing mortality (Jackson 1996). Run-off from roads, not just urban run-off, also pose a significant problem for amphibians of all sorts (Forman and Deblinger 2000). Use of agricultural chemicals and herbicides are known to cause reproductive failure in amphibians (Rohr et al. 2008, Relyea 2005). None of these significant potential impacts are addressed in the DHCP. In fact, the mitigations proposed (DHCP at pg. 7-9) leave operational impacts to be mitigated by unidentified "design features will be incorporated at the boundary between modeled suitable habitat and development areas". With the DHCP failing to actually identify all of the impacts to the salamander by the proposed development, it is impossible to analyze the impacts. Relying on future "design features" to avoid, minimize and mitigate impacts is totally inadequate. These "design features" are not included in the DHCP or the DEIS, so it is impossible to identify if they are adequate to avoid, minimize and mitigate impacts.

Likewise, Goal 6 offers that the "effects of cattle-related impacts in suitable habitat for salamander will be avoided and effects that cannot be avoided will be minimized to the extent practicable." (DHCP at pg. 7-10). Once again, the impacts to the yellow-blotched salamander

from grazing are not identified. Because of the failure to analyze the impact, the document then relies on future "grazing management plan", which is not included, making it impossible to identify if the unidentified impacts would be adequately avoided, minimized and mitigated.

While Goal 7 states that "The effects of human recreation and pet activities in suitable habitat for yellow-blotched salamander will be avoided and effects that cannot be avoided will be minimized to the extent practicable." As with the previous amphibians, the impacts to the yellow-blotched salamander from human recreation and pet activities are not identified. The mitigation proposed to avoid, minimize and mitigate the unidentified impacts is educational information provided to homeowner's associations. While the Center supports educational activities regarding sensitive and common plants and animals, it is not a mitigation measure. Domestic pets have been documented to impact native wildlife including amphibians on a significant scale (Mitchell and Beck 1992, Woods et al. 2003). Meaningful mitigations that reduce potential predation by domesticated animals and animals that benefit from human development (ravens, coyotes, and skunks for example) are needed. Domestic pets must be confined to preclude "take". Felines must be kept indoors. Domesticated canines must be confined to a yard when unattended, or leashed outside of yards at all times and never allowed in salamander habitat.

Goal 8 is basically confusing and inappropriate: it references "non permanent covered activities" and then includes inappropriate activities (DHCP – pg. 7-7). First surveys for the yellow-blotched salamanders are not a mitigation strategy. Surveys should have been done, and the data used as a basis for the HCP, or to refine the inadequate modeling effort. Absent any meaningful adaptive management strategy (as per our previous comments), the usefulness of these surveys is unclear. The "installation of infrastructure" and "the selection of appropriate locations for access, trails, and facilities" are permanent activities. The DHCP fails to identify what infrastructure, access, trails and facilities are proposed in the areas identified in salamander habitat, making an evaluation of the impacts impossible, much less mitigation requirements.

While the DHCP recognized as suite of threats that are known to cause declines including development in and the cutting of oak woodland in the Tehachapi Mountains; cattle grazing, hunting, camping, agriculture, and mining, and feral pigs (DHCP at pg. 5-26), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats still remain yet, the DHCP still fails to identify the potential impacts to the yellow-blotched salamander, and propose ways to avoid, minimize or mitigate those impacts.

2. Birds

For both raptors and songbirds, modeling habitat is fraught with uncertainty (Fielding and Haworth 1995) because of the inherent unpredictability of the systems which are being modeled. The DHCP fails to evaluate the success of the modeling exercises for these species based on subsequent rigorous field monitoring.

a. Raptors

While we support nest avoidance during the breeding season for all raptors, the avoidance measures in the DHCP fall far short of proposing measures that actually avoid interference with breeding, rearing and fledging of raptors. "The presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the human is far from an active nest" (Richardson and Miller 1997). Regardless of distance, a straight line view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for raptors involved calculation of viewsheds using a three-dimensional GIS tool and development of buffers based on this (Camp et al. 1997; Richardson and Miller 1997). The DHCP assumes that impacts to raptors can be avoided by a 0.25 miles or 1000-foot (for the American peregrine) buffer from nest sites, but this approach will not avoid disturbance to hunting habitat or line-of-sight impacts from nest sites, regardless of distance. A more comprehensive avoidance strategy needs to be developed.

As with previous species, avoidance and minimization of "long term (operational) impacts" relies on unidentified "design features" for all the raptor species. It is unclear in the DHCP what the "long-term (operational) impacts" actually are. Failure to identify and subsequently analyze the impacts fails to meet the requirements of both the DHCP and the DEIS. Coupled with the unidentified "design features", this mitigation is useless.

Because the "grazing plan" is the basis for avoiding, minimizing and mitigating the impact to raptor species from grazing, it needs to be included as part of the DHCP for public review. Additionally, the potential impacts from grazing are not identified by species, or even suites of species. The failure to identify much less analyze the impacts would make any evaluation of the adequacy of mitigations impossible.

Potential impacts to raptors from human recreation and pet activities are not identified. The mitigation proposed to avoid, minimize and mitigate the unidentified impacts is educational information provided to homeowner's associations. While the Center supports educational activities regarding sensitive and common plants and animals, education is not a mitigation measure. Additional information including identification of potential impacts, analysis of the impacts, and avoidance, minimization and mitigation measures need to be included.

The Goal that references "non permanent covered activities" includes inappropriate activities (DHCP – repeated multiple pages). First surveys for rare species are not a mitigation strategy. Surveys should have been done, and the data used as a basis for the HCP, or to refine the inadequate modeling effort. Considering the number of years that this process has been ongoing, it appears that adding additional species to what was originally scoped as the "condor HCP" is an afterthought, burying the "take" of California condors amongst the numerous lethal and non-lethal "take" of other species. However, the data sets (some a single year) is really inadequate bases on which to place a 50 year permit.

Additionally, absent any meaningful adaptive management strategy (as per our previous comments), the information that these additional surveys will provide has not mechanism for incorporation into the conservation scenario. What benefit does that provide?

The "installation of infrastructure" and "the selection of appropriate locations for access, trails, and facilities" appear to be permanent activities. The DHCP fails to identify what infrastructure, access, trails and facilities are proposed in the areas identified in rare species habitats, making an evaluation of the impacts impossible. It is also impossible to evaluate the effectiveness of the mitigation requirements.

Despite areas "conserved within Established and TMV Planning Area Open Space", this goal and cookie-cutter objectives DHCP fail to identify the potential impacts to the rare species, or propose meaningful ways to avoid, minimize or mitigate those impacts.

1. *American Peregrine*

26,742 acres of suitable foraging habitat for American peregrine falcon were modeled within the project area (DHCP at pg. 5-27). Of this and 2,590 acres of foraging habitat and 1 acre of breeding habitat will be permanently impacted (DHCP at pg. 6-14)). The DHCP states that no "lethal take" will occur (DHCP at pg. 6-14). However, no further justification of this statement is provided. Proposed conservation of foraging areas include 14,180 acres in the potentially unfragmented Established Open Space and another 4,380 acres in the fragmented TMV Planning Area Open Space according to Section 6. The total proposed foraging conservation is 18,560 acres (69%) of the modeled habitat (DHCP at pg. 7-8). In addition 79 acres of suitable breeding habitat for American peregrine falcon were modeled within the project area (DHCP at pg. 5-27) and one acre (2%) will be permanently impacted. 78 acres (98%) are proposed to be conserved under the DHCP (at pg. 7-8). An additional unspecified amount of acreage in the "Open Space" will be impacted by "road crossings and culverts) (DHCP at pg. 7-11). This acreage needs to be identified in order for impacts assessment.

Objective 6.2 states "The project biologist may reduce the 1,000-foot protection zone at his or her discretion depending on the site conditions". The protection zone needs to be based on a more comprehensive, site location based basis as described above. It may very well be that a zone will need to be expanded (not reduced) to protect the nesting site, and the DHCP needs to reflect that as a possibility. Scientific literature supports a much more robust conservation scenario for peregrine falcons (Craig 2002).

While the DHCP recognized as suite of threats that are known to cause declines including loss of suitable nesting places and the loss of wetland habitat supporting avian populations that would impact migratory populations which would sustain the wintering population identified on the project site (DHCP at pg. 5-34), none of these issues are comprehensively analyzed in the DHCP and no proposed ways to avoid, minimize or mitigate those impacts are identified.

2. *Bald Eagle*

510 acres of foraging habitat and 1,457 acres of wintering habitat for bald eagle were modeled on Covered Lands (DHCP at pg. 5-44). Of this, 662 acres of wintering habitat and 3 acres of foraging habitat will be permanently impacted (DHCP at pg. 6-17). Despite this fact, no lethal take is anticipated (DHCP at pg 6-17). However, no further justification of this statement is provided. The proposed conservation areas include 795 acres of wintering habitat and 506

acres of foraging habitat in the fragmented TMV Planning Area Open Space according to Section 6. The total proposed conservation is 795 (55%) of the modeled habitat (DHCP at pg. 7-13), while 506 acres (99%) of foraging habitat for bald eagle (DHCP at pg. 7-14). The elimination of 45% of bald eagle wintering habitat can is a significant impact. It is unclear from the document if the identification of the impact to wintering habitat is strictly from direct impact or if it includes indirect impact. Clearly the evaluation of impacts to foraging habitat do not include indirect impacts, because no analysis of the impact to ground water from proposed projects on the lake levels and foraging habitat is provided.

Vague measures are suggested to minimize impacts to the bald eagle, such as "preserving and enhancing preferred diurnal perches and high-quality roost trees associated with Castac Lake and restricting human activity within 500 feet of such roost sites between late October and March" (DHCP at pg. 6-17) However, in the more specific objectives (DHCP at pg 7-16) indicate that only a 300 foot setback will be implemented. This is confusing at best. How will restriction within 500 feet of roost site be enforced? "Interpretive and educational signage" while useful will not guarantee enforcement. Why only 500 feet? The scientific literature supports a much more robust restriction from 250 meters to 400 meters(Stalmaster and Newman 1978, Craig 2002) and maybe more depending on numerous factors that affect behavior. The DHCP indicates that management of lakeside vegetation for the benefit of wintering bald eagles will occur within 100 feet from the edge of the lake. However, a larger management zone from 1,360-1400 m has been prescribed in the scientific literature for non-breeding bald eagles roosting sites (Buehler et. al. 1991). The proposed approach to conservation with vague enforcement mechanisms is clearly not grounded in the best available science.

These "conserved" lands will still be impacted by the increase in human activity especially around Castac Lake and even on the lake itself. For instance, wintering bald eagles were detrimentally affected by boating including non-motorized boating (Knight and Knight 1984, Stalmaster and Kaiser 1998). The document does not address what activities will be allowed on the lake, and certainly doesn't address the impacts to species from those activities. Significantly more, better and clearer mitigation measures that cover the full range of potential impacts and triggers for implementation need to be included in the document if conservation for the bald eagle proposed.

While the DHCP recognized as suite of threats that are known to cause declines including habitat loss, heat stress, logging, recreational development and other human activities, collisions with objects, plastic ingestion and low levels of urbanization (DHCP at pg. 5-42 to 43), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats still remain yet, the DHCP still fails to identify the potential impacts to the bald eagle, and propose ways to avoid, minimize or mitigate those impacts.

3. *Burrowing Owl*

24945 acres of breeding/foraging habitat for burrowing owl are identified and 8,073 acres of secondary breeding/foraging habitat for burrowing owls were modeled on Covered Lands (DHCP at pg. 5-51). Of this, 2,348 acres of breeding/foraging habitat and 520 acres of secondary

breeding/foraging habitat will be permanently impacted (DHCP at pg. 6-19). No estimate of the number of burrowing owls that would be affected is provided. While only a single non-breeding owl was documented on site (DHCP at pg. 5-50), although apparently, not all the covered lands were surveyed (DHCP at pg 6-18). The proposed conservation areas include 13,773 acres of breeding/foraging habitat and 3,395 acres of secondary breeding/foraging habitat in the potentially unfragmented Established Open Space and another 3,669 acres of breeding/foraging habitat and 601 acres of secondary breeding/foraging habitat in the fragmented TMV Planning Area Open Space according to Section 6. The total proposed conservation is 17,442 acres of breeding/foraging modeled habitat (70%) (DHCP at pg. 7-17) and a calculated 3,996 acres (49%) of the secondary breeding/foraging modeled habitat although Section 7 states that 4,131 acres will be preserved (DHCP at pg. 7-18). The definition of secondary breeding/foraging habitat is not defined. The elimination of 30% of breeding/foraging habitat and 51% of secondary breeding/foraging habitat is a significant impact. It is unclear from the document if the identification of the impact to these habitat types is strictly from direct impact or if it includes indirect impact.

The burrowing owl continue to have a decreasing trend in both the San Joaquin Valley (Roberts and Gaber 2007) and could soon be extirpated in southwestern California (Kidd et al. 2007). The declining trends have been attributed to increasing destruction and fragmentation of habitat and lack of sufficient mitigation (Kidd et al. 2007), making the need for appropriate conservation and mitigation for this species essential. Additional measures need to be included to protect the burrowing owl within the project area. For instance minor land alterations including grading, tilling and disking, which are exempt under CEQA and NEPA, need to be prohibited in the conservation areas including for fire safety until the areas have been surveyed for burrowing owls (McNerney and Sears 2007) and only used if the birds are not present. Mowing or controlled grazing is a better alternative (Stanton and Teresa 2007), which also reduces the biomass of exotic grasses and maintains a more open habitat that burrowing owls prefer. Artificial burrows are another strategy that enhances the nesting opportunities for burrowing owls when sufficient burrowing animals are not available (Stanton and Teresa 2007). While most of the project site may currently be higher elevation than the typical elevation for burrowing owls, the project site may become preferred habitat for burrowing owl with continuing global climate change.

While the DHCP recognized as suite of threats that are known to cause declines including elimination of burrowing mammal populations through control programs and habitat loss; habitat fragmentation; predation; illegal shooting; pesticides and other contaminants; artificially enhanced populations of native predators (e.g., gray foxes, coyotes) and introduced predators (e.g., red foxes, cats, dogs) (DHCP at pg. 5-49 to 50), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats still remain yet, the DHCP still fails to identify the potential impacts to the burrowing owl, and propose ways to avoid, minimize or mitigate those impacts.

4. *Golden Eagle*

The conservation plan allows for the permanent loss of 1,923 acres of breeding/foraging habitat, 2,871 acres of foraging habitat, and 2,457 acres of primary breeding habitat for a total loss of 7,251 acres of modeled suitable for golden eagles, which is noted to be the amount of acreage that would support one of the three nesting pairs of golden eagles on Tejon Ranch. This is a 33% decrease in the nesting population (DHCP at pg. 6-20 through 21). While "conservation goal 4" states that "All active golden eagle nest sites will be conserved" and will accommodate golden eagles' need for alternative nests (Beecham and Kochert 1975, McGahan 1968), the fact still remains that significant amounts of breeding/foraging habitat will decrease carrying capacity of the landscape and as the document recognizes "would amount to a potential loss of habitat supporting one or two nesting pairs" (DHCP at pg 6-22). How does this reconcile with the statement that "No lethal take of golden eagle would occur" (DHCP at pg. 6-22)? The individual birds may fly elsewhere, but the conversion of habitat to urban development eliminates the ability of the eagles to use the area, forcing them into other eagles' already occupied ranges resulting in a cumulative lethal "take" for the species.

As with the bald eagle, the DHCP fails to include the best available science on nest protection of golden eagles. Scientific literature on this subject is clear, "The presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the human is far from an active nest" (Richardson and Miller 1997). Regardless of distance, a straightline view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involved calculation of viewsheds using a three-dimensional GIS tool and development of buffers based on this (Camp et al. 1997; Richardson and Miller 1997). The DHCP assumes that impacts to golden eagles can be avoided by a one half mile buffer from nest sites within a viewshed, but this approach will not avoid disturbance to hunting habitat or line-of-sight impacts from nest sites, regardless of distance. In fact, the BMP's for development and recreation will most likely cause nest abandonment over the long-term based on the available scientific research.

35,609 acres of modeled golden eagle primary breeding habitat are proposed for conservation within the potentially unfragmented Established Open Space and another 8,118 acres of breeding/foraging habitat in the fragmented TMV Planning Area Open Space according to Section 6. For the modeled golden eagle breeding/foraging habitat, 25,766 acres proposed for conservation in the potentially unfragmented Established Open Space and another3920 acres of breeding/foraging habitat in the fragmented TMV Planning Area Open Space. Lastly an additional 17,575 acres of modeled golden eagle foraging habitat is proposed for conservation in the potentially unfragmented Established Open Space and another 4,300 acres in the fragmented TMV Planning Area Open Space. The definitions of primary breeding habitat, breeding/foraging habitat and foraging habitat are not defined.

While the DHCP recognized as suite of threats that are known to cause declines including loss of grasslands to agriculture and urbanization; human disturbance of nest areas leading to desertion; shootings; car strikes; collisions (DHCP at pg. 5-49 to 50), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the

DHCP still fails to identify the potential impacts to the golden eagle, and propose ways to avoid, minimize or mitigate those impacts.

5. *White-tailed Kite*

Of the 7,841 acres of modeled foraging habitat for white-tailed kite, 1,201 acres (15%) of modeled suitable foraging habitat for white-tailed kite will be permanently lost, which could result in the permanent loss of one foraging range for the white-tailed kite (DHCP at pg.6-37). Conservation areas include 3,443 acres in the potentially unfragmented Established Open Space and another 2,164 acres in the fragmented TMV Planning Area Open Space according to Section 6. Total proposed conservation of modeled habitat is 5,607 acres (72%). Clearly additional habitat needs to be conserved to adequately assure the kite's persistence in this area.

Despite population increases and range extensions elsewhere outside of California, white tailed kites have drastically declined in numbers in southern California and the San Joaquin Valley (Small 1994). While the white-tailed kite is known to not stray too far from riparian areas for foraging (Faanes and Howard 1987), kites have been documented to occur and forage within the project boundaries in the recent past (DHCP at pg. 5-115). While Castac Lake and Grapevine Creek will be preserved under the MSHCP (DHCP at pg 6-38), as also pointed out in the document, these area on the project site are the few perennial water sources on the project site ("based on review of the areas that were modeled as suitable, most of the drainages that were included are intermittent and would not provide the required association with a water source" – DHCP at pg. 6-38). The results of the surveys indicate that not all modeled habitat is actually usable by the white-tailed kite, making the areas around Castac Lake and Grapevine Creek even more critical to the kites' foraging and survival. As with the golden eagle, the kite is a fully protected species under State protection, and the permanent displacement of the birds from their foraging area and the net loss of foraging habitat for the species will indeed cause lethal take over the long-term for the species.

The actual acreage of conservation for the species is also anomalous: Page 6-37 indicates by simple math that 6,640 acres will be conserved, and Page 6-40 states that "Implementation of the conservation plan described in *Section 7* of this MSHCP would result in the conservation of 3,443 acres of modeled foraging habitat for white-tailed kite within Established Open Space and 2,164 acres within TMV Planning Area Open Space" (a total of 5,607 acres – the inclusion of potential open space is speculative) while 7-38 indicates that 6,554 acres will be conserved. These inconsistent conservation acreages need to be clarified as to exactly how much will be conserved.

While the DHCP recognized as suite of threats that are known to cause declines including habitat loss; reduction in prey base due to land conversion to urbanization; competition for nest sites with corvids (which increase with urbanization); loss of nest trees; and increased disturbance of the nest (DHCP at pg. 5-114), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the white-tailed kite, and propose ways to avoid, minimize or mitigate those impacts.

b. Songbirds

The "boiler plate" objectives included for many of these rare songbirds fall way short of strategic directions to actually conserve the species. They read like a development plan, not a conservation plan. Avoidance of riparian areas, protection of surface water quality by BMP's are required by law anyway and while beneficial to the species, are not explicitly for the benefit of the species. The construction related best management practices that include flagging and fencing and avoidance of areas, personnel training minimization of infrastructure footprints, use of BMP's, impact minimization of access, trails and facilities while codified in the DHCP, helps to minimizes take but the document provides little direction on how to they are to be achieved. Surveys should be much more comprehensive than just in construction areas, and should be implemented to evaluate the status of the covered species. While exotic plant and animal introductions should be avoided, a conservation plan would include the integrated pest management plan to assure that infestations of problematic species would have an action plan for eradication. The grazing management plan needs to be included for review as part of this process. The educational component to the Home Owners' Association needs to be included for review also as apart of this process, however, education alone does not assure protection of the important resources. Additional enforcement measures must be included to protect them. Baseline surveys should have already been done for the covered species, and surveys are never mitigation.

1. *Least Bell's Vireo*

Of the 614 acres of modeled breeding/foraging habitat for least Bell's vireo, 8 acres (1%) of modeled suitable breeding/foraging habitat for least Bell's vireo will be permanently lost, which could result in the permanent loss of four breeding pairs for the least Bell's vireo (DHCP at pg.6-23). Conservation areas include only 80 acres in the potentially unfragmented Established Open Space and another 188 acres in the fragmented TMV Planning Area Open Space according to Section 6. These areas total 268 acres (44%) of the modeled habitat. However, Section 7 indicates that only 213 acres (35%) within the fragmented TMV Planning Area Open Space will be conserved. The actual acreage of conservation needs to be clearly and consistently identified throughout the document.

While the least Bell's vireo was not documented on site, the proposed project area is well within the historical habitat for the species (USFWS 1998) and with the return and successful nesting of the species in the San Joaquin Valley in 2006 (http://www.fws.gov/sacramento/ea/news_releases/2006%20News%20Releases/LBV_return_SJNWR_NR.htm) suggests that as the species recovers its populations, the habitat on the project site will be a key linkage for birds. The least Bell's vireo has been enjoying an increase in population numbers (Kus 2002) due to significant investments in habitat conservation and reduction of nest parasites (cowbird trapping). The DHCP fails to even suggest implementing any of these beneficial strategies. Instead it relies on inadequate measures that provide few safeguards and no active management for the species.

For example, the potential impacts to least Bell's vireo from grazing in riparian areas are significant, yet the mitigation measure proposes that "a grazing management plan will be

prepared…." The grazing management plan needs to be included for public review as stated above. The paucity of meaningful strategies for conservation of the habitat for this species confirms that the DHCP as proposed is a development plan, not a conservation plan. In the revised DHCP, please include meaningful conservation strategies for this species.

While the DHCP recognized as suite of threats that are known to cause declines including the loss and degradation of riparian habitat; nest parasitism by the brown-headed cowbird; impounding stream channels for water resource use, flood control and channelization of rivers; livestock grazing; and urbanization (DHCP at pg. 5-68), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the vireo, and propose ways to avoid, minimize or mitigate those impacts.

2. *Little Willow Flycatcher*

Of the 985 acres of modeled foraging habitat for little willow flycatcher, 8 acres (<1%) of modeled suitable foraging habitat for little willow flycatcher will be permanently lost (DHCP at pg. 6-25). However Conservation areas for the little willow flycatcher include only 407 acres in the potentially unfragmented Established Open Space and another 137 acres in the fragmented TMV Planning Area Open Space according to Section 6. These areas total 544 acres (55%) of the modeled habitat as presented in Section 7 (DHCP at pg. 7-26).

Flycatchers presumed to be little willow flycatchers were documented on site. Because flycatchers utilize similar habitat to the least Bell's vireo, it suffers from similar issues - riparian habitat loss (Cain et al. 2003). The conservation scenario fails in all of the same respects as identified above. The DHCP fails to even suggest implementing any of beneficial strategies to enhance onsite habitat. Instead it relies on inadequate measures that provide few safeguards and no active management for the species.

While the DHCP recognized as suite of threats that are known to cause declines including the loss and degradation of suitable breeding habitat due primarily to urbanization; grazing by livestock; (DHCP at pg. 5-75) but should also include impounding stream channels for water resource use, flood control and channelization of rivers. None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the little willow flycatcher, and propose ways to avoid, minimize or mitigate those impacts.

3. *Purple Martin*

Of the 85,780 acres (total from Section 6) or 85,868 acres (identified in Section 5) of modeled breeding/foraging habitat for purple martin, 4478 acres (≈ 5%) of modeled suitable foraging habitat for purples martins will be permanently lost (DHCP at pg. 6-28). However Conservation areas for the little willow flycatcher include 65,670 acres in the potentially unfragmented Established Open Space and another 12,439 acres in the fragmented TMV

Planning Area Open Space according to Section 6. These areas total 81,302 acres (95% of the modeled habitat). However, Section 7 (DHCP at pg. 7-28) states that 78,109 will be conserved. As with other species, clarifying how much acreage is actually proposed to be conserved, and where it located is essential to the analysis of the conservation scenario.

The loss of 4,478 acres will result in the loss of 1-2 breeding pairs of the 5-10 breeding pairs that were identified during the survey, which represents 20% of the documented population. The purple martins that nest on the proposed project site represent the last place known in California where they regularly nest in oak woodlands. In 1982, only 40-100 pairs of purple martins nested in the Tejon Ranch Grapevine area, and in 2000 the number had decreased north of the area where European starlings are now abundant (Airola and Williams 2008).

No conservation action other than European starling trapping and some undisclosed "abundance" level and at the discretion of the project biologist is proposed for long-term conservation of the purple martin. The majority of the proposed "mitigation" relies on inadequate measures that provide few safeguards and no other active management for the species.

While the DHCP recognized as suite of threats that are known to cause declines including the loss and degradation of riparian habitat; removal of snags and competition for nest cavities (DHCP at pg. 5-84) and should also include grazing by livestock; impounding stream channels for water resource use, flood control and channelization of rivers. None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the purple martin, and propose ways to avoid, minimize or mitigate those impacts.

4. *Southwestern Willow Flycatcher*

Of the 985 -987 acres of modeled breeding/foraging habitat for southwestern willow flycatcher, 8 acres of modeled suitable breeding/foraging habitat for least Bell's vireo will be permanently lost, which could result in the permanent loss of four breeding pairs for the least Bell's vireo (DHCP at pg.6-30). Actual conservation areas include only 407 acres in the potentially unfragmented Established Open Space and another 137 acres in the fragmented TMV Planning Area Open Space according to Section 6. These areas total 544 acres (55%) of the modeled habitat.

While the southwestern willow flycatcher was not documented on site, the proposed project area is within the Basin & Mojave Recovery Unit in the Recovery Plan for the Southwestern Willow Flycatcher (USFWS 2002a). The Recovery Plan includes numerous measures to minimize take and offset impacts including permanent habitat protection requirements which are not included in the DHCP. It also includes additional recovery actions that should be included in the DHCP.

As with the least Bell's vireo, the conservation scenario falls well short of what should be included in a conservation plan. Potential impacts from grazing in riparian areas are significant,

yet the mitigation measure proposes that "a grazing management plan will be prepared…". The grazing management plan needs to be included for public review as stated above. The paucity of meaningful strategies for conservation of the habitat for this species confirms that the DHCP as proposed is a development plan, not a conservation plan. In the revised DHCP, please include meaningful conservation strategies for this species.

While the DHCP recognized as suite of threats that are known to cause declines including the loss, fragmentation, degradation and modification riparian habitat; urbanization; recreation; water diversions and impoundments; channelization; invasions of exotic vegetation; grazing by livestock and habitat conversion; and groundwater pumping for agricultural, industrial, and municipal uses (DHCP at pg. 5-92). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the southwestern willow flycatcher, and propose ways to avoid, minimize or mitigate those impacts.

5. *Tricolored Blackbird*

Tricolored blackbirds both forage and breed on the project site. Of the 18,790 acres (calculated from Section 6) to 18842 acres (stated in Section 5) of modeled breeding/foraging habitat for tricolored blackbirds, 1077 acres of modeled breeding/foraging habitat for least Bell's vireo will be permanently lost (DHCP at pg.6-32). Unfortunately, because tricolored blackbirds are colonial nesters, the loss of 23 acres of breeding habitat could extirpate the breeding colony on the project site (DHCP 6-33). Clearly this scenario is not a conservation plan. If the breeding colony is extirpated, the amount of foraging habitat is irrelevant, because no birds will be there to forage.

The tricolored blackbird has declined precipitously throughout its range, and without significant conservation will move closer to extinction, despite the fact that less than a century ago it was one of the most common birds in California (Center for Biological Diversity 2004, Cook 2005). Recent data may indicate that numbers are rising in the Central Valley (Kelsey 2008), however, the project area remains a key linkage between the potentially rebounding Central Valley populations and the declining populations in southern California.

A significant conservation scenario needs to be identified that will not extirpate the tricolored blackbirds from their nesting area and guarantee continued nesting success in the area. The Tricolored Blackbird Conservation Plan (Tricolored Blackbird Working Group 2007) needs to be incorporated and implemented as part of that strategy. Additional ideas on conservation is available in DeHaven (2000). The goals and objectives (DHCP at pgs. 7-33 through 7-35) are inadequate to assure conservation of the species.

While the DHCP recognized as suite of threats that are known to cause declines including the continuing loss of wetlands; predation; reclamation and drainage; poisoning; increased disturbance by humans; and contamination by pesticides (DHCP at pg. 5-99 through 100). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still

potential yet, the DHCP still fails to identify the potential impacts to the tri-colored blackbird, and propose ways to avoid, minimize or mitigate those impacts.

6. *Western Yellow-billed Cuckoo*

Of the 985-987 acres of modeled suitable habitat for western yellow-billed cuckoo, 8 acres of it will be permanently lost, which could result in the permanent loss of one breeding pair of the western yellow-billed cuckoo (DHCP at pg.6-35). Actual conservation areas include only 407 acres in the potentially unfragmented Established Open Space and another 137 acres in the fragmented TMV Planning Area Open Space according to Section 6. These areas total 544 acres (55%) of the modeled habitat.

As noted by Laymon and Halterman (1989), "a management plan for yellow-billed cuckoo in California requires more than habitat preservation". Enhancement of the riparian resources to create appropriate habitat (foliage volume, mean canopy height, tree size) (Laymon 1998) needs to be incorporated. Anderson and Laymon (1989) also provide more conservation guidance that needs to be incorporated into the revised DHCP.

While the DHCP recognized as suite of threats that are known to cause declines including the continuing destruction of riparian habitat; fragmentation of habitat; stream flow management; stream channelization; livestock grazing; groundwater pumping; invasive plants; and pesticide poisoning (DHCP at pg. 5-106 through 107). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the yellow-billed cuckoo, and propose ways to avoid, minimize or mitigate those impacts.

7. *Yellow Warbler*

Of the 985 to 987 acres of modeled breeding/foraging habitat for yellow warbler, 8 acres of modeled suitable breeding/foraging habitat for yellow warbler will be permanently lost, which could result in the permanent loss of one breeding pair (DHCP at pg.6-41). Surveys documented 5 breeding pairs (based on singing males), so the proposed project would eliminate 20% of the breeding pairs. Actual conservation areas include only 407 acres in the potentially unfragmented Established Open Space and another 137 acres in the fragmented TMV Planning Area Open Space according to Section 6. These areas total 544 acres (55%) of the modeled habitat.

In addition the DHCP identifies between 51,742 acres (in section 5) and 51,692 acres (in Section 6) of "secondary foraging", but fails to identify what secondary foraging area actually means ecologically. Of that 2,526 acres will be permanently lost. 39,026 acres in the potentially unfragmented Established Open Space and 8,356 acres in the fragmented TMV Planning Area Open Space will be conserved according to Section 6. These areas total 47,382 acres (92%) of the modeled secondary foraging habitat. This amount is less than the 48,677 acres proposed in Section 7.

As with the least Bell's vireo, willow flycatcher and yellow billed cuckoo, the conservation scenario falls well short of what should be included in a conservation plan. The paucity of meaningful strategies for conservation of the habitat for this species confirms that the DHCP as proposed is a development plan, not a conservation plan. In the revised DHCP, please include meaningful conservation strategies for this species. Schroeder (1982) provides a habitat suitability index for the yellow warbler that needs to be included in this conservation scenario.

While the DHCP recognized as suite of threats that are known to cause declines including the continuing destruction and fragmentation; brood parasitism; nest predation; livestock grazing; nighttime collision with tall, lighted structures; and predation by corvids (DHCP at pg. 5-120 through 121). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the yellow warbler, and propose ways to avoid, minimize or mitigate those impacts.

3. Invertebrates

a. *Valley Elderberry Longhorn Beetle*

Of the 2,587 acres of modeled habitat for Valley elderberry longhorn beetle, nine acres will be permanently impacted (DHCP at pg. 6-44). Conservation areas include 2,190 acres in the potentially unfragmented Established Open Space and another 163 acres in the fragmented TMV Planning Area Open Space according to Section 6. A total of 2,353 acres (91%) of the modeled habitat is identified for conservation. Tally et al. (2007) provides additional improvements in the definition of habitat for the beetle, which should be incorporated to further refine the model.

Despite the fact that no Valley elderberry longhorn beetles were identified on the site, because the species is proposed to be a covered species, additional actions need to be included in a revised DHCP. Because grazing and pesticide use (USFWS 1984) are known to impact the Valley elderberry longhorn beetle, the Grazing Management Plan and the Integrated Pest Management plan need to be included in the revised DHCP and evaluated for potential impacts to the beetle. Removal of exotic species in Valley elderberry longhorn beetle habitat needs to be implemented (USFWS 1984) as well as encouraging dense stands of elderberry (Collidge et al. 2002, Holyoak and Koch-Munz 2008). Other actions from the recovery plan for the valley elderberry longhorn beetle (1984) must also be included.

While the DHCP recognized as suite of threats that are known to cause declines including the loss and alteration of habitat; livestock grazing; stream channelization, levee construction, and removal of riparian vegetation; recreational, industrial and urban development; stochastic events; groundwater pumping; insecticides, pesticides and herbicides; non-native plant invasions; and European earwigs; (DHCP at pg. 5-127 through 128). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the valley elderberry longhorn beetle, and propose ways to avoid, minimize or mitigate those impacts.

4. Mammals

a. *Ringtail*

The 98,923 acres of modeled habitat for the ringtail appears to be poorly modeled because ringtail territories are known to be within 0.5 miles of riparian zones (CDFG 1980). This modeling does not track with other riparian dependent species. Also no ringtails were unequivocally detected on site (DHCP at pg. 5-136). So the permanent impact to 6,888 acres of modeled ringtail habitat may be an overestimation (DHCP at pg. 6-44). However, no lethal take is expected, but no justification of this determination is presented, either. Based on a 29.7 acre home range of ringtails in the Central Valley (http://www.yoloconservationplan.org/yolo_pdfs/speciesaccounts/mammals/ringtail.pdf), 6,888 acres represents the potential demise of over 230 ringtails. Conservation areas include 64,519 acres of modeled habitat in the potentially unfragmented Established Open Space and another 19,893 acres in the fragmented TMV Planning Area Open Space according to Section 6. A total of 84,412 acres (85%) of the modeled habitat is identified for conservation.

Ringtail are not common within the general are of the proposed project (CDFG 1980). Because ringtail are omnivores, their occurrence in the proposed project area and potential impacts on the ringtail maybe substantial. As with other species, simply setting aside habitat is not enough to assure species conservation, especially due to the proposed suburban development in and around the TMV open space conservation areas. Both the Grazing Management Plan and the Integrated Pest Management Plan could have significant impacts on the habitat and food sources of the ringtail, and need to be presented and analyzed in the revised DHCP.

While the DHCP recognized as suite of threats that are known to cause declines including destruction and fragmentation of riparian habitat; livestock grazing; removal of riparian vegetation; urbanization; groundwater pumping; increasing human activity in its habitat; off-road vehicles; pets, strays and feral cats and dogs; rodenticides that reduce the rodent prey of ringtails (DHCP at pg. 5-134). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the ringtail, and propose ways to avoid, minimize or mitigate those impacts.

b. *Tehachapi Pocket Mouse*

Of the 1,128 acres of modeled habitat for Tehachapi pocket mouse, 55 acres will be permanently impacted (DHCP at pg. 6-50), resulting in the elimination of as many as 110 mice. Conservation areas include only 137 acres in the potentially unfragmented Established Open Space and another 20 acres in the fragmented TMV Planning Area Open Space according to Section 6. A total of 157 acres (14%) of the modeled habitat is identified for conservation. This proposed conservation scenario based on the modeled habitat is significant and will cause localized extirpations in the northwestern part of the mouse's range. Clearly additionally habitat must be conserved, and strong conservation measures to reduce the impacts to the Tehachapi pocket mouse must be included.

Habitat fragmentation and edge effects are a significant threat to the persistence of rodents in southern California (Bolger et. al. 1997).

While the DHCP recognized as suite of threats that are known to cause declines including destruction and fragmentation of habitat; pet, stray, and feral cats and dogs as predators; nighttime lighting advantaging predators; increased human activity resulting in habitat degradation; exotic species; off-road vehicles; and the use of rodenticides (DHCP at pg. 5-142). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the locally endemic Tehachapi pocket mouse, and propose ways to avoid, minimize or mitigate those impacts.

5. Reptiles

a. *Coast Horned Lizard (frontale and blainvillei populations)*

Of the 86,338 acres of modeled primary habitat and 144 acres of secondary habitat for coast horned lizard (DHCP at pg. 5-151), 5,210 acres of primary habitat and an additional 8 acres of secondary habitat will be permanently impacted (DHCP at pg. 6-53), resulting in the elimination of as many as 1740 lizards. Conservation areas include only 57,415 acres of modeled primary habitat in the potentially unfragmented Established Open Space and 12,733 acres of modeled primary habitat and 137 acres of secondary habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 70,148 acres (81%) of the modeled primary habitat and 137 acres (95%) of the secondary habitat is identified for conservation.

Horned lizards are charismatic and relatively easy to catch. Jennings (1987) noted significant declines in the coast horned lizard due to harvest for the curio trade. Because of their diet is composed primarily of harvester ants, most horned lizards taken into captivity perish.

In order to maintain the open habitat that the lizard require (Germano et al. 2001), a plan must be put identified and implemented to provide adequate management to sustain habitat for the horned lizard, including their primary food source – harvester ants.

While the DHCP recognized as suite of threats that are known to cause declines including destruction and fragmentation of habitat; Argentine ants; urban-related predators including pet, stray, and feral cats and dogs; collecting of lizards; increased human activity resulting in habitat degradation; exotic species; off-road vehicles; livestock grazing; and type conversion of habitat (DHCP at pg. 5-149 through 150). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the coast horned lizard, and propose ways to avoid, minimize or mitigate those impacts.

b. *Two-striped Garter Snake*

Of the 373 (total from text of Section 6) to 380 acres of modeled primary habitat for the two-striped garter snake (DHCP at pg. 5-158), 45 acres of habitat will be permanently impacted (DHCP at pg. 6-55), resulting in the elimination of as many as 1950 snakes. Conservation areas include 328 acres of modeled habitat in the potentially unfragmented Established Open Space according to Section 6. These 328 acres represents 86% of the extant area that will be conserved.

Two-striped garter snakes were found in certain areas of the proposed TMV project area, although the document is not clear if the whole proposed projects site was surveyed for the species. Relocation is proposed as a minimization measure (DHCP at pg. 7-54), however relocation of rare species has been documented to be relatively unsuccessful (Griffith et al 1989, Dodd and Siegel 1991, Wolf 1996, Fischer 2000). While agreeing to move animals out of harm's way is good publicity, has short-term success and is politically expedient, relocation has simply not been proven a scientifically sound technique that ensures snakes survival – it may as easily assure death. If this technique is to be applied, then a relocation plan must be developed to document the efficacy of relocation over the long-term.

While the DHCP recognized as suite of threats that are known to cause declines including destruction of wetlands; predation by non-native species (bullfrogs, fish, feral pigs); loss of amphibian prey; urbanization; cement-lined streams; flood control projects; barriers to dispersal (roads and urbanized areas) (DHCP at pg. 5-156). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the two-striped garter snake, and propose ways to avoid, minimize or mitigate those impacts.

6. Plants

One of the major flaws with the plant conservation scenarios is that only the TMV project area was surveyed for occurrences. Based on the above and below referenced flaws in the modeling and the absence of substantial subsequent field verification, there are no actual data on the distribution of most of these plants outside of the TMV project area. Project impact analysis for these species is therefore incomplete and likely inaccurate. Therefore it should not be used as a basis for any conservation scenario.

a. *Fort Tejon Woolly Sunflower*

Of the 55,415 (total in Section 6) to 57,430 (DHCP at pg. 5-163) acres of modeled habitat for the Tejon woolly sunflower, 5,049 acres of suitable habitat will be permanently impacted (DHCP at pg. 6-58). No estimate of the number of individuals that will be affected is given. Conservation areas include 37,761 acres of modeled suitable habitat in the potentially unfragmented Established Open Space and 13,128 acres of modeled suitable habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 50,889 acres (89%) of the modeled suitable habitat is identified for conservation. All of the thirty-six documented occurrences from recent surveys are located within the "Open Space", but not the

entire modeled suitable habitat has been surveyed. Potential impacts will still occur in the "Open Space".

FWS and the Forest Service have cooperated on a management plan that includes the Tejon woolly sunflower and have specific management actions that need to be included here (USFWS 1996)

While the DHCP recognized as suite of threats that are known to cause declines including road construction and maintenance; erosion; development; livestock grazing and trampling (DHCP at pg. 5-162). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the Tejon woolly sunflower, and propose ways to avoid, minimize or mitigate those impacts.

b. *Kusche's Sandwort*

Of the 30,476 (total in Section 6) to 30,505 (DHCP at pg. 5-169) acres of modeled habitat for the Kusche's sandwort, 1,971 acres of suitable habitat will be permanently impacted (DHCP at pg. 6-59). No estimate of the number of individuals that will be affected is given, however it is anticipated that some would be permanently lost (DHCP at pg. 6-59). Conservation areas include 24,633 acres of modeled suitable habitat in the potentially unfragmented Established Open Space and 3,136 acres of modeled suitable habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 27,769 acres (91%) of the modeled suitable habitat is identified for conservation. All of the seven documented occurrences representing 20-30 individuals from recent surveys are located within the fragmented TMV Planning Area Open Space. Not the entire modeled suitable habitat has been surveyed to evaluate the actual range of the species on the project site. Potential impacts will still occur in the proposed conservation area.

The occurrences of Kusche's sandwort (also known as the Forest Camp sandwort) found in the project area more than doubles the number of occurrences ever documented for this rare species, and a range extension many miles north of its previously known range (Stephenson and Calcarone 1999). It also established its occurrence within the Tehachapi Mountains which was previously unknown (Stephenson and Calcarone 1999).

The DHCP recognized as suite of threats that are known to cause declines including destruction and fragmentation of habitat; road maintenance and vehicles; off-road vehicles; fuel modification activities, development and mining (DHCP at pg. 5-168). Actually most of the identified threats seemed to be threats specifically identified on Forest Service lands, where the original populations are located. It is unclear if these same issues threaten the populations on Tejon Ranch. Evidently there maybe additional threats including grazing and exotic plant invasions, because these impacts are have proposed, albeit inadequate, mitigations (DHCP at pg. 7-60 through 61) Regardless, none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the Kusche's sandwort, and propose ways to avoid, minimize or mitigate those impacts.

c. *Round-leaved Filaree*

Of the 58,072 acres of modeled habitat (DHCP at pg. 5-175), 4,695 acres of habitat will be permanently impacted (DHCP at pg. 6-60), resulting in the elimination of between 310-510 plants (70-72%) of the 430-730 plants found onsite (DHCP at pg. 6-60) Conservation areas include 39,107 acres of modeled habitat in the potentially unfragmented Established Open Space and 9,236 acres of modeled habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 48,343 acres (83%) of the modeled habitat is identified for conservation. However it is unclear if the entire modeled habitat was surveyed and if in fact the plants occur on it. This plant is known to occur on heavy clay soils with low cover of native and exotic species, but often with other rare species (Gillespie 2003). The modeled habitat is not restricted to clay soils or low plant cover areas, and appears to significantly over-estimate the available habitat for this species.

While the DHCP recognized as suite of threats that are known to cause declines including urbanization; habitat alteration; vehicles; pipeline construction; feral pigs; non-native plants; grazing and the loss of the species' friable clay microhabitat (DHCP at pg. 5-174), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the round-leaved filaree, and propose ways to avoid, minimize or mitigate those impacts.

d. *Striped Adobe Lily*

Of the 32,212 acres of modeled habitat for the striped adobe lily (DHCP at pg. 5-182), 2,571 acres of modeled habitat will be permanently impacted (DHCP at pg. 6-61). No estimate is given on the number of plants that will be impacted. Conservation areas include only 22,033 acres of modeled habitat in the potentially unfragmented Established Open Space and 3,632 acres of modeled habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 25,665 acres (80%) of the modeled habitat is identified for conservation. As with *California macrophylla*, the modeling for the striped adobe lily habitat appears to be significantly over-estimated based on the species known requirements of heavy adobe clay soils in blue oak woodland (Davis et al. 2004). While no plants were identified on the site, the comprehensiveness of the surveys is not discussed. Bulbiferous plants like *Fritillaria* are challenging to survey. Above ground plant parts are not always present, based on the lack of appropriate growing condition (i.e. too little rain etc.)(Fiedler 1987). However, the lack of above ground plant material does not preclude an underground "bulb bank" (Fiedler 1987).

While the DHCP recognizes a suite of threats that are known to cause declines including destruction and fragmentation of habitat like agriculture, urbanization, road maintenance activities, non-native plants, and grazing (DHCP at pg. 5-181), none of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential, yet the DHCP still fails to identify the potential impacts to the striped adobe lily, or propose ways to avoid, minimize or mitigate those impacts.

e. *Tehachapi Buckwheat*

Of the 2,579 acres of modeled habitat for the endemic Tehachapi buckwheat (DHCP at pg. 5-188), 15 acres of modeled habitat will be permanently impacted (DHCP at pg. 6-62). None of the known populations will be impacted (DHCP at pg. 6-63), however not all of the project area was surveyed. Conservation areas include 2,140 acres of modeled habitat in the potentially unfragmented Established Open Space and 399 acres of modeled habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 2,539 acres (98%) of the modeled habitat is identified for conservation.

The Tehachapi buckwheat was only discovered and describe in 2006, and represents a new section (Lanocephala) within the subgenus Eucycla. It is only known from the south and central portions of the project site. Because of its local endemism, it is vulnerable to stochastic events, which are not discussed in the species analysis.

While the DHCP recognized as suite of threats that are known to cause declines in species similar to the Tehachapi buckwheat including grazing; mining; urbanization/construction; road maintenance activities, competition from non-native plants; changes in hydrology; and exotic ants which could displace native ant pollinators (DHCP at pg. 5-186 through 187). None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the locally endemic Tehachapi buckwheat, or propose ways to avoid, minimize or mitigate those impacts.

f. *Tejon Poppy*

Of the 12,641 acres (total in Section 6) to 12,672 acres of modeled habitat for the Tejon poppy (DHCP at pg. 5-193), 106 acres of modeled habitat will be permanently impacted (DHCP at pg. 6-63). It is unclear how many plants this will impact, because no plants were located on the site. Conservation areas include only 7,938 acres of modeled habitat in the potentially unfragmented Established Open Space and 186 acres of modeled habitat in the fragmented TMV Planning Area Open Space according to Section 6. A total of 8,124 acres (64%) of the modeled habitat is identified for conservation.

As with other modeled habitat, the habitat identified for the Tejon poppy appears to be significantly over-estimated based on the species known requirements of adobe clay or sandy soils in sparsely vegetated grassland and in the presence of valley chenopod scrub (Cypher 2006). While no plants were identified on the site, the comprehensiveness of the surveys is throughout the modeled habitat not discussed.

While the DHCP recognized as suite of threats that are known to cause declines including oilfield development and related petroleum production, grazing and competition from non-native plants (DHCP at pg. 5-192). Additionally development needs to be added to the list. None of these issues are comprehensively analyzed in the DHCP. Even in the proposed conservation

lands within Established and TMV Planning Area Open Space many of these threats are still potential yet, the DHCP still fails to identify the potential impacts to the Tejon poppy, or propose ways to avoid, minimize or mitigate those impacts.

G. IMPLEMENTING AGREEMENT

The ESA provides no specific authority for agreements to implement HCPs. Accordingly, we evaluate the Implementing Agreement for the Tehachapi Upland Multi-Species HCP ("IA") as a component of the DHCP. That is, the IA must be consistent with the findings required under section 10(a)(2) and other relevant provisions of the ESA, and its impacts must be fully disclosed and evaluated under NEPA. Our comments on the DHCP and DEIS are incorporated herein.

IA Section 3.3: The IA defines "California Condor Non-Lethal Incidental Take" very narrowly, specifying that non-lethal take that requires "medical intervention" or that affects essential behavioral patterns to the point that the condor requires removal from the wild. Non-lethal take is defined by the ESA in a much broader manner and is not limited to that requiring medical intervention or removal from the wild. 16 U.S.C. § 1532(19). The reasoning behind the two definitions is made clear in either the DHCP or the IA, and the consequences of having two definitions are not easily discerned. If the purpose of the IA is to require that specific actions be taken in response to some forms of take, while other actions are required for other forms of take, this needs to be clearly described. As it is, it appears that the only actions the IA requires for non-lethal take are those related to medical intervention and removal from the wild. This is clearly inadequate (and contradicted by other text in the DHCP).

IA Section 5.1.1(a): While Tejon's lead ammunition ban might at one time have been considered a significant conservation measure, it now merely reflects compliance with California law, namely the Ridley-Tree Condor Conservation Act. While it may be appropriate to recognize Tejon's obligations to comply with state law, it is not appropriate to cite this measure as a mitigation obligation *of this agreement*. Tejon's compliance with state law is not a commitment that justifies the long-term FWS assurances described in the IA.

IA Section 5.1.1(d): According to the IA, numerous management plans affecting covered portions of Tejon Ranch will be submitted for FWS review *after* approval of the HCP and issuance of incidental take authorization. These include the ranchwide management plan, the integrated pest management plan, the grazing plan, and the fuel modification plan. Each of these plans has the potential to affect covered species, including California condors. The details of the integrated pest management plan are of particular interest for condors, as the HCP provides no analysis of the availability of poisoned carrion within condor foraging habitat that may occur. When these plans are submitted to FWS, however, FWS will already have provided 50-year incidental take authority under the HCP, and the TMV development may well be under construction within designated critical habitat for the condor. While FWS will have an opportunity to review these plans, there will be no further public review under the ESA or NEPA. Moreover, unless and until these plans are provided, there is no basis for the required findings that the applicant has minimized and mitigated the impacts of the taking to the maximum extent practicable and that the taking will not appreciably reduce the likelihood of the

survival and recovery of covered species in the wild. 16 U.S.C. § 1539(a)(2)(B). It is not enough, as the IA provides, that the HCP may be modified after the fact; the harm will have already occurred through the long-term take authorization that permits the TMV project to move forward.

IA Section 5.2.2: In addition to the concerns noted above regarding the post-approval submission of management plans, the "no surprises" assurance provides that FWS "shall not require additional conservation and mitigation measures that involve the commitment of additional land, water, or financial compensation or additional restrictions on the use of land water or other natural resources otherwise available for development or use under the original terms of the MSHCP without the consent of the Permittee." Accordingly, it appears that even if FWS finds post-approval management plans inadequate or inconsistent with the HCP or the ESA, FWS' ability to require additional conservation commitments and/or changes to the HCP is virtually non-existent. The "no surprises" assurance thus exacerbates the DHCP's flaw of allowing the applicant to submit essential conservation plans after take authority is granted. The fundamental inadequacy of the "no surprises" assurance is also discussed in Section II.C., above.

IA Section 11.1: The IA provides that the FWS shall ensure that subsequent consultations under Section 7 of the ESA do not result in reasonable and prudent measures and terms and conditions in excess of those included in the HCP, the IA, and the ITP. This provision is inconsistent with the ESA and is an inappropriate abdication of the FWS' future discretion. The qualification "to the maximum extent appropriate" does not save this provision; it is inconceivable that such abdication of statutory authority will ever be appropriate.

IA Section 11.2: As discussed elsewhere in these comments, the HCP does not adequately account for the destruction and adverse modification of condor critical habitat likely to result from the TMV development. The HCP and EIS provide an insufficient foundation for FWS' stated belief "that the MSHCP incorporates special management considerations and protections for the California condor and its essential habitat within the Covered Lands necessary to provide for the conservation of the species within the Covered Lands."

III. VIOLATIONS OF THE NATIONAL ENVIRONMENTAL PROTECTION ACT

A. DISCLOSURE OF DOCUMENTS

The regulations implementing the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ("NEPA"), explicitly state that agencies "*shall.*…[m]ake environmental impact statements, the comments received, and *any underlying documents* available to the public pursuant to the provisions of the Freedom of Information Act." 40 CFR 1506.6(f) (emphasis added). As discussed in Section II.A., above, regarding ESA Section 10(c), FWS's actions to date have been in violation of this NEPA implementing regulation as relevant underlying documents have repeatedly not been disclosed in response to FOIA requests.

B. ALTERNATIVES

The "heart" of an EIS is the section evaluating the alternatives. 40 C.F.R. § 1502.14. This regulation requires that the action agency describe the "environmental impacts of the proposal and the alternatives in comparative form," "sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." *Id.* In its alternative analysis, the agency must include a "no action" alternative. *Id*. at 1502.14(d).

Importantly, NEPA requires agencies to define the purpose of a proposed action in a sufficiently broad manner so as to allow for consideration of a reasonably broad range of alternative means for accomplishing the underlying goals of a proposal. *Simmons v. U.S. Corps of Engineers*, 120 F.3d 664 (7th Cir. 1998). Otherwise it allows an agency to slip past the strictures of NEPA by contriving a "purpose so slender as to define competing "reasonable alternatives" out of consideration." *Simmons v. United States Army Corps of Engineers*, 120 F.3d 664, 666 (7th Cir. 1998). Here, the FWS has contrived such a narrow purpose and need—responding the Tejon's application for a multi-species ITP—that is has eliminated other viable alternatives from consideration (South Coast Wildlands' "Proposed Reserve Design for Tejon Ranch: A Threatened California Legacy," is just one example of an actually-existing alternative proposal for Tejon Ranch. *See* CBI-SCW 2006. The narrow purpose and need also eliminates, from the outset, several alternatives in the DEIS such as the Condor HCP and no action alternative.

The DEIS's analysis of alternatives fails on three additional accounts. First, it describes a "no action" alternative that is anything but: instead of preserving the status quo, it assumes the full build-out of the Kern County General Plan, describing a highly destructive development scenario that has no basis in reality and that skews any comparison of the proposed action and the no action alternative. Second, the MSHCP is nothing more than a "straw man" alternatie. Third, the DEIS improperly excludes existing conservation measures and land use restrictions from the three non-preferred alternatives, falsely attributing these measures to the preferred alternative alone. For these reasons, the DEIS's analysis of alternatives fails to provide a clear basis of choice for decisionmakers and the public, failing to meet the requirements of NEPA. As this analysis provides the foundation for all of the other sections in the DEIS, it is an error fatal to the entire document, necessitating its entire withdrawal.

1. Improper "No Action" Alternative

The DEIS's No Action alternative assumes that, absent the issuance of the HCP, Tejon Ranch (save the Condor Study Area and 2-mile buffer) will be fully built out according to the Kern County General Plan. DEIS p. 2-6. The No Action alternative thus results in a far greater disturbance area than the preferred HCP alternative (10,618 acres vs. 5,533 acres), less open space (72,822 acres vs. up to 129,318 acres), more residential dwelling units (5,897 vs. 3,633), and far more commercial development (6,512,220 sq. ft. vs. 1,804,390). DEIS p. 2-29. This unreasonable assumption results in a false comparison between the preferred alternative and the No Action alternative, in violation of NEPA.

The Council on Environmental Quality's ("CEQ") guidance on the No Action alternative describes two distinct interpretations of the requirement. 46 Fed. Reg. 18026 (Question 3 of "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations"). The proposed HCP is an example of the second of the two situations: a federal decision on a project proposal.[13] "'No action' in such cases would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward." *Id.* However, "[w]here a choice of 'no action' by the agency would result in predictable actions by others, this consequence of the 'no action' alternative should be included in the analysis." *Id.*

The DEIS states that it "assumes existing conditions" in its No Action alternative. DEIS p. 2-4, note 3. Yet the DEIS also states that "[d]evelopment consistent with the Kern County General Plan *would* occur throughout the approximately 56,922 acres of the Covered land that are located outside of the CSA and 2-mile Buffer areas" under the no action alternative. DEIS p. 2-6 (emphasis added). The DEIS thus determines that the full build-out according to the General Plan is a predictable action that would result from FWS not issuing an HCP. But full build-out on Tejon Ranch according to the General Plan is not only not a predictable consequence of the no action alternative, it is not even remotely likely.

Importantly, the growth projections of the DEIS contradict the growth projections in the Kern County General Plan. The Kern County General Plan demonstrates that the majority of population growth occurs in incorporated cities, while population growth in unincorporated areas—like Tejon Ranch—remains low (Kern County 2007. General Plan, Introduction). The Kern County General Plan demonstrates only a 2% increase in population in unincorporated areas of Kern County. *Id.*

Furthermore, current market trends indicate decreasing home sales over the past several years in Kern County (City Data 2009). Future indicators of residential market sales also indicate slow increases in residential growth in Kern County due to existing planned development and current housing stock (Webwire 2009). Furthermore, housing markets in Kern County are ranked as some of the worst in the country where thousands of homes are vacant due to the foreclosure crisis (Housing Predictor 2009; Housing Predictor 2009b). The 2% growth within unincorporated areas of Kern County combined with depressed housing markets and high vacancy demonstrates that the DEIS relies upon an improperly inflated baseline to mask the impacts from the HCP.

A general plan designation is not a reasonable indicator of a predictable future action. General plans in California do not vest any rights or entitlements on their own. *Gilliland v. County of Los Angeles*, 126 Cal. App. 3d 610, 617 (1981) ("An owner of undeveloped land…has no vested right in existing zoning."). Any number of events outside the control of the landowner can intercede between a general plan designation and the construction of a building on a particular piece of property, starting with the amendment of the general plan itself. A myriad of site-specific permits and approvals are required prior to building, any or all of which could

[13] The first situation involves updates to ongoing management programs.

significantly modify the potential total build-out of Tejon Ranch, and even prevent it altogether, regardless of the general plan designation.

An excellent example of one such permit that would be required before building anything according to the General Plan is an ITP under Section 9 of the ESA. Although the DEIS posits that the Condor Study Area, along with a two-mile buffer zone, would prevent any need for a take permit, no support or proof of this proposition is provided. Indeed, based on the preferred alternative's impacts to condors alone, as described in the DEIS, take would most certainly occur outside of the CSA and buffer areas, requiring a take permit from the FWS. The No Alternative described in the DEIS thus sets up a comparison between an illegal development project and the preferred alternative, in violation of NEPA.

Instead of subjecting the preferred alternative to a rigorous analysis, comparing it to reasonable range of alternatives that include a valid no action alternative, the DEIS "cooks the books" to avoid a conclusion contrary to its development goals. By assuming full build-out according to the general plan, the DEIS fatally skews its analysis of alternatives, calling into question the veracity of the entire document and making an informed and reasoned decision impossible.

> NEPA's primary purpose is to ensure that agencies incorporate environmental values as part of their decisionmaking. When finalist alternatives are subjected to rigorous environmental analysis, an agency becomes educated about the environmental effects of a project, and is then presumed to be able to make a reasoned and informed decision based ultimately upon the agency's expertise in its own field.

Surfrider Found. v. Dalton, 989 F. Supp. 1309, 1326 (S.D. Cal. 1998) *aff'd on the basis of the district court opinion sub nom. San Diego Chapter of the Surfrider Found. v. Dalton*, 196 F.3d 1057, 1058 (9th Cir. 1999).

A true comparison of the preferred alternative to a No Action alternative would compare not two hypothetical development schemes, but rather the proposed development scheme with the status quo. *See Association of Pub. Agency Customers v. Bonneville Power Admin.*, 126 F.3d 1158, 1188 (9th Cir. 1997). The status quo in Tejon Ranch's case is not thousands of houses and millions of square feet of commercial space that exist only in the realm of fantasy. Rather, it is the continuance of existing, actually occurring activities on the Ranch. This means the no action alternative, and its various environmental impacts, must describe the existing ranching, agriculture, mining, hunting, and other activities that currently take place (described briefly in Sec. 2.2.2 of the DEIS). Only this description will accurately describe the differences between taking the proposed action—issuing an HCP and granting the ITP to Tejon Ranch that it requires in order for its development scheme to go forward—and taking no action.

Conversely, the General Plan buildout projected under the No Action alternative is no *less* likely if the preferred alternative is adopted (the DHCP, even if approved, covers activities on only part of Tejon Ranch). There is no basis, therefore, for including this buildout in the No Action alternative but excluding it from the preferred alternative.

2. "MSHCP General Plan Buildout" Alternative is a Straw Man Alternative

For the same reasons articulated above regarding the No Action alternative's improper assumption of full build-out of the Kern County General Plan, the MSHCP General Plan Buildout also fails. The MSHCP General Plan Buildout Alternative is merely contrived as a "straw man" alternative to be disregarded without any realistic consideration. The inefficacy of the MSHCP General Plan Buildout Alternative is evidenced because it actually allows for *more* disturbance of covered species and their habitat and provides for *less* conserved habitat than the No Action alternative (DEIS at ES-9). FWS's proposed MSHCP General Plan Buildout Alternative would not meet the purpose of providing take coverage for species because it would lead to greater jeopardy through adverse modification of critical habitat, sensitive habitat, and wildlife than the no action alternative. The DEIS cannot be permitted such an illusory alternatives analysis that fails to provide a reasonable range of alternatives for consideration. *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 2007 U.S. App. LEXIS 11245 at **8 (9th Cir. May 9, 2007) (holding that the Forest Service violated NEPA "by defining the goals of its project so narrowly that only its preferred alternative would serve those goals").

3. Improper Exclusion of Ranchwide Agreement from Alternatives

The DEIS's alternatives analysis fatally excludes the Tejon Ranch Conservancy and the protections provided to the Covered Lands by the Tejon Ranch Land Use and Conservation Agreement ("Ranchwide Agreement") from three of the four analyzed alternatives. It is included only in the preferred alternative: "The Ranchwide Agreement provisions affecting the Covered Lands are assumed to be implemented in the Proposed MSHCP Alternative *but are not assumed to be implemented under the other alternatives*." (DEIS p.2-4, *emphasis added*). The only explanation given is that "[t]he Ranchwide Agreement restrictions did not exist when the other land use alternatives were developed and considered over the past decade." *Id.*

This is completely nonsensical. The Ranchwide Agreement, made between Tejon Ranch and five organizations, was signed on June 17, 2008 (Tejon Ranch 2008).[14] By its own terms,

> [The Ranchwide Agreement] permanently protects approximately 178,000 acres and grants the Resource Organizations an option to purchase conservation easements over an additional 62,000 acres of Tejon Ranch, resulting in a total of approximately 240,000 acres of conserved land with provisions for public access and environmental stewardship.

(Tejon Ranch 2008, p.1).

The Ranchwide Agreement independently protects these lands, without any reliance on or even expectation of the approval of an HCP. Although the timing of the conservation easement

[14] The entire Ranchwide Agreement, at least as is publicly available, is included here in Appendix A (Tejon Ranch 2008). Neither the DHCP nor the DEIS include the entire agreement, further limiting the public's ability to adequately review the proposed HCP.

conveyances in the Ranchwide Agreement are pegged to the final approvals of the three developments, as long as one of the three developments is approved all easements will be conveyed (at an outside date of up to 30 years from the date of the first final approval). Importantly, neither the easements nor any of the other provisions of the Ranchwide Agreement are in any way dependent on an HCP being issued; they are lawfully enforceable terms of a valid signed contract, completely independent of the proposed HCP.

The following conservation measures, all terms of the Ranchwide Agreement, are examples of those attributed only to the preferred alternative, and discussed only in that analysis, even though they will be occurring regardless of which alternative is selected:

- The "permanent protection of and permanent prohibition of development on 116,523 acres" (DEIS p. 2-7)
- The "option for the Resource Groups to acquire conservation easements or fee on an additional 12,795 acres" (DEIS p. 2-7);
- Enhancement of the protection and stewardship of the open space lands by the creation and funding of the Tejon Ranch Conservancy (DEIS p. 2-7);
- Creation of a Fuel Management Plan for the open space areas (DEIS p. 2-8);
- Development of a public access program (DEIS 2-8);
- Dedication of approximately 10,000 acres for the relocation of the Pacific Crest Trail (DEIS p. 2-8);
- Restrictions on new road construction in the open space (DEIS 2-9);
- Restrictions on the expansion or relocation of the existing nine backcountry cabins (DEIS p. 2-9);
- Restrictions on new fencing in open space (DEIS p. 2-10).

These measures, rather than being elements specific to one alternative, are in fact part of the environmental baseline of the DEIS and are common to all of the alternatives. No matter what happens with this HCP, no matter what form it eventually takes, or if it is never issued, these conservation elements, the Tejon Ranch Conservancy, and the Ranchwide Agreement do and will exist. It is deceptive to suggest that they are attributable only to the preferred alternative when they in fact have nothing to do with it. They cannot be used as a reasonable basis to select one alternative over any other as they are equal constants in each alternative and cannot therefore be part of the alternatives analysis.

The DEIS's paltry excuse that these alternatives were developed and considered over the past decade provides no cover for such selective exclusion. Just because one or more alternatives were developed over the past decade (if in fact this is the case) does not fix those alternatives in that particular time. NEPA allows for some flexibility in determining what the proper baseline is for a DEIS, especially in determining at what point in time that baseline should be determined. But it defies reason to compare alternatives with different baselines. The only sensible comparison would be one that describes the conservation measures of the Ranchwide Agreement in each alternative. If the result is that previously-completed portions of the DEIS are required to be re-worked to reflect the updated baseline (and to allow the alternatives to be fairly and accurately compared to each other), so be it. As it is, FWS must now withdraw the entire DEIS and provide entirely new descriptions and analyses of the alternatives, reflecting

accurate baselines that do not selectively exclude existing conservation measures from some alternatives.

The DEIS states that the no action alternative "assumes existing conditions, which do not include the development restrictions and other requirements of the Ranchwide Agreement, for purposes of analysis." As described above, the DEIS improperly selectively excludes the development restrictions and other requirements of the Ranchwide Agreement. It does so with a clear intent: to deceive decisionmakers and the public into believing that the preferred alternative will result in greater conservation measures than any other alternative. Such an effort must fail. As the alternatives analysis provides the foundation of the entire DEIS, pervading virtually every other section, the entire DEIS must be withdrawn and rewritten in order to comply with the law.

C. GLOBAL CLIMATE CHANGE

The DEIS fails to adequately consider the impacts of global climate change on species covered under the DHCP and the ecosystems that those species rely upon, and the indirect impacts of greenhouse gas emissions associated with the project. The Supreme Court has acknowledged that "[t]he harms associated with climate change are serious and well recognized." *Massachusetts v. EPA*, 127 S. Ct. 1438, 1455 (2007). Likewise, the Interior Secretary issued Secretary Order No. 3226, which specifically requires the Department of Interior and its agencies to "[c]onsider and analyze potential climate change impacts when undertaking long-range planning exercises" including activities that conserve species placed at risk by climate change and developing effective adaptation strategies related to climate change. U.S. Secretary of Interior 2009, Order No. 3226, Amendment No. 1. NEPA also requires the consideration of climate change, including how climate change has and will continue to impact the affected environment. *See e.g. Center for Biological Diversity v. NHTSA*, 508 F.3d 508 (9th Cir. 2007) ("Global warming has already affected plants, animals, and ecosystems around the world. Some scientists predict that 'on the basis of mid-range climate-warming scenarios for 2050, that 15-37% of species in our sample of regions and taxa will be 'committed to extinction.'").

An EIS must provide a "full and fair discussion of significant environmental impacts" of a proposed action, "supported by evidence that the agency has made the necessary environmental analyses." *Id*. at § 1502.1. A limited discussion of impacts is permissible only where the EIS demonstrates that no further inquiry is warranted. *Id*. at § 1502.2(b). Global warming's well-established impacts on resources including air quality, water resources, and biological resources will combine with and exacerbate the effects of development facilitated by the HCP, but the DEIS never addresses this critically important aspect of the problem.

This analysis should have incorporated a consideration of the effects of climate change to existing ecological conditions – including the effects on covered species. As the Ninth Circuit has recognized, "[g]lobal warming has already affected plants, animals, and ecosystems around the world." *CBD v. NHTSA*, 538 F.3d at 1190-91 (citations omitted). The impacts of species in the project area are well known. The DEIS's analysis should have also taken a hard look at the indirect impacts from greenhouse gas emissions associated with the project itself.

1. The Impacts of Climate Change on Threatened, Endangered, Rare, and Special Status Species

Climate change is already impacting California in severe and irreversible ways (CCCC 2008, Kelley and Goulden 2008). Scientists model future impacts based on different emissions scenarios (Cayan et al. 2006). Under a low emissions scenario, by the end of this century heat waves and extreme heat in Los Angeles will quadruple in frequency and heat-related mortality will increase two to three times (Hayhoe et al. 2004). Alpine and subalpine forests are reduced by 50-75%, and Sierra snowpack is reduced 30-70% (Hayhoe et al. 2004). Under a higher emissions scenario, heat waves in Los Angeles will be six to eight times more frequent, with heat-related excess mortality increasing five to seven times (Hayhoe et al. 2004). Alpine and subalpine forests would be reduced by 75-90%, and snowpack would decline 74-90%, with impacts on runoff and streamflow that, combined with projected declines in winter precipitation, could fundamentally disrupt California's water rights system (Hayhoe et al. 2004).

Climate change has impacted a range of ecosystem processes leading to large-scale shifts in the ranges of species and the timing of the seasons and animal migration (USGCRP 2009). Threats to ecosystems and their species from fires, insect pests, disease pathogens, and invasive weed species have increased and will likely continue to increase (USGCRP 2009). For areas like the arid southwest (including the project area) deserts and drylands are likely to become hotter and drier, feeding a self reinforcing cycle of invasive species, drought, and wildfire that will transform ecosystems (USGCRP 2009).

Climate change is a leading threat to California and the world's biological diversity. Climate change will become one of the major drivers of extinction in the 21st century (IUCN 2009; Mayhew 2007). Under a relatively high emissions scenario, 35%, under a medium emissions scenario 24%, and under a relatively low emissions scenario, 18% of the world's species studied would be committed to extinction by the year 2050 (Thomas 2004). The IPCC, the world's pre-eminent authority on global climate change, projected that approximately 20-30% of plant and animal species are likely to be at increased risk of extinction (IPCC 2007). In listing species under the ESA, FWS has also recognized that climate change poses an ongoing threat to wildlife posing a threat that can lead to extinction. *See e.g.* 71 Fed. Reg. 26852, Endangered and Threatened Species: Final Listing Determinations for Elkhorn Coral and Staghorn Coral; 73 Fed. Reg. 28212, Endangered and Threatened Wildlife and Plants: Determination of Threatened Status for the Polar Bear (*Ursus maritimus*) Throughout Its Range; 74 FR 1937, Endangered and Threatened Wildlife and Plants: Endangered Status for Black Abalone.

Some of the species most threatened by climate change are amphibians (IUCN 2008, IUCN 2009) such as Tehachapi slender salamander, yellow-blotched salamander, and western spadefoot toad that are covered species under the HCP. A study published in *Nature* has linked the extinction of dozens of amphibian species in the tropical highland forests of Central and South America to global warming due to the creation of ideal conditions for growth of the chytrid fungus, a disease which kills frogs by growing on their skin and attacking their epidermis and teeth, as well as by releasing a toxin (Pounds et al. 2006). Seventy-four of the 110 species of brightly colored harlequin frogs of the genus *Atelopus* have disappeared in the past 20 years due

to the spread of the fungus (Pounds et al. 2006). The study's lead author stated "Disease is the bullet killing frogs, but climate change is pulling the trigger" (Eilperin 2006). The golden toad (*Bufo periglenes*), endemic to the same tropical mountain forests, was also driven extinct by climate change. These amphibian extinctions from the Monteverde Cloud Forest are one of the largest recorded vertebrate extinction events of at least the last 100 years, and are an ominous harbinger of the severe impacts of climate change that will impact species throughout the world including the project area.

Scientists have predicted three categories of impacts from global warming: (1) earlier timing of spring events, (2) extension of species' range poleward or upward in elevation, and (3) a decline in species adapted to cold temperatures and an increase in species adapted to warm temperatures (Parmesan and Galbraith 2004). A survey of more than 30 studies covering about 1600 hundred species summarized empirical observations in each of these three categories and found that approximately one half of the species were already showing significant impacts (Parmesan and Galbraith 2004). Changes in the life cycles and behaviors of organisms such as plants blooming and birds laying their chicks earlier in the spring were some of the first phenomena to be observed. Depending on the timing and interactions between species, these changes may be very harmful.

The Edith's checkerspot butterfly, which occurs along the west coast of North America, provides a clear example of a species that has been severely impacted by such changes in the lifecycles of organisms. The Edith's checkerspot's host plant, *Plantago erecta*, now develops earlier in the spring while the timing of caterpillar hatching has not changed. Caterpillars now hatch on plants that have completed their lifecycle and dried up, instead of on young healthy plants (Parmesan and Galbraith 2004). The tiny caterpillars are unable to move far enough to find other food and therefore starve to death (Parmesan and Galbraith 2004). Because of this, many Edith's checkerspot butterfly populations have become extinct. Many more populations have been lost in the southern portion of the species' range than in the northern portion, resulting in a net shift of the range of the species northward and upwards in elevation. All these changes have occurred in response to "only" 1.3° Fahrenheit regional warming (Parmesan and Galbraith 2004).

The southernmost subspecies of the Edith's checkerspot butterfly, the Quino checkerspot butterfly, already listed as endangered under the Endangered Species Act due to habitat destruction from urban development and other impacts, has disappeared from nearly 80% of otherwise suitable habitat areas due to global warming (Parmesan and Galbraith 2004). The Bay checkerspot and Taylor's checkerspot butterflies, also listed under the Endangered Species Act, have been similarly impacted (Parmesan and Galbraith 2004).

Butterfly species are impacted in other ways as well. The northward expansion of the treeline into alpine meadow butterfly habitat can impede dispersal, fragment habitat, and increase mortality via butterfly collisions with the trees (Krajick 2004).

While theoretically some species can adapt by shifting their ranges in response to climate change, species in many areas today, in contrast to migration patterns in response to paleoclimatic warming, must move through a landscape that human activity has rendered

increasingly fragmented and inhospitable (Walther 2002). When species cannot shift their ranges northward or to increased elevations in response to climate warming, they will become extinct (Parmesan and Galbraith 2004). Therefore, the least mobile species will be the first to disappear.

Alpine species like the pika are unable to shift their ranges as warming temperatures and advancing treelines, competitors, and predators impact their mountain habitat (Krajick 2004). Pikas are further limited by their metabolic adaptation to their cold habitat niche, which allows them to survive harsh winters but also causes them to die from heat exhaustion at temperatures as low as 77.9° F (25.5° C) (Krajick 2004).

American pika populations at seven of twenty-five previously recorded localities in the Great Basin of the western United States have disappeared in recent years (Beever 2003). Based on work conducted in the late 1990s, researchers documented that the average elevation of surviving pika populations was 8,310 feet, up from a pre-historic average of about 5,700 feet between 7,500 and 40,000 years ago (Beever 2003; Grayson 2005). Most recently, researchers announced in December, 2005, that at least 2 additional populations have become extinct, and the average elevation of surviving populations has increased by another 433 feet.

Alpine plants, which have little or no capability to shift their range to higher elevations as the climate warms, may be most at risk. One study predicts that a 3° Centigrade temperature rise over the next century will eliminate eighty percent of alpine island habitat and cause the extinction of between a third and a half of 613 known alpine plants in New Zealand (Krajick 2004).

A study of 15,148 North American vascular plants found that 7%-11% of all species (1,060 to 1,670 plants) could be entirely out of their climate envelopes with just a 5.4° F (3° C) warming, the lower limit of climate change predicted for this century by the IPCC (Morse et al. 1995). At the upper boundary of climate change predicted for this century, 10.4° F (5.8° C), the percentage of plants completely outside their envelope increases to 25-40% (Morse et al. 1995). By contrast, about 90 North American plant species are believed to have become extinct in the past two centuries (Morse et al. 1995).

Species are also at great risk because climate change can alter conditions for diseases and their vectors in a way that allows the incidence of disease to increase and spread. Global warming can exacerbate plant disease by altering the biological processes of the pathogen, host, or disease-spreading organism (Harvell et al. 2002). For example, cold winter temperatures limit disease in some areas because the cold kills pathogens. Warmer winter temperatures can decrease pathogen mortality and increase disease (Harvell et al. 2002). Warmer temperatures can also increase pathogen growth through longer growing seasons and accelerated pathogen development (Harvell et al. 2002). The most severe and least predictable disease outbreaks will likely be when climate change alters host and pathogen geographic ranges, so that pathogens introduced to new and vulnerable hosts (Harvell et al. 2002).

Climate change will also influence wildlife diseases by affecting the free-living, intermediate, or vector stages of pathogens (Harvell et al. 2002). Many vector-transmitted

diseases are currently climate limited because the parasites cannot complete development before the vectors are killed by cold temperatures (Harvell et al. 2002). Well studied vector borne human diseases such as malaria, Lyme disease, tick-borne encephalitis, yellow fever, plague, and dengue fever have expanded their ranges into higher latitude areas as temperatures warm. (Harvell et al. 2002).

Climate change will also elevate the importance of wildlife linkages to connect species populations or provide for migratory corridors for wildlife species impacted by changing ecosystem conditions. One of the critical functions of wildlife corridors or wildlife linkages is buffer the negative impacts of climate change on wildlife through facilitating migration and genetic flow (Servheen 2007, Halpin 1997, South Coast Wildlands 2006). Tejon Ranch is part of a landscape-scale connection between the Coast Ranges and Sierra Nevada, and between the San Joaquin Valley and the Mojave Desert, all of which is integral to the interconnectedness of California's biographic regions and their wildlife (South Coast Wildlands 2006, DEIS 3.1-7). Thus the importance of that wildlife connection or linkage must be analyzed in the context of its elevated importance to provide for wildlife migration due to climate change.

It is clear that some impacts from climate change are inevitable, and thus adaptation strategies to account for climate change impacts in long term habitat planning will be an essential component of any comprehensive strategy to manage the impacts of climate change on species. As outlined below the DEIS fails to properly account for these impacts.

2. Failure to Take a Hard Look at Impacts of Climate Change on Covered Species and the Environment

An EIS must "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. This discussion must include an analysis of "direct effects," which are "caused by the action and occur at the same time and place," as well as "indirect effects" which are "later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. §§ 1502.16, 1508.8; see *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 963 (9th Cir. 2002) ("NEPA regulations and caselaw require disclosure of all foreseeable direct and indirect impacts" of a proposed action). As the Ninth Circuit has stated, this consideration "must amount to a 'hard look' at the environmental effects." *Idaho Sporting Cong.*, 305 F.3d at 963. In addressing the impacts of a proposed action, both the short-term and long-term effects must be considered. 40 C.F.R. § 1508.27(a).

Unfortunately the DEIS fails to account for the impacts of climate change on species covered under the HCP. The DEIS's analysis of biological resources completely neglects to mention global warming or climate change, and fails to include a substantive analysis of the impacts of climate change on the covered species that will be subject to take as a result of the ITP (DEIS §§ 3.1, 4.1). This omission falls short of the hard look required under NEPA in considering the environmental effects of the permitted harm, harassment, and destruction of imperiled wildlife and wildlife habitat.

The DEIS also fails to provide a proper accounting for indirect greenhouse gas emissions associated with the Project. The projected emissions in the DEIS contradict those within the Tejon Mountain Village Draft Environmental Impact Report ("DEIR"). *Compare e.g*. DEIS § 4.3 to TMV DEIR § 4.3. The DEIS must provide a full accounting of the environmental effects associated with this project and describe any inconsistencies in data. This inconsistent and incomplete data fails to provide the public and decision-makers with the necessary information required for the hard look NEPA requires.

The DEIS and DHCP also fail to account for the ESA's required analysis of conservation and recovery of endangered species through the ESA § 10 process. *National Wildlife Federation v. NMFS*, 481 F.3d 1224 (9th Cir, 2007) (agency must take into account both the survival and recovery of the species "[b]ecause a species can often cling to survival even when recovery is far out of reach"). Courts have repeatedly ruled that an agency's failure to address the impacts of climate change in analyzing impacts to threatened and endangered species violates the ESA. *NRDC v. Kempthorne*, 506 F.Supp.2d 322 (E.D. Cal. 2007); *Pac. Coast Fed'n of Fishermen's Ass'n v. Gutierrez*, 606 F. Supp. 2d 1122, 1184 (E.D. Cal. 2008). As discussed above climate change poses severe risk for ecosystems and species covered by this HCP. This grave threat to both covered species and the environment must be fully analyzed and accounted for in the DEIS.

3. Failure to Adequately Describe Global Climate Change as Part of the Environmental Setting and Affected Environment

Without adequate information on greenhouse gas emissions and their relationship to climate change, the DEIS cannot adequately describe the existing environment, nor can it properly analyze the reasonably foreseeable direct, indirect, and cumulative impacts of the development facilitated by the project. The "affected environment" section of the DEIS should establish the context in which the proposed action must be evaluated. 40 C.F.R. 1502.15. NEPA regulations require that when considering whether its proposed action may have a significant effect on the environment, an agency must analyze the impacts "in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality… Both short- and long-term effects are relevant." 40 C.F.R. § 1508.27(a). This discussion must include an analysis of "indirect effects" which are "later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. §§ 1502.16, 1508.8; see *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 963 (9th Cir. 2002) ("NEPA regulations and caselaw require disclosure of all foreseeable direct and indirect impacts" of a proposed action).

The DEIS must place the development it facilitates into context by fully explaining greenhouse gas emissions and climate change and by fully assessing the project's impacts within this environmental context. As detailed above, this information is readily available and the DEIS must evaluate and reveal such information before approving a project that will allow take of covered species threatened by climate change for the next 50 years, permit the destruction of critical habitat, and indirectly contribute to greenhouse gas emissions by facilitating development on the property.

Similarly, to effectively evaluate the significance of impacts, it is important to establish a baseline against which to compare the impacts of a proposed action, consisting of the pre-project

environmental considerations (Bass 2001).[15] The DEIS fails to account for climate change in establishing a baseline against which to measure the impacts of the project. In doing so, the DEIS masks the increased threats to the species covered under the plan and the impacts that will be associated with the indirect effects from the TMV development on biological resources, water resources, and air quality. The DEIS also uses an improper no-action alternative baseline against which the alternatives are measured. This inflated future baseline masks the impacts to species, and improperly downplays the indirect effects of the HCP.

The DEIS's failure to conduct an adequate analysis of the project's indirect impacts from greenhouse gas emissions, omission of the impacts to the affected environment from climate change, and improper minimization of the significance of the impacts of the project prevent the DEIS from properly disclosing the significance of the climate change impacts from the project.

D. AIR QUALITY

The DEIS also fails to provide a proper accounting for indirect criteria pollutant emissions associated with the Project. The projected emissions in the DEIS contradict those within the Tejon Mountain Village Draft Environmental Impact Report. *Compare e.g.* DEIS § 4.3 to TMV DEIR § 4.3 (Kern County 2009). The competing documents provide contradictory metrics for evaluation of the overall contribution of both the operational and construction emissions, and fail to provide the public and decision makers with a clear description of the project's impacts. This inconsistent and incomplete data fails to provide the public and decision-makers with the necessary information required for the hard look NEPA requires.

The DEIS also fails to adequately address the severe indirect impacts to the environment that will result from implementation of the project through the massive increase in air pollutants. This failure on behalf of the DEIS is in part due to the DEIS's failure to take a hard look at the project's impacts, the incomplete description of the affected environment, and the improper baseline used in the analysis.

The project impacts areas where attainment planning for air quality standards is most challenging and understates the magnitude of the problem and impacts. Both ozone and Particulate Matter ("PM") 2.5 and their gaseous precursors are by their nature capable of being transported by prevailing winds within air basins and between adjoining air basins. Because of its location at the southern boundary of the San Joaquin Valley, emissions from the project affect not only the San Joaquin Valley but also the adjacent South Coast (metropolitan Los Angeles) air basin and the Mojave Desert air basin. Thus, the TMV project impacts the 3 most heavily-polluted areas in the country. For the three most recent years for which quality-assured data are available (2005-7), Los Angeles-South Coast Air Basin has the highest 8-hour ozone design value (.122 ppm), San Joaquin Valley has the second highest (.107 ppm), and Los Angeles-San Bernardino (Mojave) area has the third highest value (.103 ppm). *See* EPA 2007, Ozone Design Values. For the same period, the San Joaquin Valley has the nation's highest PM2.5 design values with respect to both the 24-hour and annual standards (69 ug/m3 and 20.3 ug/m3), and Los Angeles-South Coast Air Basin has the third highest PM2.5 values in the country (55 ug/m3 and 19.6 ug/m3). *See* EPA 2007, PM2.5 design values. Successfully addressing the area's

[15] Bass, Ronald. 2001, The NEPA Book: A step-by-step guide on how to comply with NEPA (not attached).

unique pollution problems is made more difficult by projected growth in population and activity levels, increasing the amount of pollution generated within the area, the geographic extent of the polluted area, and the size of the population exposed to these extraordinarily high pollution levels.

In 2007, California requested that both the San Joaquin Valley and South Coast be reclassified to extreme for 8-hour ozone, putting those regions into a unique category with respect to this standard, just as the areas were previously the nation's only two areas classified as extreme for the now-revoked 1-hour ozone standard. *See* 40 CFR 81.305. State and local air agencies determined that attainment required massive emission reductions from all pollution sources, even in the absence of any growth in emissions associated with new projects, if these areas are to attain the standards. Consequently, the State and local plans depend upon ambitious and expensive future controls, along with unknown or untested new control technology concepts and technologies (CARB 2009). The DEIS fails to adequately address the project's significant increase in emissions in emissions in the San Joaquin and South Coast Air Basin's and analyze to what extent the ambitious reductions required under the State implementation plans will be hindered by the project.

The DEIS fails to take a hard look at the project impacts because of the difficulty of determining, in the absence of modeling, whether the Project, the associated TMV project, and other potential projects interfere with attainment of National Ambient Air Quality Standards ("NAAQS"). From an air quality perspective, a new project of the magnitude of TMV, coupled with other potential projects (Centennial, Newhall Ranch, Frazier Park estates), has the potential to interfere with the air plans' tasks of reducing ambient pollutant concentrations to levels no greater than federal air standards for PM2.5 and ozone. This is true even if the speculative emission reductions achieved through compliance with the San Joaquin Valley Air Pollution Control District ("SJVAPCD") Independent Source Review ("ISR") rule and through the strategies eventually incorporated in the Voluntary Emission Reduction Agreement actually do equal the emission increases associated with the project, since the specific location of emissions increases and emissions reductions affects ambient concentrations. This relationship between emissions levels and air quality can be estimated through dispersion modeling for the entire area of impact. The approach for modeling the impact of the cumulative projects and projected mitigation strategies should be consistent with the modeling used in the attainment plans.

The DEIS fails to adequately analyze how the project affects the ability of State to meet future Federal obligations associated with more stringent revised NAAQS. Attainment of the PM2.5 NAAQS as revised in 2006, and the 8-hour ozone standard as revised in 2008, will demand even more extraordinary control strategies to meet these more stringent standards in the San Joaquin Valley and South Coast air basins. See, for example, the discussion of the special attainment challenges faced by these two areas in EPA's national Regulatory Impact Analysis associated with promulgation of the revised PM2.5 NAAQS and the revised 8-hour ozone NAAQS. EPA 2008 Regulatory Impact Analysis, Ozone Criteria Chapter 7, App.B, EPA 2008 Regulatory Impact Analysis, Ozone Criteria Chapter 4, and the revised PM2.5 NAAQS. EPA Regulatory Impact Analysis, Executive Summary. It is not yet clear how the State and local agencies will be able to prepare plans that demonstrate progress and attainment of the more stringent NAAQS, as required by Federal law.

This DEIS's failure to take a hard look at the project's impacts, the incomplete description of the affected environment, and the improper baseline used in the analysis for the severe impacts to air quality that are associated with the region and the analysis doom the DEIS.

E. CULTURAL RESOURCES

The Cultural Resources sections (3-5 and 4-5) of the DEIS are critically flawed in that they neither identify nor protect the Chumash, Kitanemuk and Yowlumne Indian settlements, sacred sites or burial grounds on the Tejon Ranch property, in violation of the National Historic Preservation Act, ("NHPA"), 16 U.S.C. § 470f (NHPA § 106). The Cultural Resources section acknowledges NHPA § 106 requirements and states that effects to cultural resources "would be identified at the time that development is proposed through the planning review process." DEIS § 4.5.3.2 at 4.5-4. Yet the issuance of the DEIR for Tejon Mountain Village demonstrates that the planning review process is well underway. By its own terms, then, the DEIR must be revised to comply with the NHPA.

The DEIS's cultural resources analysis fails to comply with the requirements of the NHPA in several ways. First, the FWS made no reasonable or good faith effort to identify cultural resources, particularly traditional cultural properties, on Tejon Ranch. Second, FWS made no reasonable or good faith effort to seek information concerning cultural resources, as demonstrated, for example, by the existence of a lengthy 2004 archaeological survey of the Tejon Mountain Village area that was not considered by FWS. The result of FWS's inaction is that no surveys of cultural resources were completed for Tejon Ranch for inclusion in the DHCP.

Ignoring this deficiency, the DEIS improperly assumes that any significant impacts to cultural resources would be adequately mitigated by subsequent compliance with local, state, and federal law. The DEIS thus suggests that adequate mitigation for its own failure to follow the law is a mere promise or expectation that it will follow the law in the future. NEPA and the NHPA both require more from the agency.

1. The DHCP Fails to Perform the Cultural Resources Analysis Required by the National Historic Preservation Act

a. NHPA Requirements

The NHPA requires FWS to "take into account the effect of [an] undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register," 16 U.S.C. § 470f (NHPA § 106), and to "take responsibility for the impact that its activities may have upon historic resources." *City of Grapevine v. Dep't of Transp.,* 17 F.3d 302, 308 (D.C. Cir. 1994), *as quoted in National Mining Association v. Fowler,* 324 F.3d 752, 760 (D.C. Cir. 2003). An "undertaking" is any "federally funded or federally licensed activity," NHPA § 301, including those requiring "a federal permit or approval." *Sheridan Kalorama Historical Assoc. v. Christopher,* 49 F.3d 750, 755 (D.C. Cir. 1995), *as quoted in Fowler,* 324 F.3d at 760. The proposed ITP, a federal agency action, is an "undertaking" pursuant to the NHPA. *See, e.g.,* U.S. Fish & Wildlife Svc., *National Historic Preservation Act*

(NHPA) Compliance and Habitat Conservation Plans (HCP), Briefing Paper 1 (California, May 1999) ("Our Regional (NW) solicitors…are now recommending that an issuance of an ITP be considered an undertaking."). *See also* 36 C.F.R. §§ 800.3(a) and 800.16(y) (requiring and defining an agency's determination of an "undertaking").

The Advisory Council on Historic Preservation ("Advisory Council" or "ACHP") is tasked by the NHPA with establishing relevant implementation and compliance regulations. *See* 36 C.F.R. 800. Because the ITP is an undertaking under the Act, the NHPA regulations require FWS to "[s]eek information, as appropriate, from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area." 36 C.F.R. 800.4(a)(3). The regulations also require a heightened burden of collecting data concerning potential cultural sites from Indian tribes and Native Americans. *Id*. at 800.4(a)(4). Importantly, the agency must make a "reasonable and good faith effort to carry out appropriate identification efforts." *Id*. at § 800.4(b)(1). This effort requires "Consultation with the [Advisory] Council, state historic preservation officers ["SHPO"], and the public." *Fowler*, 324 F.3d at 756. Yet FWS did none of this.

After a complete and thorough identification of cultural resources, the second step in the NHPA process is to assess the adverse effects caused by the undertaking. 36 C.F.R. § 800.5. An adverse effect occurs "when an undertaking may alter, directly *or indirectly*, any of the characteristics of the property for inclusion in the National Register in a manner that would diminish the integrity of the design, setting, materials, workmanship, feeling, or association. *Id.* at § 800.5(a)(1). The massive development envisioned by the DEIS is an obvious indirect effect that will unquestionably disturb many cultural resources on the property.

Third, after identifying the adverse effects on cultural resources, § 106 requires the agency to consult with the SHPO to "develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate effects on historic properties." *Id.* at § 800.6(a). In other words, FWS must develop adequate mitigation measures for the cultural resources on Tejon Ranch to offset the indirect impacts of its ITP undertaking.

The DEIS itself lays out many of the NHPA responsibilities, explaining that the NHPA applies to "historic properties" that are "cultural resources deemed eligible for inclusion on the National Register," including resources that "possess integrity and… yield information important in history or prehistory." DEIS at 4.5.1. The DEIS then pledges:

> In the event that a proposed federal activity would adversely affect a historic property, the federal agency and the State Historic Preservation Office would sign a memorandum of agreement that details the methods to resolve any adverse effects.

Id. This passage mirrors the NHPA regulations and clearly states that consultation with the SHPO would occur "if the federal activity would adversely affect a historic property." The process is backwards, however, because the consultation with the SHPO and/or ACHP should occur to identify cultural resources in the first place. Given the number of historical settlements at risk through development of the Tejon Ranch property, this

consultation should have already occurred and "methods" should have been taken to "resolve any adverse effect." To date, however, no such properties have been identified, no consultation has occurred, and most importantly, no methods have been "detailed" to "resolve" the adverse effects.

b. DEIS Compliance with NHPA

In preparing the DEIS, the FWS did not sufficiently seek information concerning cultural resources in the project area. Instead, the DEIS states that "after review of the records at the Information Centers, it was determined that the vast majority of the Covered Lands has not been previously surveyed for cultural resources." DEIS at p. 3.5-3. Likewise, the FWS concludes that "the area has not been entirely surveyed and the potential for the No Action/No MSHCP Alternative to affect cultural resources is unknown." DEIS at p. 4.5-2. This explanation is essentially repeated for the other alternatives, except that the FWS declares the MSHCP Alternative has a "lesser effect" on cultural resources because it disturbs less ground. DEIS 4.5.3.1 at 4.5-4. If FWS research provided no evidence of dozens of Indian settlements and sacred sites that form the very core of Tejon Ranch history, then FWS did not make a good faith effort to identify cultural resources on the property. And it is impossible to protect what is not identified.

Deferring the identification of cultural resources violates the plain language of the NHPA, which requires FWS to make an assessment of cultural resources "prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license." 16 U.S.C. § 470(f). The NHPA's purposes are frustrated by this lack of disclosure: decisionmakers and the public have no way of knowing what, if any, impact the proposed HCP will have on the cultural resources of Tejon Ranch. The DEIS acknowledges this fact but does not act on it. This pattern of non-disclosure by Tejon Ranch only increases the burden on FWS to investigate and determine for itself the extent of Native American resources to be disturbed by the site's development.

Similarly, the DEIS fails to make any mention of any data collection from Native Americans and Indian tribes. While notices may have been sent to Native Americans and/or tribes with knowledge of cultural resources on Tejon Ranch, a "mere request for information is not necessarily sufficient to constitute the "reasonable effort" section 106 requires." *Pueblo of Sandia v. United States*, 50 F.3d 856, 860 (10th Cir. 1995). *See also Muckleshoot Indian Tribe v. United States Forest Serv.*, 177 F.3d 800, 806 (1999). In fact, a number of Native American tribal representatives received a notice of development on Tejon Ranch, but could not investigate the impact on their cultural sites due to lack of access to the property. The NHPA requires a heightened level of effort by the agency to "gather information" from Native Americans. 36 C.F.R. § 800.4(a)(4). This level was clearly not achieved.

If the agency could not locate this information itself, it should have solicited this information through comments by the SHPO and/or Council on Historic Preservation. The failure to do so "forecloses" the advisory bodies from commenting under the act, *Id.* at § 800.9(b), which is illegal because the agency head "must take into account ACHP's written comments in deciding how to proceed." Advisory Council on Historic Preservation, "Section

106 Regulations Summary; Failure to Resolve Adverse Effects," *available at:* www.achp.gov/106summary.html.

2. Examples of Cultural Resources Requiring Analysis and Preservation on Tejon Ranch Property Pursuant to the NHPA

Any good faith effort by USFWS would disclose the fact that Tejon Ranch has numerous Native American cultural resources present on its property, and that the proposed Tejon Mountain Village project would adversely affect these resources. In fact, the Draft Environmental Impact Report for Tejon Mountain Village ("DEIR"), released after the DEIS, features an Archaeological Study prepared by Tejon Ranch that purports to identify 58 sites within the Tejon Mountain Village "study area." (Kern County 2009, Appendix F). Without critiquing the methods and recommendations of the DEIR report itself (e.g. misidentification, under-identification, and lack of proper mitigation measures), the study's obvious existence proves that the developers were fully aware of archaeological sites in the TMV area, yet FWS was apparently oblivious when drafting the DEIS.

It should be stressed that the Cultural Resources section of the Tejon Mountain Village DEIR would not meet the DEIS's obligations to identify and protect cultural resources pursuant the NHPA. First, the DEIR study was performed only for the area surrounding Tejon Mountain Village, or the "CEQA development envelope," which is far smaller than the area encompassed by the DHCP, making its analysis incomplete. *See* DEIR, Appendix F, Addendum, at 2. Second, the study does not require federal consideration or approval because it was not conducted under the guise of an "undertaking" pursuant to the NHPA. Because it is not a federal "undertaking," the DEIR does not provide for protection and mitigation for these resources in consultation with the SHPO and/or ACHP. However, the archaeological study actually concludes with the recommendation that the sites be preserved when possible. *Id.*

The DEIR study aside, even a cursory review of Tejon Ranch history would have identified a restored schoolhouse as well as Indian settlements and sacred burial sites within the proposed HCP boundaries, both around Castac Lake and the area in the above canyons continuing northward to the Ranch's Old Headquarters on Paso Creek.

a. Historic Schoolhouse

One of the clearest examples of cultural resources within the DHCP boundaries is the Indian schoolhouse located in Tejon Canyon. This schoolhouse was the first in California built exclusively for Indian education, and was restored with Ranch permission by descendants of its pupils (Dominguez 2009, *attached here (letter only) as Exhibit C, letter plus attachments included on CD-Rom*). As recently as 2008 these restorations were ongoing with the intent of making the schoolhouse an official Historic Landmark. Unfortunately, Tejon Ranch's support of this restoration and recognition ceased when the Tejon Mountain Village project got underway, making it all the more critical that FWS document and preserve this historic building.

b. Settlements and Cemetery near Castac Lake

Castac Lake is named after the Chumash village of Kashtiq, which once stood at the edge of the (previously) ephemeral water body. *See* John Johnson, *The Trail to Kashtiq*, Journal of California Anthropology, Vol. 5, No. 2, p. 188 (1978). Unfortunately, the village site is now underwater because the new, man-made lake exceeds the boundaries of the old, seasonal lake at the Castac site. Far from supposition, the flooding of the Kashtiq site can be easily determined by comparing the old and new lake boundaries. The area of Tejon Ranch surrounding Castac Lake (wrongly referred to as "Tejon Lake") not only forms the heart of Tejon Mountain Village, but is also the heart of historic Chumash settlements. *See, e.g.*, Horne 1981 at p. 233 ("the eastern periphery [of Chumash settlements] includes Castac Lake and the area around Fort Tejon."); *see also* David L. Jennings, *Preliminary Report on Castac Village Site* (empirical archaeological survey, 1978). Because of the prominence of Kashtiq as a Chumash settlement, there was almost certainly a sacred burial site at Kashtiq that was likewise flooded by Tejon Ranch (Dominguez 2009). Numerous other sources make reference to Kashtiq Chumash settlements, including the Cultural Resources section of the DEIR. Yet the DEIS makes no mention of these settlements, their review with the SHPO, or proposed measures to protect these sites.

There is also a sacred burial site located one-half mile east of Castac Lake that was reported to Ms. Dominguez in 2001 (Dominguez 2009). The site was unusually secluded, featured a pile of bones where graves should have been, and lacked any funerary item even though Indians were <u>never</u> buried without such items. *Id.* The suspicious circumstances surrounding this "cemetery" suggest that these bones were taken from other, <u>real</u> cemeteries, such as the one at Kashtiq prior to its flooding. *Id.* This is particularly suspicious because if one grave had been discovered at the purported site, then no other graves should have been uncovered. *Id.* The "excavation" of these graves, and their presumptive relocation, raises serious doubts as to Tejon Ranch's ability to preserve cultural resources. Likewise, the extreme disrespect shown to the bodies raises doubts as to the efficacy of the monitors and archaeologists used by the Ranch.

c. Settlements and Cemetery Near Old Headquarters

As the Chumash, Kitanemuk and Yowlumne Indians were pushed northward on Tejon Ranch by General Beale, many settlements along creeks in the canyons above Castac Lake were abandoned and new settlements were created near the Old Headquarters. *See, e.g.*, Frank F. Latta,, Saga of Rancho el Tejón, (Biography of Jorge Jesus López) (Bear State Books, Exeter, CA, 2006 ed.). at 129 ("About 1880, all of those scattered Indians <u>were moved to their present location</u> about five miles above the ranchhouse," *emphasis added*). Prior to their forced relocation, Indians maintained villages in Cañada de las Uvas (Lapau, Matapquelequel), Aliso Creek, Pastoria Creek, Paso Creek (Mavea, Tahtakwakahavea, Ahheavea, Mumumpea, Tinliu and Tsuitsaw), and Tejon Creek (Pusin Tinliu, Kuutsitahovea, Pishapespea, Nakwalkivea) (Dominguez 2009 p.2, *citing* Deposition of Maria Chololo). The last Indian leaders on Tejon Ranch property provided depositions and created maps detailing the specific locations of these settlements (Dominguez 2009 p.2, *citing* Depositions of Eugenia Mendez and Maria Chololo (1922)). The original depositions for the Tejon Ranch Supreme Court cases are preserved at the

National Museum of Natural History in Washington, D.C.; copies have been provided by Ms. Dominguez. These depositions, along with the other sources identified below, should be used to identify the locations of many of the old settlements. Unfortunately, Tejon Ranch refuses to permit Native American research on the area surrounding the Lake, making it impossible to provide more detailed accounts of what remains. The Ranch's refusal makes the obvious wealth of sacred Indian sites all that much more apparent, or at least reinforces the need for FWS to consult the SHPO and/or ACHP regarding these historical properties.

The Tejon Ranch area became home to the Sebastian Indian Reservation, founded by General Beale prior to his assembly of the nearby Mexican land grants that became Tejón. *See* Kane at p.129 (illustration of location). Once General Beale had created the reservation, he required all residents of outlying villages to resettle within the Reservation lands. *See* Letter by Gen. Edward Beale to George Manypenny, *as quoted in* Kane at p. 121. This left many native settlements abandoned and unmarked outside of the depositions described above; for another rough outline of literally dozens of such pre-reservation village locations, see Bonnie Kane's *View From the Ridge Route: Volume 1: The First People*, at p.8 (Self-Published, Five Volume History of Tejon Ranch, 2001) (Sourced from Frazier Park Historical Society, May, 2009).

As with Castac Lake, Tecuya canyon was named after the Chumash village of Tacui. *See, e.g.*, Kane at pp. 63-66. The village in Tacuya canyon was still inhabited as recently as 1850, when an old lady carrying the heavy stone *metate* from her old home in Tacuya canyon to her next home in Tejón Canyon. Latta at p.122. Of course, these Indians were relocated by General Beale in 1853.

Likewise, there is evidence of Indian settlements in Tejon/Tunas creek. *See* Mae Saunders, *Fort Tejón, El Tejón Rancho, and the Tejón Indians* (Self-Published, May 1925) (Courtesy of Frazier Park Historical Society) at p.3 (noting that "Tecuya" Indians moved to the mouth of Tejon Canyon). Due to concerns over privacy, detailed maps of the settlements will not be made public, but they are available on a confidential basis for the purpose of consultation, analysis, and preservation of these sensitive, historic properties. *See* Dominguez 2009.

Ample evidence of these settlements also occur in the accounts of J.J. Lopez, the *Majordomo* (head rancher) of Tejon Ranch under General Beale. *See* Latta, *supra* (Lopez biography). Mr. Lopez kept a diary since living in Los Angeles in 1867; he arrived at Tejon Ranch in 1873 (although his family was closely connected with the area since the founding of Mission San Gabriel in the late 18th Century). Latta at 1. Although the diaries were later lost to a fire, his writings assisted the accuracy of Lopez's own oral accounts to Frank Latta, his biographer. *Id.* at xiv.

In his biography, Lopez describes "Sebastian Reservation Chiefs" who "lived with their subjects at different locations around the mouth of Tejon [Tunis] Canyon and on the creeks westward toward La Canada de las Uvas, where Highway 9 now is located." *Id.* at 128. Other Native Americans had emigrated to Tejon Ranch from as far as Santa Rosa Island to settle around the mouth of Tejon Canyon. *Id.* at 122. The leader of these Indians shared ancestry with both coastal Chumash and inland Kitanemuk tribes, and was called Zapatero, Spanish for "shoemaker", who lived "on the creek which now bears his name, a few miles west of the

present (1930) ranchhouse." *Id.* at 128; *see also* Kane at 115. Lopez describes Zapatero and the other chiefs as "the finest characters you could meet." Lopez at 128. The *Majordomo's* admiration was a reflection of the strong Indian presence in the area during his lifetime and the corresponding respect accorded to their chiefs.

As previously noted in the Indian depositions, settlements were also evident at the Arroyos de las Tunas, Pastoria, Encinas and Alamos sites. Lopez notes the Native Americans in these settlements ("rancherías") were all moved to a location "five miles from the ranchhouse" in 1880. *Id.* at 129. Zapatero and the other chiefs are all buried in a cemetery "at the Indian settlement about five miles above the [1936] Tejon Ranch headquarters." *Id.* at 131. Dee Dominguez has identified this cemetery as "Huerta de Arriba" (the high orchard) on Paso Creek, and is where many of her ancestors are still buried. Dominguez 2009.

It is important to consider Lopez's casual reference to "moving" the Indians from different locations on the ranch to their last settlement above the old ranchhouse. Just as the Indian depositions claim, the Lopez account underlines that Native Americans were settled in nearly every canyon on the western side of Tejon Ranch leading to present-day Highway 99. *See also* Kane.

This brief review of available sources demonstrates an abundance of Chumash, Kitanemuk and Yowlumne settlements and sacred sites in the DHCP area that require identification, analysis, and preservation by FWS. These settlements include many previously undisclosed in the canyons above Castac Lake, the area around the Old Headquarters, and in the surrounding canyons. In addition, any sites near Castac Lake already identified in the separate Kern Co. DEIR must be identified and preserved. Until these sites are identified and protected in consultation with the SHPO and/or ACHP, the DEIS remains in violation of the NHPA.

d. California Condor

Finally, the California Condor itself should be identified as a key cultural resource and protected accordingly. The condor is absolutely sacred to Chumash, Kitanemuk and Yowlumne tribes, and is arguably the most important cultural resource to these tribes, period. *See, e.g.*, Kane. Because it is mobile, the condor is not, per se, a historic *place*, but it is a cultural "object" every bit as concrete as a schoolhouse or cemetery. Obviously, Tejon Ranch's goal in seeking an ITP is to sanction some loss of the condor, yet as a sacred cultural resource this animal must be preserved and protected.

3. Conclusion

The NHPA and its implementing regulations require consultation with the SHPO and thorough analysis of these sites now, before any action is taken and before any approval is granted to the proposed HCP as a precursor to issuing an incidental take permit. *See* 36 C.F.R. § 800.1(c) (prohibiting federal approval until §106 analysis is complete). The DEIS's attempt to sidestep the issue and defer any identification of cultural resources until individual projects work their way through local, state, and federal permitting processes is likewise insufficient.

As it stands, the Cultural Resources section is cursory and vague. There is nary a mention of the tribes and settlements, let alone their sacred sites and burial grounds that actually resided on the Tejon Ranch area. More research and protection is required, then, to offset the potential for destroying cultural resources, simply because Tejon Ranch has not allowed for (or published) their identification.

The DEIS states that "procedures should include pre-construction surveys, resource evaluation, and application of avoidance/minimization measures on a case-by-case bases to ensure that potential effects are addressed." DEIS 4.5.3.2. As these comments make clear, the CEQA planning review process is underway and there are abundant cultural resources that require the procedures outlined in the passage above. Until the FWS conducts these procedures as part of its compliance with the NHPA, the DHCP remains in violation of federal law and an incidental take permit may not be issued until the § 106 process is complete.

IV. CONCLUSION

As is demonstrated above, the DHCP, DEIS, and proposed IA are fatally flawed and violate the ESA, NEPA, and other applicable statutes and regulations. Given the numerous problems inherent with the proposed plan for the HCP area, it is extremely doubtful that the documents can be merely re-written. We urge the FWS to seriously consider denying Tejon Ranch's permit application outright.

There are plenty of viable and economically fruitful uses of Tejon Ranch that would actually serve to conserve the many endangered, threatened, and sensitive species and important cultural resources that are found on the Ranch. The development of Tejon Mountain Village, as proposed, is not one.

Thank you for your time and consideration in reviewing these comments.

Sincerely,

/s/

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(Exhibits A, B, and C attached; References and Appendices on Accompanying CD-ROM).

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EXHIBIT A

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Adam Keats
Center for Biological Diversity
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RE: Tehachapi Upland Multiple Species Habitat Conservation Plan Review of Suitable Habitat Modeling

Dear Mr. Keats,

This is a review of the methods used for suitable habitat models for the MSHCP. The suitable habitat modeling performed was a GIS analysis of species presence/absence points and environmental layers. The analysis was for covered lands of the Tejon Ranch. Each species was modeling with relevant vegetation cover types, elevation and slope. A few species had additional data layers such as drainages, seeps pools and soils. The two main conclusions of this review are:

1. The spatial scale of modeling (Tejon Ranch only) maybe too small to fully understand a given species potential suitable habitat.

2. The presence points of many of species are small and may not provide enough information about the species for a complete analysis of suitable habitat. To remedy these conclusions the entire range of a species should be modeled and all occurrence points should be included in the models.

Recommendations:

Advancements in suitable habitat modeling can provide a better understanding of a species distribution across the landscape. Many of these techniques are available for

use with a desktop computer, species location data and environmental variables. Review papers such as Elith et al 2006 suggest these techniques would perform a better analysis than the one performed for the MSHCP. A general GIS analysis with overlay techniques such as those performed for this study provided general results for each species. A newer technique such as MaxEnt could provide a much more detailed understanding of a species suitable habitat. MaxEnt has been noted in the literature to support modeling of rare species and out performs other modeling techniques. Species with limited occurrence points and those with little to no absence points would benefit the most.

Current literature also suggests that too accurately model a species suitable habitat a species entire range should be modeled. This was not performed for the MSHCP. Species environmental needs for suitable habitat may not be realized with only modeling portions of a species known range. Modeling a species entire range has also helped scientist to locate new populations of rare species and gain new insights of a species climatic and environmental needs.

Species location data was reported to be used for all species but only the California condor models have actual point data. Point location data can provide a much more detailed understanding of habitat needs and should be included in all models. Climate variables such as temperature and precipitation requirements are well known and documented for most species in the report and should be included in the suitable habitat models. This analysis should also include soils data for all species. Reported in the MSHCP, soils data from SSURGO were not available for the entire study area. Other sources of soils data are available such as the USGS 2005 data that do cover the study area. These data should be included in all species models.

The covered species are grouped together as amphibians, birds, insects, mammals, reptiles and plants. Each group has different requirements for suitable habitat modeling. Listed below are general requirements and suggestions for each group. The individual species review also notes changes to modeling approaches and environmental variables for each species.

Amphibians: Many of the species have temperature range restrictions and precipitation needs for suitable habitat, climate variables should be included in the models. Soils can also be important predictors and should be included in the modeling.

Birds: Vegetation cover that is detailed enough to identify vegetation structure for each species polygon should be included. Normalized Difference Vegetation Index (NDVI) has been used for many studies of bird suitable habitat modeling and has provided useful insight and should be included in the models. Drainages, seeps and ponds should be included in the models of bird species specializing in riparian habitat.

Insect: There is only one insect being modeling. This model should include a model of the host plant elderberry.

Mammals: NDVI should be included in the models to provide a better understanding of vegetation for each species habitat.

Reptiles: Geology and soils layers can identify areas of suitable habitat. Climate layers may also provide a delineation of suitable habitat. Both should be included in the models.

Plants: Land use (disturbance) layers may identify areas of suitable habitat. A geology layer with substrate information may also identify areas of suitable habitat. Land use and geology layers should be included in the models. Climate layers should also be included, most precipitation and temperature needs of a species are recognized in the report and should help identify suitable habitat.

Individual Species Review:

Tehachapi Slender Salamander (*Batrachoseps stebbinsi*)

Elevation should be lowered to include sites of 1500 ft. The main predictor of habitat is talus substrate and should be included in the model. The species is dependent on temperature range and precipitation patterns, climate variables should be included in model.

Western Spadefoot (*Spea hammondii*)

Adult activity is dependent on temperature and rainfall events, climate should be included in the model. Buffer around seeps and springs should be enlarged from 5 feet to at least several hundred meters. Soils data should be included, sandy and gravely soils are known habitat predictors.

Yellow-Blotched Salamander (*Ensatina eschscholtzii croceater*)

This species is correlated with surface moisture and soils that are generally loamy climate and soil variables should be included in the model.

American Peregrine Falcon (*Falco peregrimus anatum*)

Climate variables may provide more information for the species and analysis of migration matters.

Bald Eagle (*Haliaeetus leucocephalus*)

Other areas of suitable vegetation cover around water sources should be included in the model.

Burrowing Owl (*Athene cunicularia*)

Soil type is a known predictor of suitable habitat and should be included in the model. Burrowing mammal's location data could also provide information for suitable habitat.

California condor (*Gymnogyps californianus*)

Golden Eagle (*Aquila chrysaetos*)

Least Bell's Vireo (*Vireo bellii pusillus*)

Migration habitat should be included in the model; also a more detailed vegetation layer may be able to identify vegetation structure of individual polygons.

Little Willow Flycatcher (*Empidonax traillii brewsteri*)

Other habitats may be used during migration periods; other vegetation cover types should be included.

Purple Martin (*Progne subis*)

Southwestern Willow Flycatcher (*Empidonax traillii*)

Vegetation cover should include areas for migration habitat. Better vegetation data to identify vegetation structure of polygons should be included in the model.

Tricolored Blackbird (*Agelaius tricolor*)

Proximity to wetlands, riparian, seeps etc. should be added to the model.

Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis*)

Climate layers should be included to better understand habitat and humidity needs for the species. Again better vegetation cover data may provide delineation of vegetation structure in polygons.

White-Tailed Kite (*Elanus leucurus*)

Yellow Warbler (*Dendrocia petechia brewsteri*)

Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)

All vegetation cover types with Elderberry should be included in the model.

Ringtail (*Bassariscus astutus*)

A geology layer should be included in the model, with rock piles and talus slopes identified as potential habitat variables.

Tehachapi Pocket Mouse (*Perognathus alticolus inexpectatus*)

Elevation should be lowered to include areas of 3,000 ft.

Coast Horned Lizard (*Phrynosoma coronatum*)

Soil layer should be included in the model, the association with the species and loose soils with a high sand content could provide more detail for suitable habitat in conjunction with vegetation variables.

Two-Striped Garter Snake (*Thamnophis hammondii*)

Soil layer may be able to identify steams with rocky or sandy beds associated with willows and should be included in the model.

Fort Tejon Woolly Sunflower (*Eriophyllum lanatum var. hallii*)

Climate layers may provide a better insight of suitable habitat and should be added to the model.

Kusche's Sandwort (*Arenaria macradenia var. kuschei*)

Land use layers should be included to identify areas of disturbance such as grading that may provide openings in the landscape for the species to find suitable habitat. Other soils data should be included with quartz monzonite, alluvial terraces and debris flows to identify suitable habitat.

Round-Leaved Filaree (*California macrophylla: Erodium marcrophyllum*)

Land use layers should be included to identify areas of disturbance such as fire that may provide openings in the landscape for the species to find suitable habitat.

Striped Adobe Lily (*Fritillaria striata*)

Reproductive phenology is correlated with rainfall patterns and soil moisture levels, climate layers should be included in the model.

Tehachapi Buckwheat (*Eriogonum callistum*)

Pollinator distribution should be included in the model. Climate layers should also be included in the model.

Tejon Poppy (*Eschscholzia lemmonii ssp. Kernensis*)

Plant growth is dependent on precipitation amounts, climate layers should be included in the model.

EXHIBIT B

California Condor Activity in the Tejon Ranch Region

A summary of California condor habitat use patterns in conjunction with designated critical habitat and proposed developments on Tejon Ranch, CA

Christopher B. Cogan, PhD

12 June 2009

A CENTER for BIOLOGICAL DIVERSITY REPORT

California Condor Activity in the Tejon Ranch Region

A summary of California condor habitat use patterns in conjunction with designated critical habitat and proposed developments on Tejon Ranch

Christopher B. Cogan, PhD

Published by the Center for Biological Diversity
12 June 2009

Front Cover:
Adult condor "AC-6" on Tejon Ranch
Photograph by Christopher B. Cogan, 18 March 1986

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The Center for Biological Diversity is a national nonprofit conservation organization with more than 200,000 members and online activists dedicated to protecting endangered species and wild places. We work through science, law, and creative media to secure a future for all species, great or small, hovering on the brink of extinction.

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Introduction

To determine the significance of the Tejon Ranch as habitat for California condors, this report combines and analyzes all available condor data from multiple datasets over the period from the late 1800's to the present. Data sources include:

Visual condor sightings from the McBee records: 1890 – 1984
Visual condor sightings from USFWS and Audubon researchers: 1982 – 1987
Visual flightlines from USFWS/Audubon pilots: 1982 – 1987
Condor Nest location records. 111 records from pre-1900 – 1986

USFWS (Ventana):
CACO_VWS_GPSDATA_1-65535.xls
CACO_VWS_GPSDATA_65536-77250.xls
- VentGPS03_06_Merge
- 77,250 records (Only includes: Date, Time, Lat, Lon. Condor ID's were not provided) from 17 July 2003 – 3 June 2006

USFWS non-visual point locations from Satellite radio transmitters (select Fix = 3)
XY_MergeFix3_WGS84
29,595 records from: Dec 23, 2001 – June 17, 2008

USFWS non-visual point locations from Satellite radio transmitters
XYSatelliteDataTable
3,923 records from: 1 Jan 2007 – 19 June 2008

USFWS non-visual GPS tag point data:
XYGPSDataTable
37,521 records from 1 Jan 2007 – 19 June 2008

USFWS non-visual GPS tag point data:
XYGPSDataTable
38,405 records from 1 May 2008 – 31 Dec 2008

World Wildlife Fund terrestrial ecoregions
Tejon Ranch proposed development boundaries from the Center for Biological Diversity (CBD)
Tejon Ranch property boundaries (from CBD)
Condor ESA critical habitat designation from http://criticalhabitat.fws.gov/ (10 polygons).

Spatial Analysis of Tejon Ranch as California Condor Habitat

A series of 15 geographic information system (GIS) maps (Figures 1-15 below) summarize and illustrate the various types of condor activity in the Tejon Ranch area. Each of these map figures are presented in color. Black and white copies of this report will not provide sufficient information.

Figure 1. Locator Map. Historic California condor range, ESA designated critical habitat zones, Tejon Ranch property, and proposed Tejon Ranch development area.

This map identifies the position of Tejon Ranch and the Tejon Ranch proposed development areas within the historic condor range. The condor range boundaries were drafted in consultation with USFWS and National Audubon condor biologists in the 1980's providing a generalized outline of condor habitat areas. Of particular interest is the Tejon Ranch location at a four-fold ecoregion "choke point" between the transverse range and the Sierra Nevada Mountains.

Figure 2. WWF Ecoregions. The original condor range map from Figure 1 was drafted as a general consensus by condor researchers. Figure 2 brings in an independent data set, the World Wildlife Fund for Nature terrestrial ecoregions (see also Hickman 1993, for the Jepson ecoregion version). Condors tend (with some exceptions) to avoid the California Central Valley and the Mojave Desert. This map provides further explanation for the constriction of the condor range in the Tejon Area, and highlights the uniqueness and importance of the region.

Another habitat property illustrated in Figure 2 is the division of the Tejon Ranch Proposed Development area into four major ecoregions, in particular the California interior chaparral and woodlands vs. the California montane chaparral and woodland types (yellow and purple in the map). Following general ecological principles, any consideration of habitat impacts or endangered species impact needs to treat each ecoregion separately. This is particularly important when considering how condors use habitats in multiple ecoregions and how a species such as the condor can act as an umbrella species.

Figure 3. McBee Records. The historic McBee records reflect visual condor sightings, with a total of 7,341 records included in the data base. The records run from 1890 until 1984. Approximately 1,342 sightings are from the Tejon Ranch area, with records from the 1930's through 1984. These Tejon area data include 1178 Airborne records, 102 perched records, and 51 feeding records. The McBee data are an important record of past condor habitat. What is particularly striking is the consistency of condor use in this area from our earliest records through present times. Recent condor captures, releases, or feeding programs have not significantly attracted nor deterred condors from the Tejon Ranch area. Pastoria Creek and Winters Ridge are prime examples of long-standing condor habitat areas.

Figure 4. Visual Records. The visual sighting data represented in Figure 4 are based on data collected by field researchers. From 1982 through 1987 there were 10,294 records collected, with approximately 1,800 in the Tejon Ranch area. Corresponding condor ID's (CID) include 11 individuals (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 97). CID code 97 indicates "unknown adult condor". Note how the spatial patterns of habitat use are consistent with the earlier McBee records.

Figure 5. Flight Lines. From the period 1982 – 1986 condor biologists in light aircraft used radio telemetry to locate tagged condors, then observe the birds visually and follow them in flight. While flying, the pilots drafted their course on county-scale maps, which were later digitized and compiled in GIS format. The flight data are unique, because they provide a consistent visual record of bird movements over large areas for a five-year period. Though the wild population was very small in these years, the Tejon area data include records from six individual birds (condor ID's 1, 2, 5, 6, 8, and 9). Please note that these data are intended as a general indication of flight routes, not as spatially precise as other data types such as the GPS data. In spite of the spatially coarse nature of the maps, the flight data add yet another important form of evidence identifying Tejon Ranch as critical condor habitat.

Figure 6. GPS Records. The GPS satellite telemetry data on condor locations represents a true breakthrough in data collection technology. The massive data volumes and quality of data offer critical insights to condor habitat use. The GPS locations plotted in figure 6 are from three USFWS data sets:

1) GPS data collected from 17 July 2003 – 3 June 2006 77,250 records with approximately 400 in the Tejon Ranch area. Approximately 80% of the records from this data set were located in the Ventana / Pinnacles region. Condor ID's were not provided with this data so a summary of the number of individual birds in the Tejon area is not presented here.
2) GPS data collected from 1 January 2007 – 19 June 2008 37,521 records, with approximately 1,300 in the Tejon Ranch area. All of the 17 birds from this data set have recorded locations in the Tejon area.
3) GPS data collected from 1 May 2008 – 31 Dec 2008 38,405 records, with approximately 1,500 in the Tejon Ranch area. Of the 17 birds represented in this data set, 14 have recorded locations in the Tejon area.

Of particular note with all of the Figure 6 records is the spatial correlation of the high accuracy GPS data with the older visual data sets, including the flight line data.

Figure 7. Pastoria Creek Map. Figure 7 is an enlargement of Figure 6, providing detail for key condor activity areas along Bear Trap Canyon and Pastoria Creek within the Tejon Ranch, and specifically within the proposed "Tejon Mountain Village" development area.

Figure 8. Perched Activity. To determine different types of condor activity within the Tejon Ranch area, the 1982 – 1987 visual data (10,294 records) were reduced to show perched activity only (2,901 records). These data included approximately 600 records in the Tejon Ranch area. Many of the perched records occur in the upland areas above Bear Trap and Tunis Creeks, and in the Winters Ridge area.

Figure 9. Feeding Activity. Of the 1982 – 1987 visual data records, 777 were coded as feeding records. This figure includes approximately 200 records of feeding condors within Tejon Ranch. Note how most of the feeding locations are well apart from the 5 kilometer buffers around nest locations. Also note how the flight lines that pass over the proposed development areas identify critical habitat which acts to connect the feeding areas with nesting areas. Based on the ecoregion patterns in Figure 2, this figure highlights multiple activities (nesting, flying, and feeding) within the California montane chaparral and woodland ecoregion. This figure also suggests how impacts in the Tejon area could also impact (for example) nesting areas 40 km to the south.

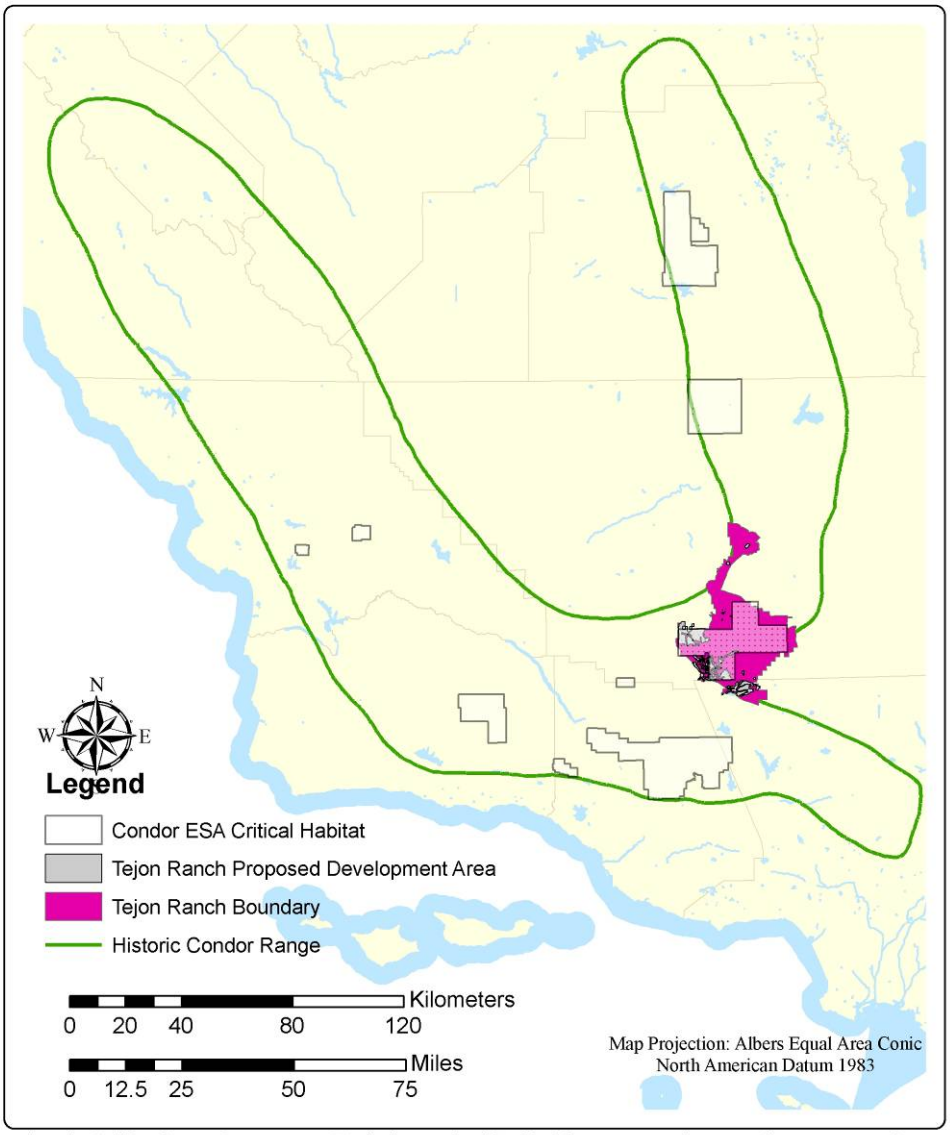
Figures 10 – 12. Perspective views of selected condor data within the proposed Tejon Ranch development areas. Please see figure legends for more information.

Figure 13. Koford Map. Historic 1953 map from Carl Koford with transition routes from Ventura to Tejon.

Figure 14. GPS-measured Condor Positions with ½ mile buffer. See figure legend for additional description and discussion.

Figure 15. Proposed Tejon Ranch development areas with 400 meter (1/2 mile, shown in blue) and 800 meter (1 mile, in green) buffer extensions. See figure legend for additional description and discussion.

Locator Map with Historic Condor Range and Designated Critical Habitat Zones

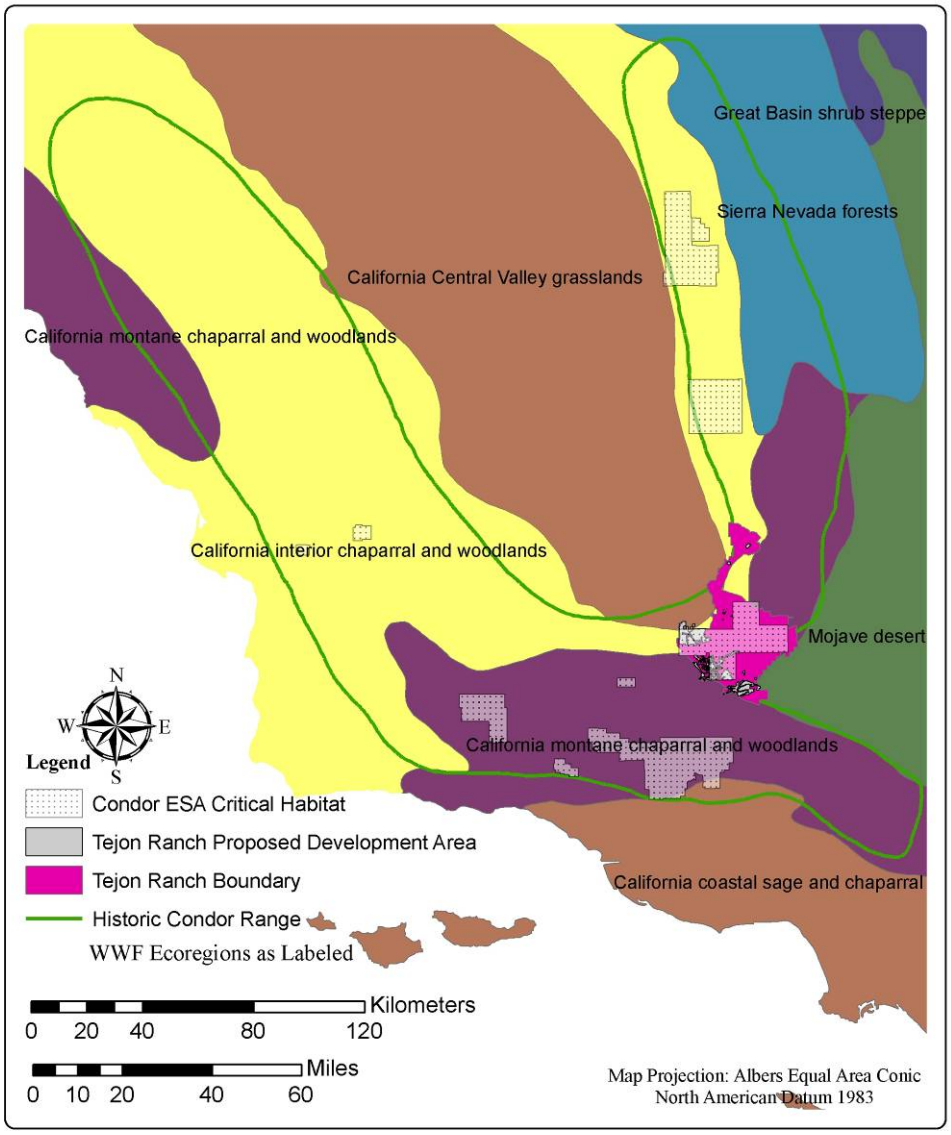


Historic California condor range, ESA designated critical habitat zones, Tejon Ranch property, and proposed Tejon Ranch development area.

GIS Analysis:
Center for Biological Diversity
1 May 2009

Figure 1. Locator.

Locator Map with World Wildlife Fund Terrestrial Ecoregions and Proposed Tejon Ranch Development Zones

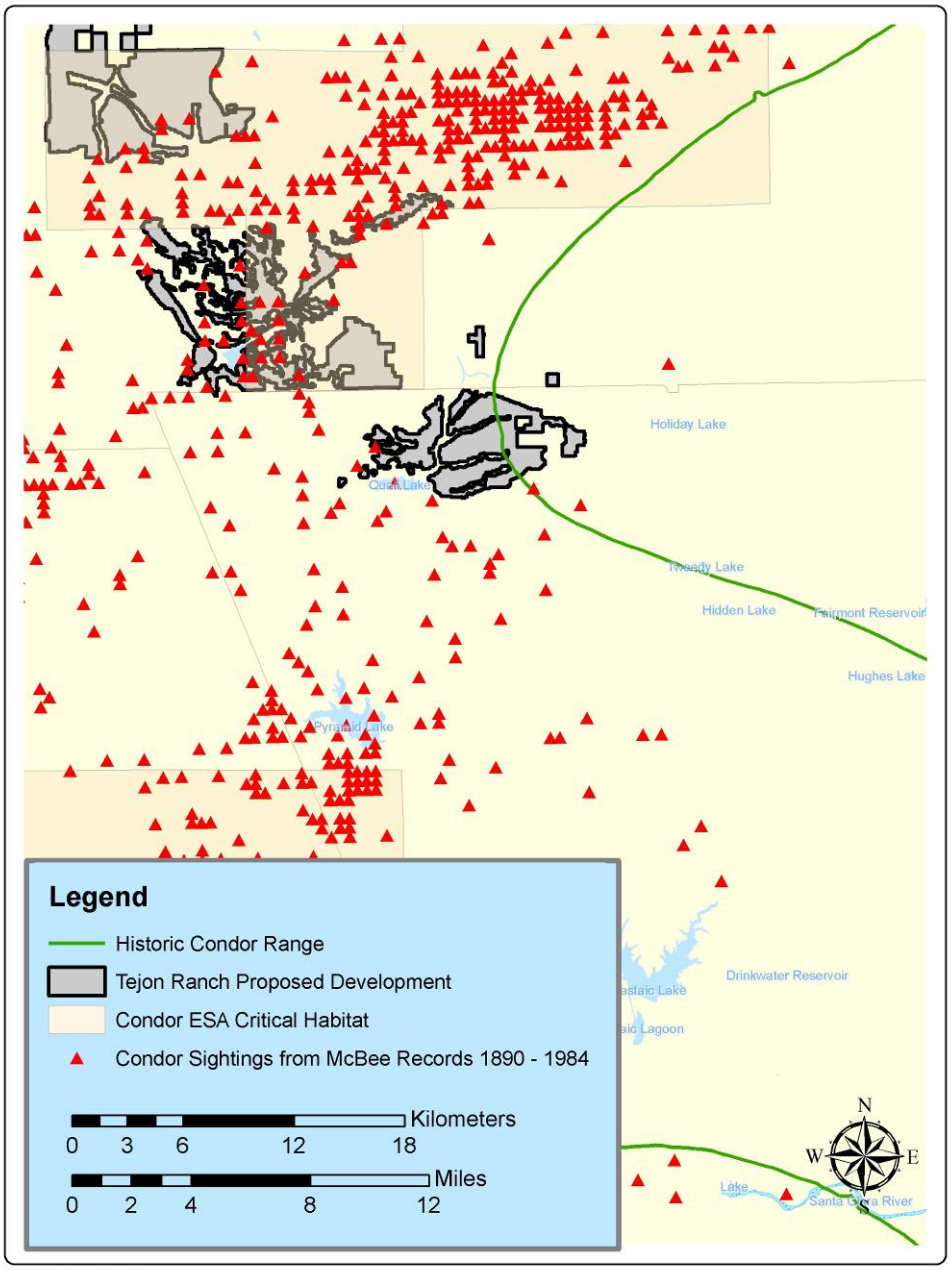


Historic California condor range with proposed Tejon Ranch development area and World Wildlife Fund terrestrial ecoregions.

GIS Analysis:
Center for Biological Diversity, 1 May 2009

Figure 2. WWF.

Condor Sightings from McBee Records 1890 - 1984



GIS Analysis:
Center for Biological Diversity, 1 May 2009

Figure 3. McBee.

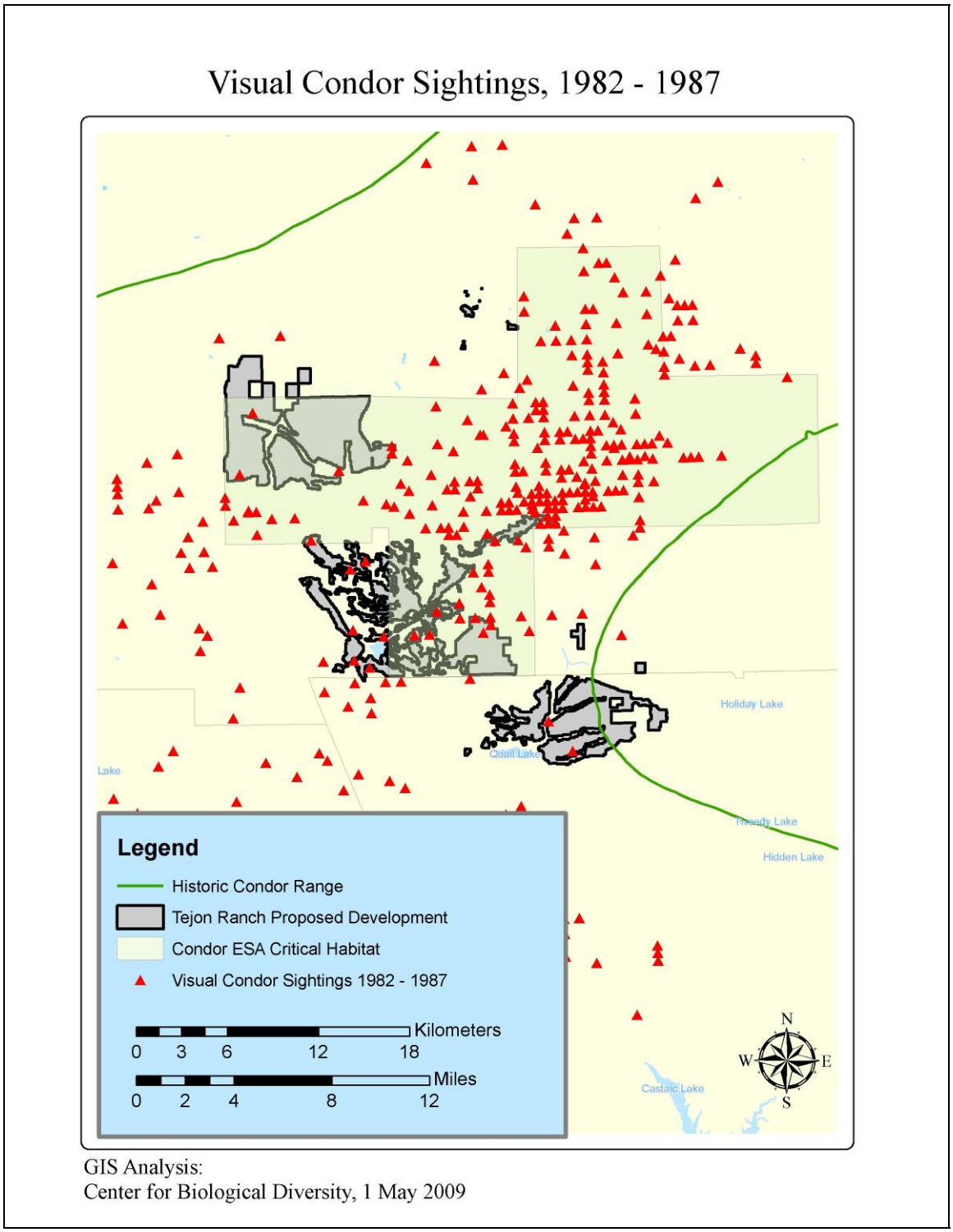


Figure 4. Visual.

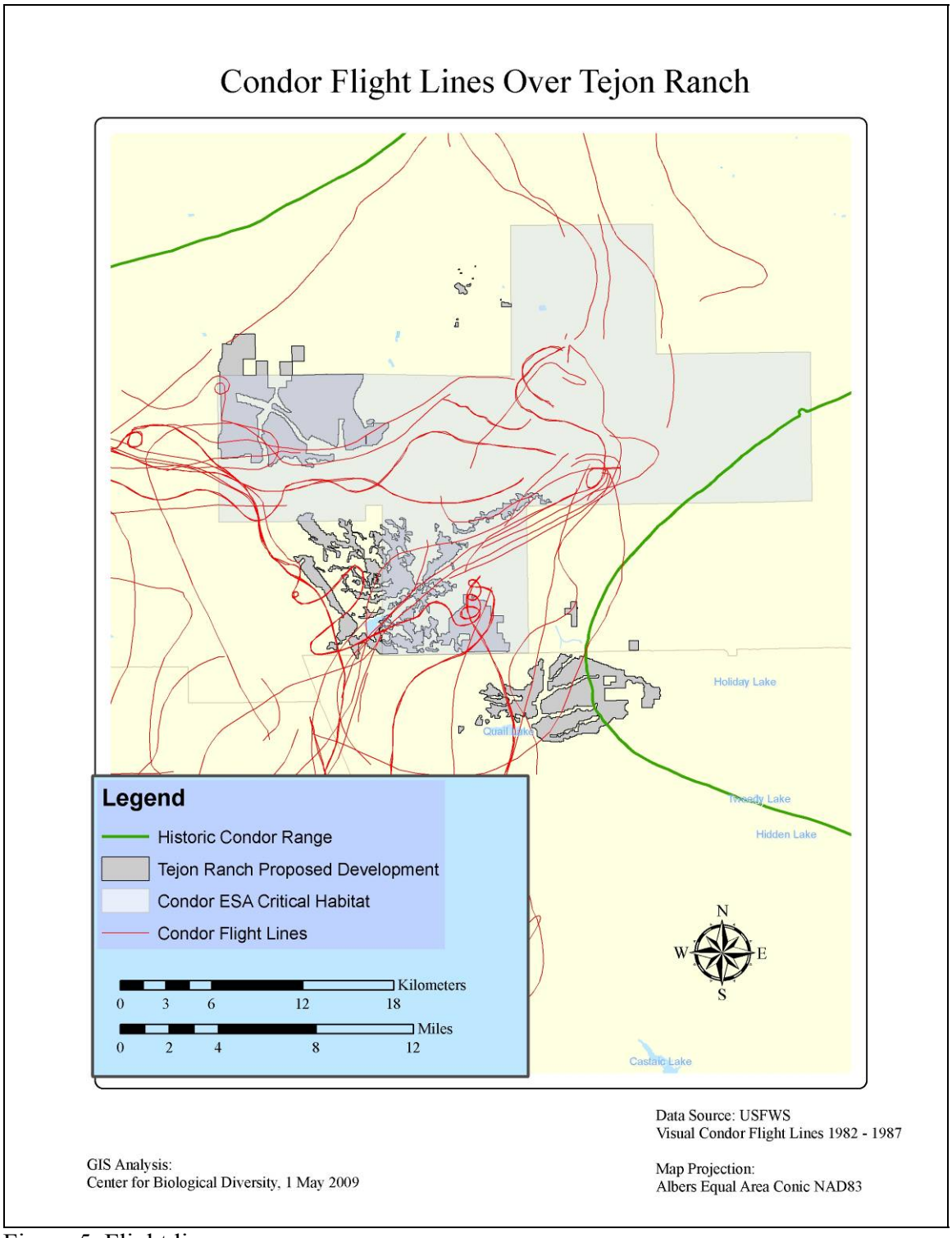
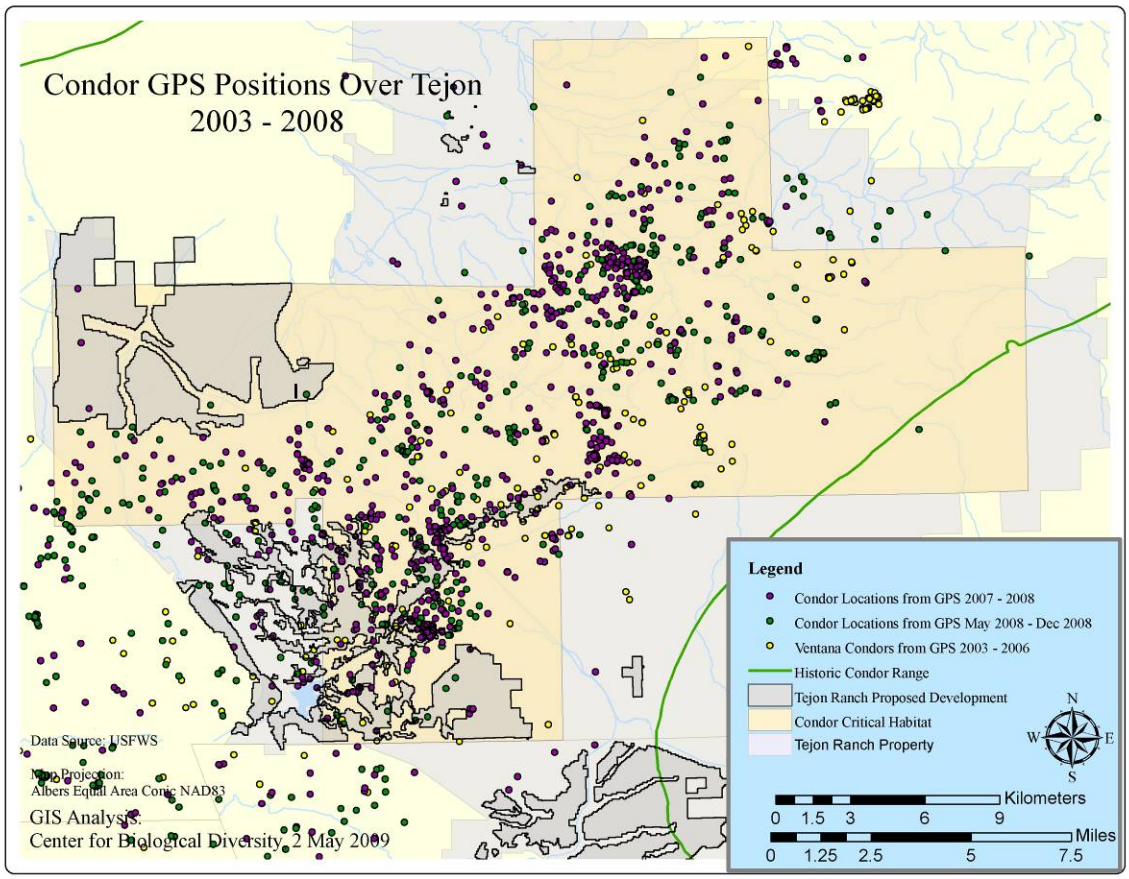


Figure 5. Flight lines.


Condor GPS Positions Over Tejon
2003 - 2008
Legend
Condor Locations from GPS 2007 - 2008
Condor Locations from GPS May 2008 - Dec 2008
Ventana Condors from GPS 2003 - 2006
Historic Condor Range
Tejon Ranch Proposed Development
Condor Critical Habitat
Tejon Ranch Property
N
W
E
S
Kilometers
0 1.5 3 6 9
Miles
0 1.25 2.5 5 7.5
Data Source: USFWS
Albers Equal Area Conic NAD83
GIS Analysis:
Center for Biological Diversity, 2 May 2009
Figure 6. GPS.

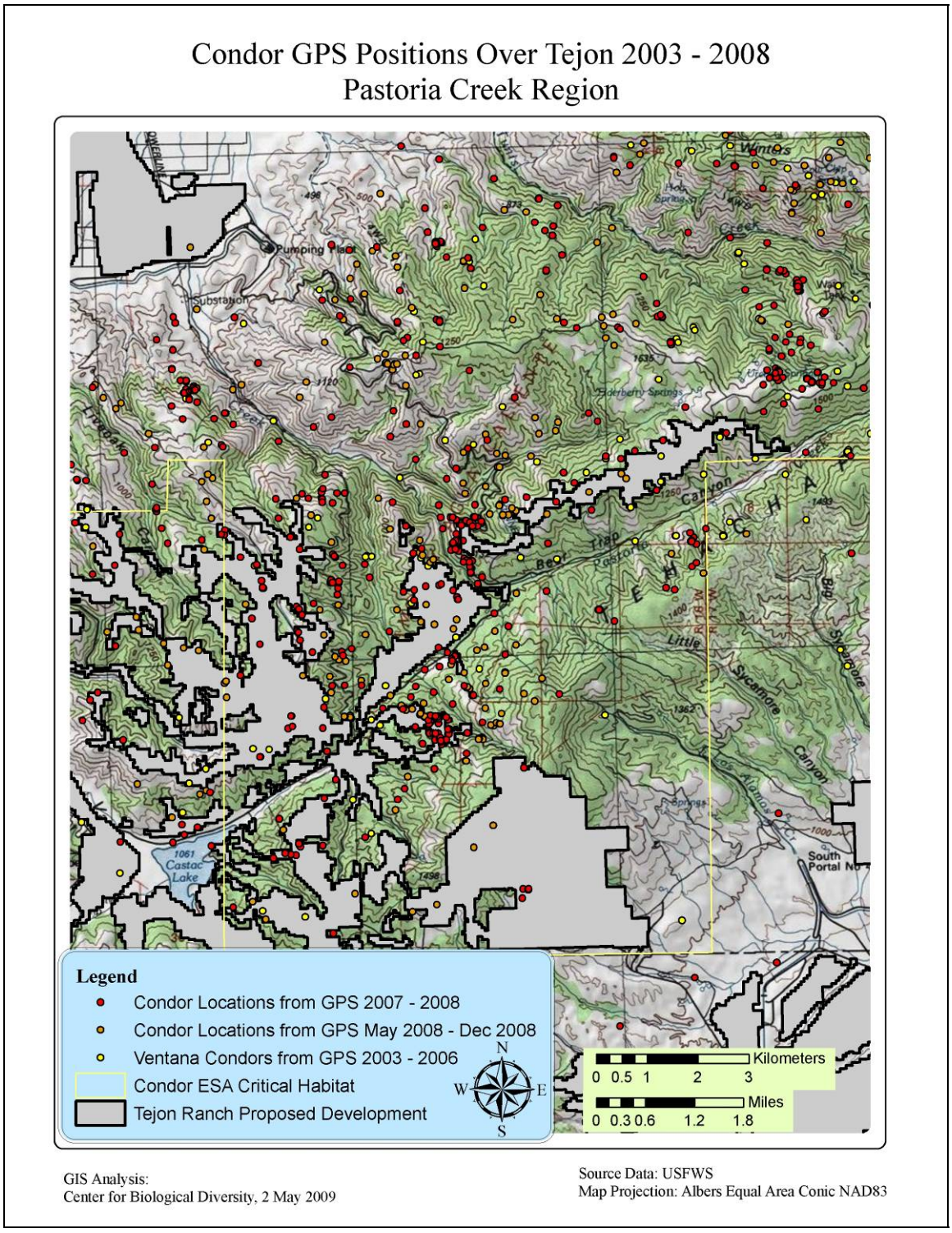


Figure 7. Pastoria Creek.

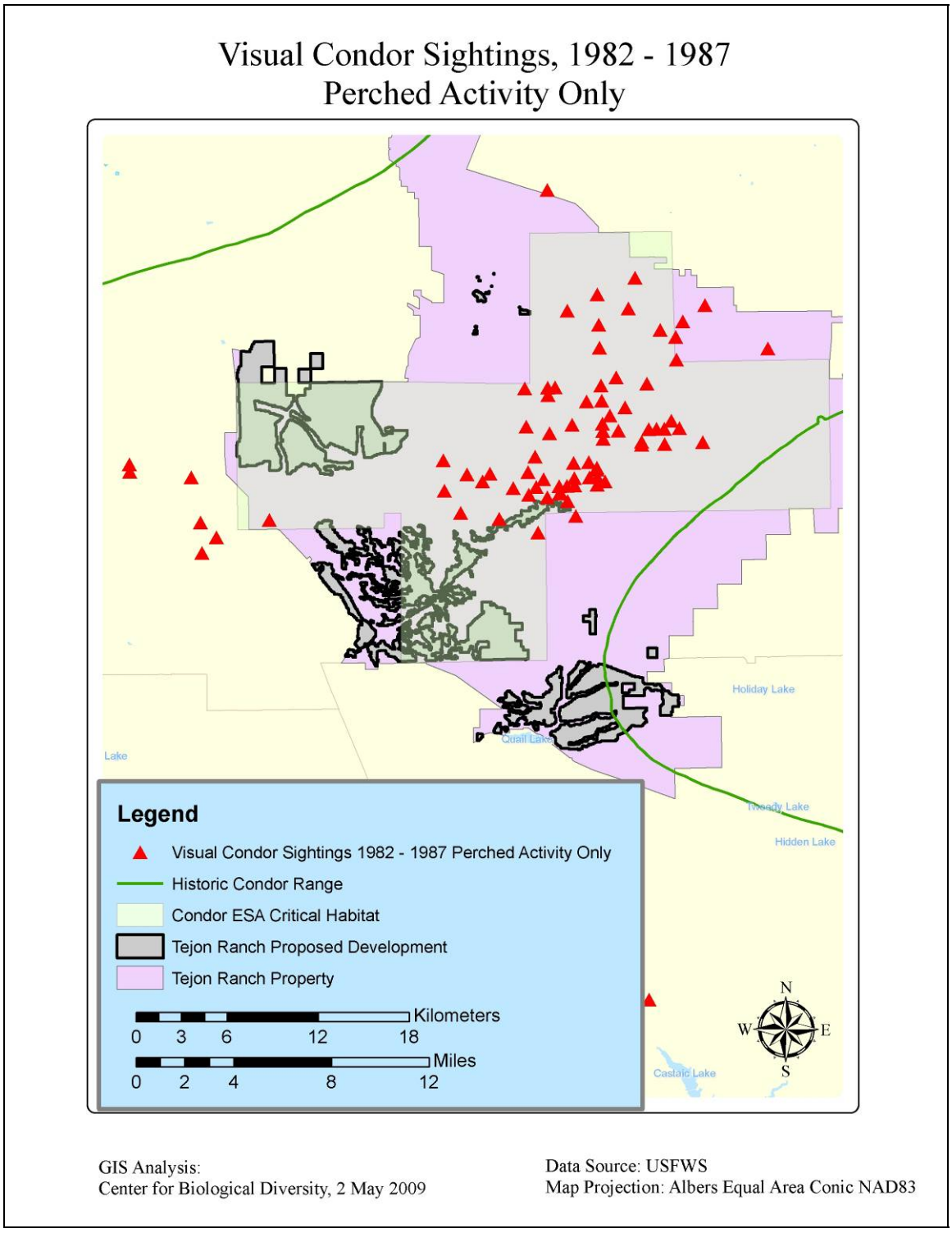


Figure 8. Perched.

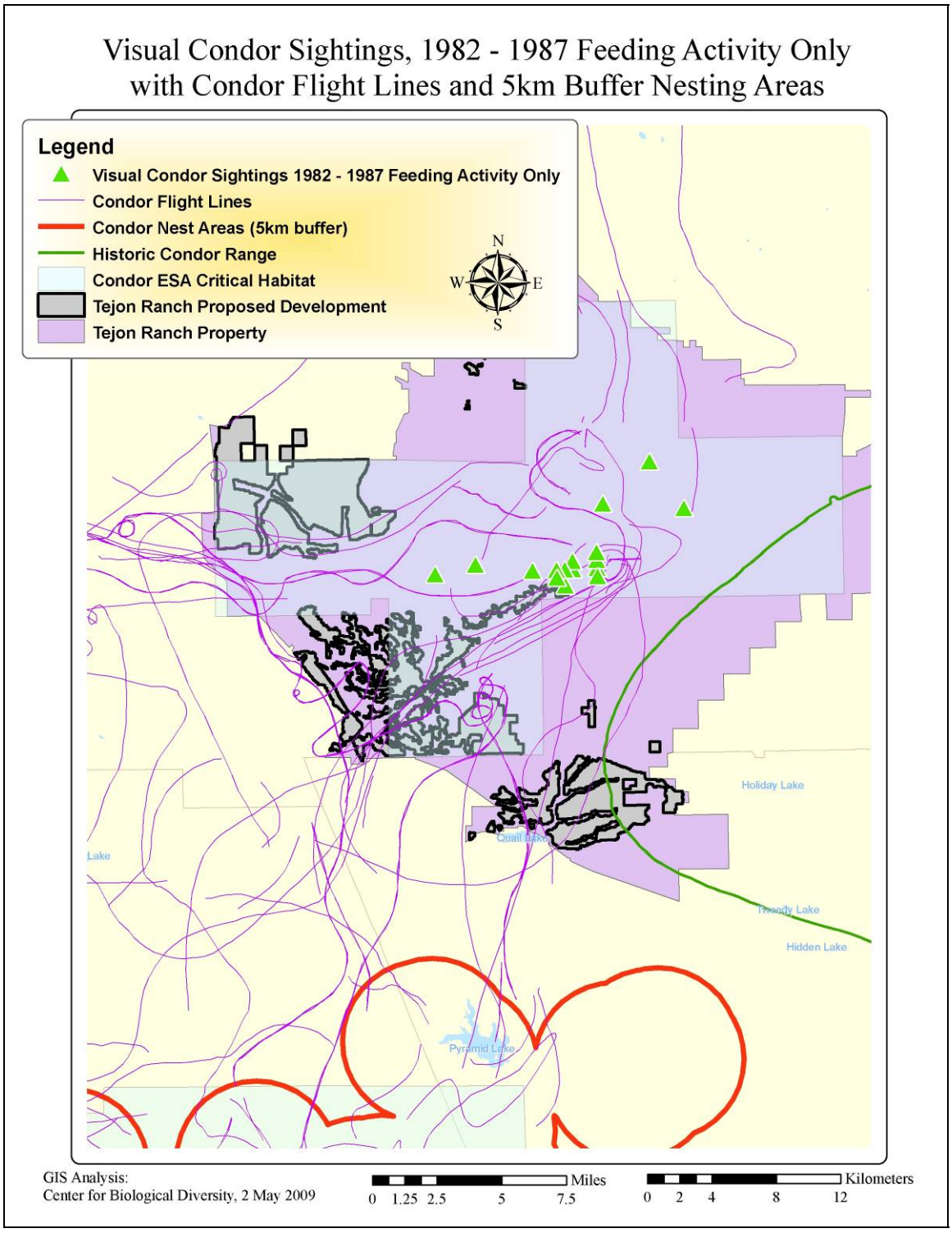


Figure 9. Feeding.

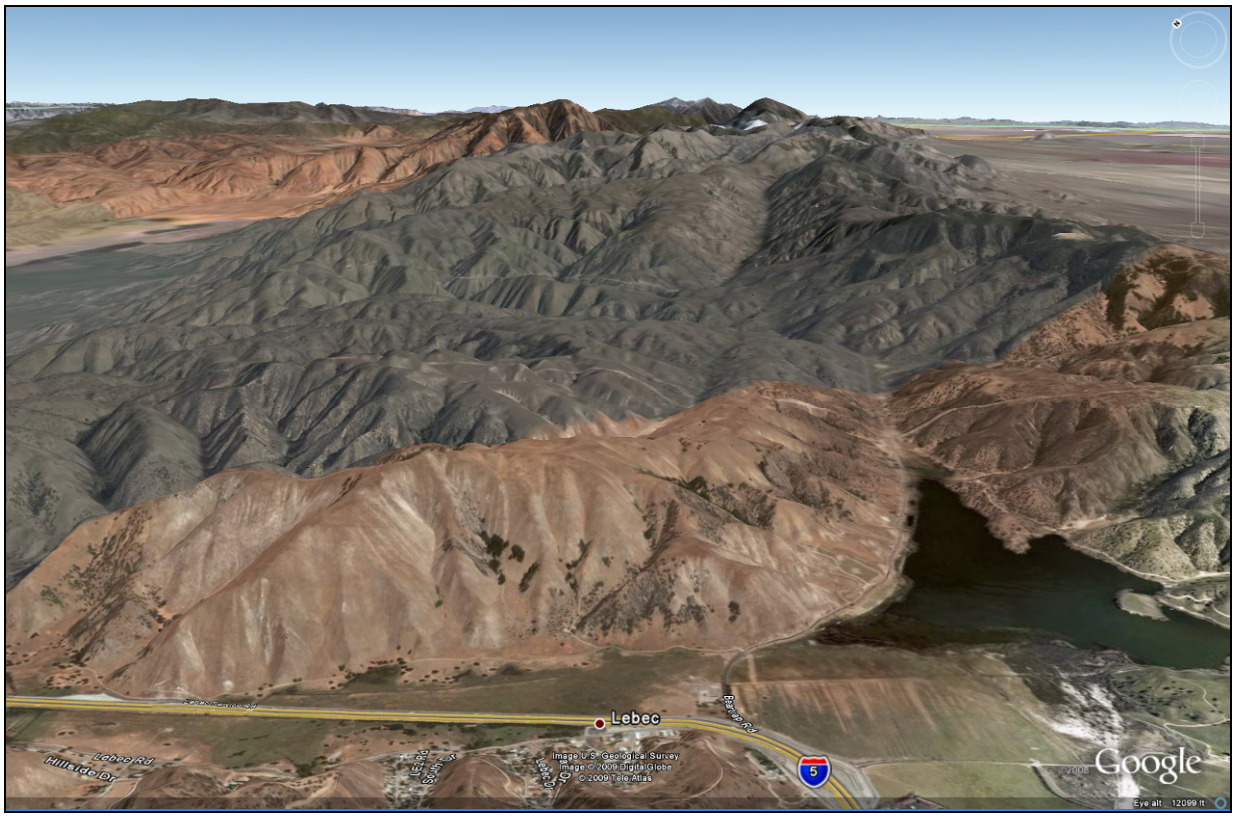


Figure 10. Perspective view looking north-east up Bear Trap Canyon from Castac Lake and Lebec.

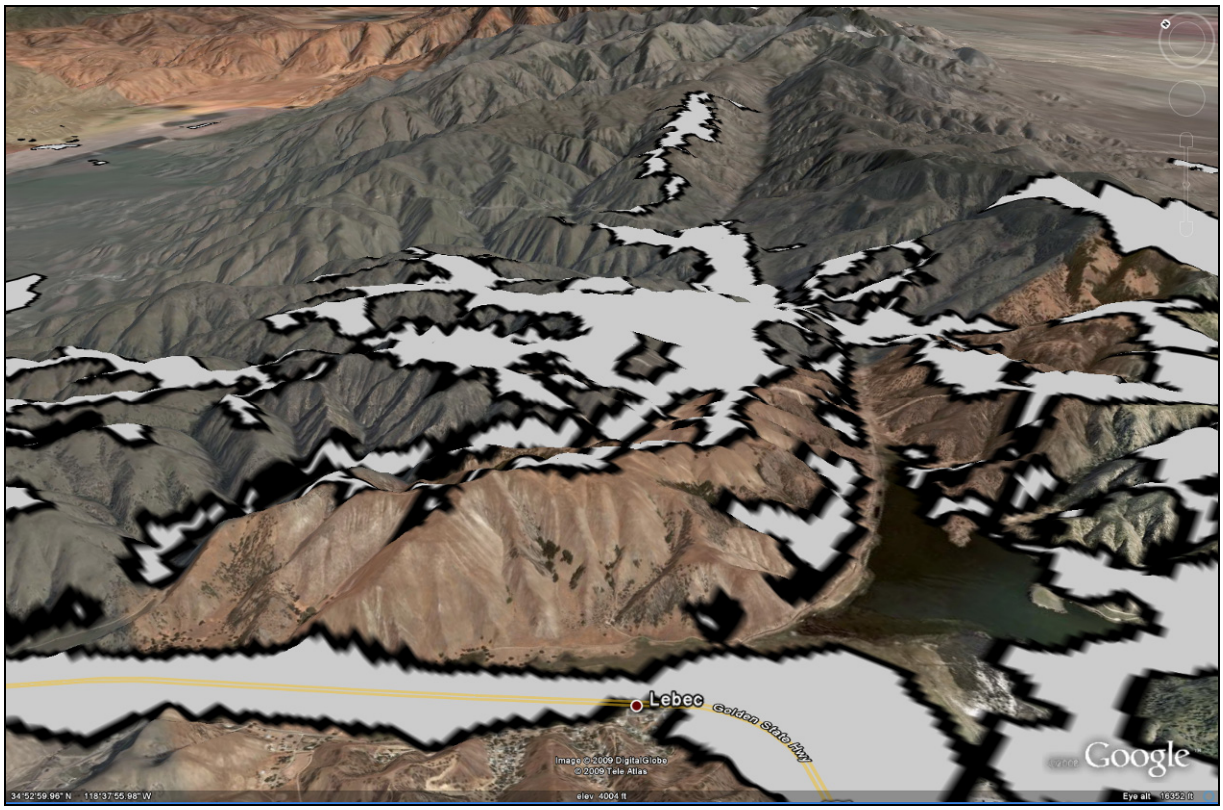


Figure 11. Perspective view looking north-east up Bear Trap Canyon from Castac Lake and Lebec with proposed Tejon Developments indicated by the grey overlay. From this perspective, the combined proposals for the "Grapevine Development", the "Tejon Mountain Village", and the "Centennial Development" present a significant intrusion and connectivity barrier to this habitat area and transition zone flyway.

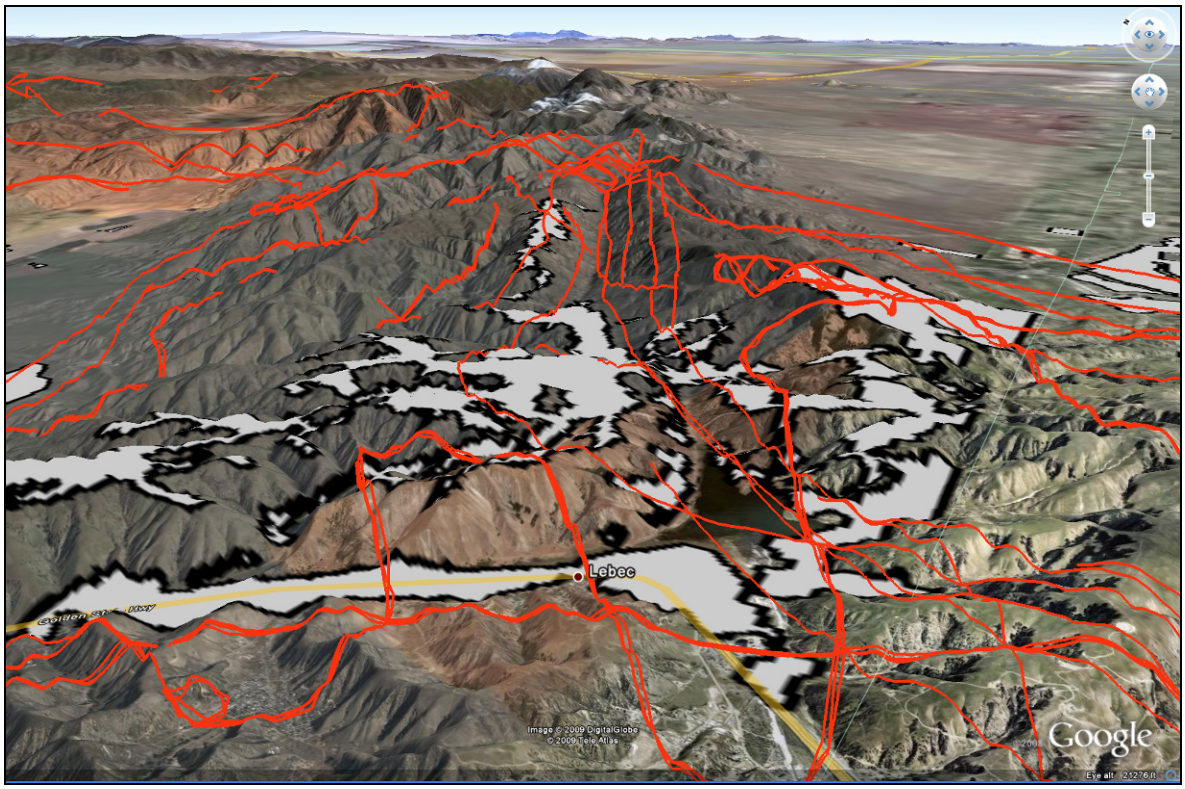


Figure 12. Perspective view looking north-east up Bear Trap Canyon from Castac Lake and Lebec with proposed Tejon Developments in grey and condor flight lines in red. As noted in the accompanying text for Figure 5, the red flight lines are general indications of flight routes, not precise locations. More precise location data is represented in Figure 7, GPS positions over Tejon.

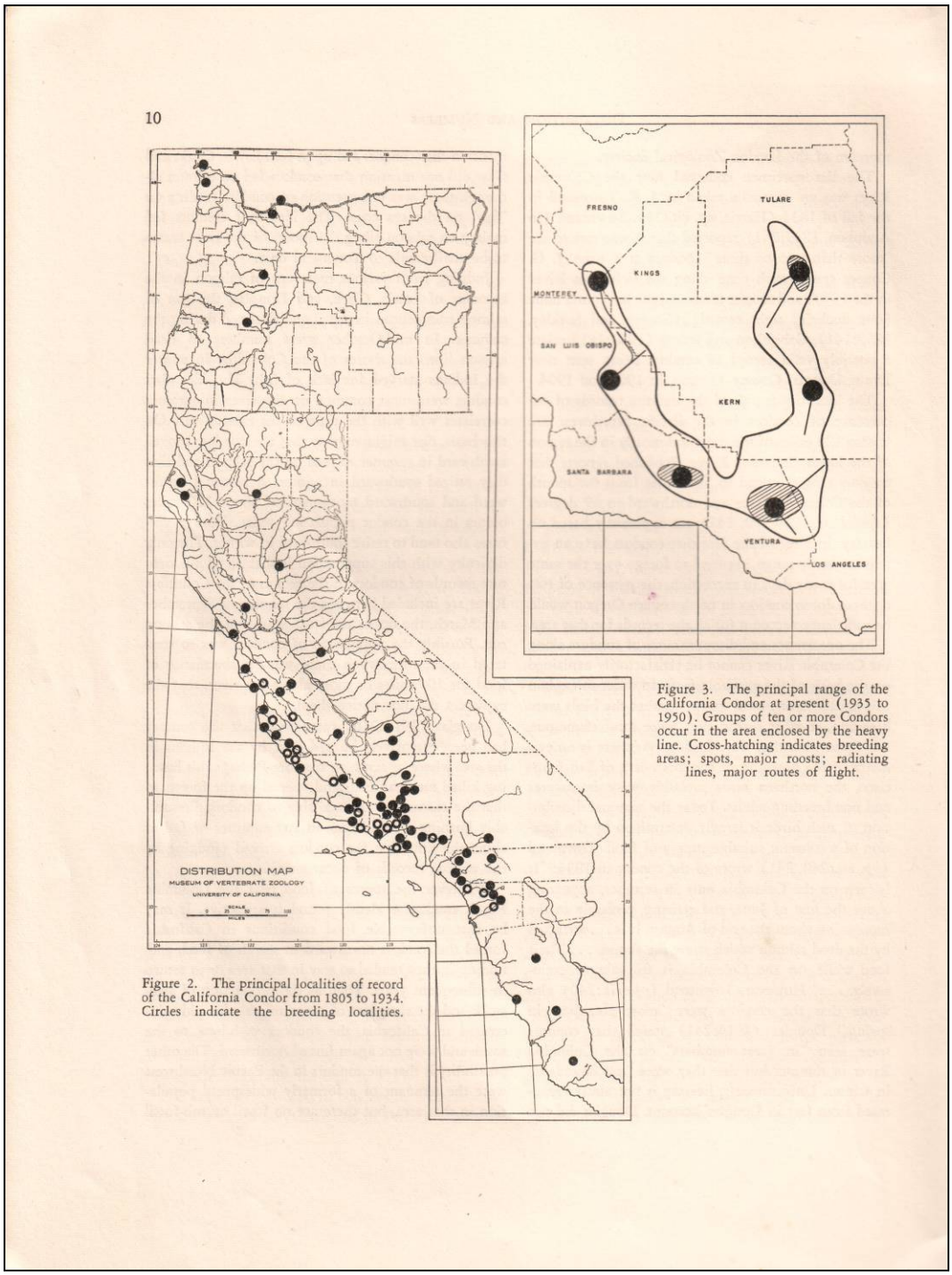


Figure 13. Condor map from Carl Koford's notes (1953, page 10). Note the general trend for flight lines to extend north-east from the Ventura nesting area to the Tejon feeding and roosting area shown in the inset map. The Tejon area flight patterns and habitat use is consistent with the flight line data (Figure 5) and the most recent GPS data (Figure 6).

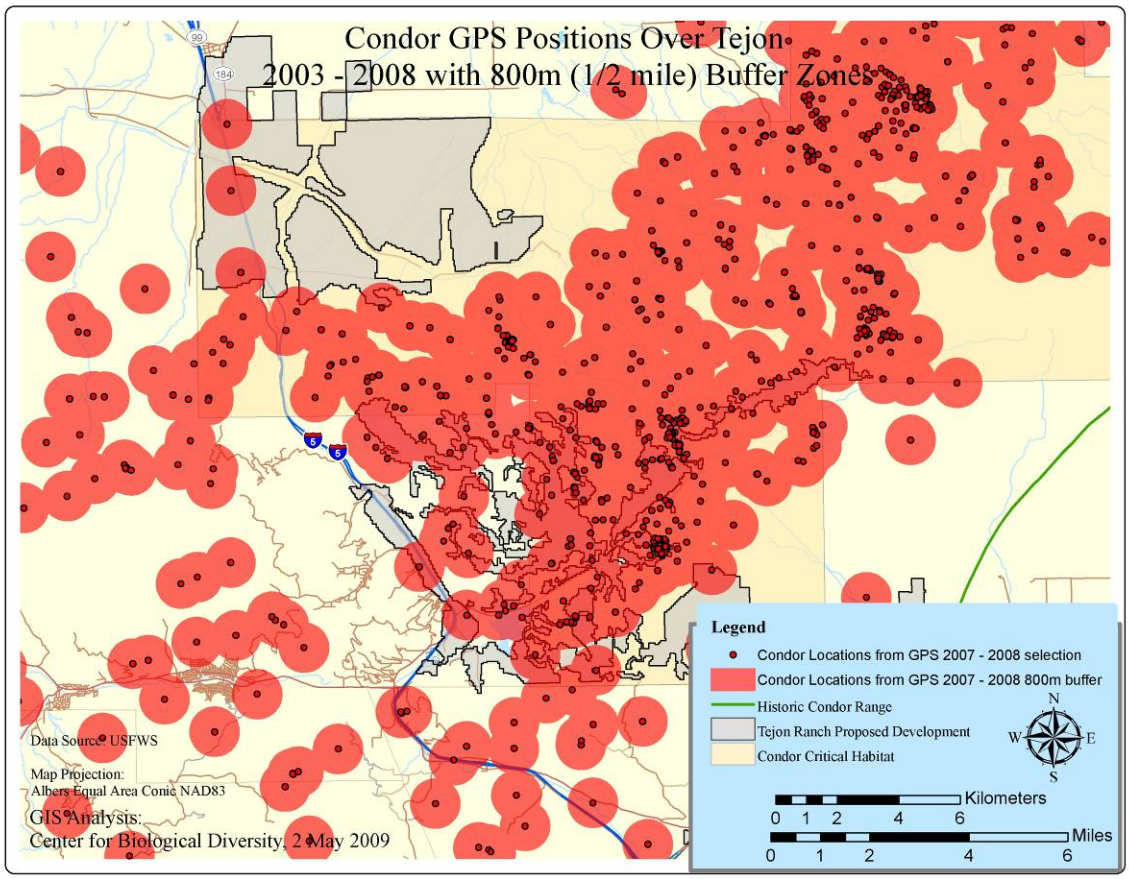


Figure 14. Condor Positions with ½ mile buffer. The high-accuracy GPS positions have been buffered with an 800 meter (1/2 mile) radius in this figure. There is longstanding precedence to protect nesting and other condor activity areas by areas ranging from 500 yards (0.28 miles) to 2.3 miles (see Text Box 1 for citations). While the exact buffer distances required in this case will require further study, the importance of the buffer concept is well documented.

Text Box 1. Human Disturbance and Protective Buffer Distances for California Condors as Recommended by Various Researchers and Agencies

Koford's statements on closures to protect nesting and roosting sites are found on pp 136-137 of his Audubon Research Report #4. 1953.
His most famous statement about the effects of disturbance by humans on nesting condors is found on p. 109.

"One man can keep a pair of condors from the egg all night or prevent the feeding of a chick for an entire day merely by exposing himself within 500 yards of a nest for a few minutes at one or two critical times of the day. Loud noises can alarm condors at distances of over one mile. Individuals or groups of persons moving about must keep at least one-half mile from condor nests in order to void disturbance of the parent birds."

Some of the documents relating to Forest Service closures in the Condor Information System:

00893CON
CARRIER, W.D. 1971.
HABITAT MANAGEMENT PLAN FOR THE CALIFORNIA CONDOR.
U.S. FOREST SERVICE, LOS PADRES NATIONAL FOREST, GOLETA, CALIFORNIA. 53 PP.
Procedures mentioned: Eliminate human activity within ½ mile of roosting and bathing sites.

01827CON
MULDOWNEY, B.K. 1977.
FOREST SERVICE PARTICIPATION IN SAVING THE CONDOR HABITAT.
IN: CALIFORNIA CONDOR--1977. P.P. SCHAEFFER AND S.M. EHLERS (EDS.). NATIONAL AUDUBON SOCIETY, TIBURON, CALIFORNIA. PP. 13-19.
Mentions closing or relocating 36 miles of trails or roads to protect condor habitat. No oil field activities within 1 ½ miles of a condor nest site. Mentions earlier ½ mile closure. Reports that was inadequate.

03080CON
U.S. FOREST SERVICE. 1976.
FOREST SERVICE ROAD USE REGULATIONS [CLOSING THE SLIDE MOUNTAIN ROAD TO ALL PUBLIC MOTOR VEHICLE TRAFFIC.]
DECLARATION NO. 53-1, DATED MARCH 25, 1976. 1 P.
One reason given for closure is "the necessity to protect Condor nesting sites from disturbance"

03083CON
U.S. FOREST SERVICE. 1977.
CONDOR SANCTUARY CLOSURES, LOS PADRES NATIONAL FOREST.

03101CON
U.S. FOREST SERVICE. 1980.
ORDER NO. 01-80-1. WILDLIFE HABITAT AREA CLOSURE. ANGELES NATIONAL FOREST [CONDOR NEST SITE].
SIGNED BY W.T. DRESSER, FOREST SUPERVISOR, ANGELES NATIONAL FOREST, AND DATED APRIL 6, 1980. PASADENA, CALIFORNIA. 2 PP.
This refers to the trail closure for the Red Rock nest site.

Sibley and Wilbur on Disturbance as found in:

03352CON
WILBUR, S.R. 1978.
CALIFORNIA CONDOR, 1966-76: A LOOK AT ITS PAST AND FUTURE.
N. AMER. FAUNA, NO. 72. U.S. FISH AND WILDLIFE SERVICE, WASHINGTON, D.C.136 PP.

Notes on disturbance by humans are found on pp. 34-39. Topics covered are: Flying condors; Roosting Birds; Feeding Birds; Nesting Condors.
Sibley's plotting of the location of active condor nest sites in relation to roads, trails and oil field activity and came up with (condensed) the following minimum distances:
0.8 miles from lightly used dirt roads; 1.2 miles from regularly used dirt roads; 2.2 miles from paved roads; 1.2 miles from oil wells shielded by sight and sound; 2.3 miles from oil wells in view.

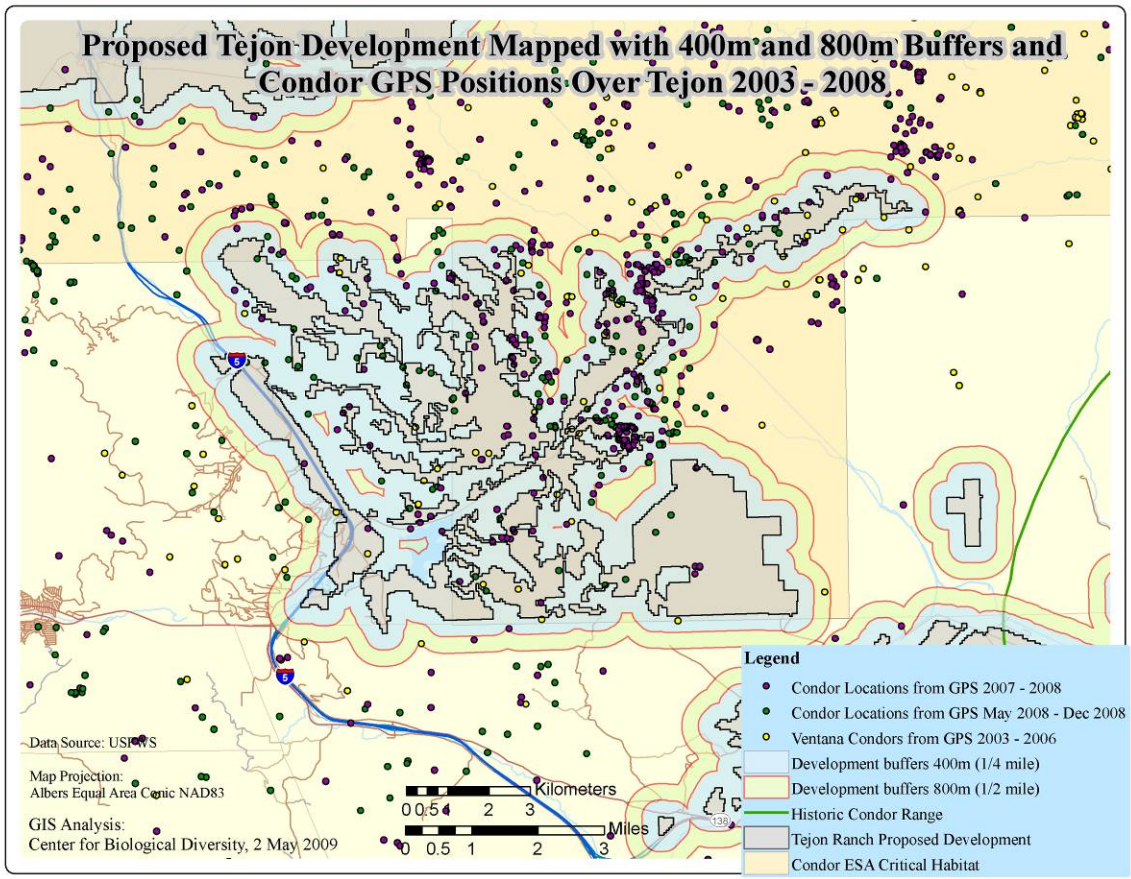


Figure 15. Proposed Tejon Ranch development areas with 400 meter (1/2 mile, shown in blue) and 800 meter (1 mile, in green) buffer extensions. The basic premise represented is the effect that a house and garden patch has a much larger ecological footprint than would be measured from the property lines alone.

Notes:

1) Far more of the condor ESA critical habitat is impacted when buffers are taken into account. The fragmented design of the proposed developments (i.e. linear areas with intermediate "open space") results in a deceivingly low impact when measured by area alone. In such cases, proposed development perimeter length may also be a good indicator of habitat impact.

2) The three proposed Tejon development areas begin to merge when buffers are taken into account, forming a more complete barrier across the WWF ecoregions, the transverse range, and the habitat corridor between nesting and feeding/roosting areas.

3) The number of conflicts between designated critical habitat and condor data points is increased when environmental buffers are taken into account. In this figure the condor data points are represented as simple points for visual clarity, however these points should also be buffered into circles (as in Figure 14) to more accurately quantify impacts associated with development in critical habitat.

EXHIBIT C

Delia "Dee" Dominguez
115 Radio St
Bakersfield, CA **93305**

July 1, 2009

Adam Keats
Urban Wildlands Director
Center for Biological Diversity
351 California St., Ste. 600
San Francisco, CA 94104

Dear Adam,

I am writing to express my concerns with the Cultural Resources section of the Tehachapi Upland Multi-Species Habitat Conservation Plan, in the hope that you will include these concerns in your comments. I am writing in the capacity of a concerned citizen with strong ties to the Tejón Ranch property, and also in the capacity of Most Likely Descendant (MLD) for Kitanemuk and Yowlumne Yokut Indian tribes.

The Cultural Resources section of the HCP contains no reference to the Chumash, Kitanemuk and Yowlumne tribes who resided on present-day Tejón Ranch. Nor does it consider the settlements, cemeteries, and historic schoolhouse that are all documented. In doing so, the Cultural Resources section omits the most significant cultural resources of all.

Indian Settlements (Attachment "A")
My ancestors lived in long-established settlements in many of the canyons surrounding Castac Lake (wrongly called Tejón Lake by the developers), and evidence of their settlements remain throughout the area. Generally speaking, Chumash Indians lived in the vicinity of Kashtiq (now underwater because of Castac Lake expansion), while the Kitanemuk and Yowlumne tribes lived in the canyons east and north of the lake. General Beale forced all of these tribes to move to present-day Tejón Canyon, which made it the last Indian settlement on the property. The U.S. Government actually sued Tejón Ranch for this forced removal of Kitanemuk, Yowlumne and Chumash, in a case that went all the way to the U.S. Supreme Court, meaning that federal government should have been well aware of these settlements already.

Because Tejón Ranch has historically blocked access to the property by MLD's such as myself, many of these settlements have not been officially identified. However, I have conducted extensive research on the history of my ancestors' movements on the ranch. As part of this research I have discovered the existence of depositions taken by archaeologist (and translator) J.P. Harrington in 1922, on behalf of the U.S. Government, in its suit against Tejón Ranch for the forced removal of the Indians. The depositions are from Indians who were moved themselves, and were the oldest members of the Tribe. They were 70, 80, 90 and over 100 years old. Each one of them spoke of where they

were born, where their parents were born, where they hunted, fished, gathered acorns, berries, pinenuts, described the elk drives on the plain all the way to Kern Lake, and many other things and places they named in their native languages, Kitanemuk & Yowlumne. This included Eugenia Mendez, who was my Great, Great, Great Aunt who lived on Paso Creek at the Huerta de Arriba, as did my Great Great Grandmother Magdalena Olivas. All of the creeks and canyons had settlements from Canada de las Uvas/Grapevine Creek- Lapau, Matapquelequel, Aliso Creek, Pastoria Creek, Paso Creek- Mavea, Tahtakwakahavea, Ahheavea, Mumumpea, Tinliu & Tsuitsaw, and Tejon Creek- Pusin Tinliu, Kutsitahovea, Pishapeshpea, Nakwalkivea.
The deposition of Maria Chololo, my Great Great Step Grandmother also references the settlements of Tinliw, Tsuiteaw, Hoshtigw,Yauliw, Posun Tinliw, "and others." Tinliw in particular was one of the original and largest settlements, located where General Beale built his original headquarters on Paso Creek.

Historic Schoolhouse (Attachment "B")
This schoolhouse on Tejón Ranch was the first school in California built explicitly for teaching of Indian children, it is the third building used as a schoolhouse, making it a historical landmark. A small group including myself worked closely with the Ranch to restore and preserve this schoolhouse as recently as August 9 & 10, 2008. The precise location of the schoolhouse is identified in a map drawn by Tejón Ranch Company in Attachment 2. This schoolhouse deserves to be placed on the National Register of Historic Places due to its cultural importance, and its absence from the cultural resources section raises serious questions as to whether the Fish and Wildlife Service actually surveyed the property for cultural resources.

Sacred Burial Sites
Most disturbing of all, the Cultural Resources section ignores at least four sacred burial sites on the property that should not be disturbed under any circumstances.

1. Tejón Creek: this cemetery is fenced-off and is already well-known to Tejón Ranch. Even so, it must be identified and protected.

2. Paso Creek: this cemetery was referred to as "Huerta de Arriba," in reference to its location behind an orchard above and west of the old headquarters. I have never visited this site but I know that several of my ancestors are buried there. I do not know if the site is currently marked and protected, but it should be identified and preserved nonetheless. This cemetery is probably the site of burial from the Indians who lived at Tinliw

3. Kashtiq (Castac Lake): The well-documented Indian village of Kashtiq is the namesake for Castac Lake, and was situated on the edge of the old, seasonal water body. However, Tejón Ranch flooded this site when it expanded the boundaries of the lake while making it permanent. Because such an established, well known settlement was certain to have a cemetery, Kashtiq must be regarded as another sacred burial site. The

fact that the Ranch buried the site underwater (!) clearly demonstrates just how careless and callous they have been in their treatment of sacred sites.

4. East of Castac Lake: this "cemetery" is located off the road leading east from Castac Lake for approximately ½ mile. It was first disclosed to me by Tejón Ranch in **September 2001** under extremely odd circumstances. The State of California Native American Heritage Commission , Rob Wood called me by telephone and requested I visit the "cemetery" site as Most Likely Descendant after Dave Whitley, Archaeologist and Richard Angulo, Chumash monitor from Ventura, supposedly discovered a burial site near Castac Lake during an "excavation" for seismic testing.

Problems With "East of Castac" Lake Burial Site
When I arrived, I discovered a very secluded location, in which there was literally piles of bones scattered inside of, and out of a trench 75 yards long and 20 feet deep. I requested that the bones be picked up and returned to "how they were," although I knew this would be impossible since they had apparently dug up all of the graves and appeared to have been scattered by the bull dozer on site. The fact that apparently almost all of the graves had been dug up surprised me, since the Ranch claims there was both a monitor and an archaeologist supervising the excavation. There were 2 graves exposed in the eastern wall of the trench and a burn area which may have been a hearth, estimated at 2,000 years old. The graves were 6 to 9 feet from the top of the trench, and were close together in proximity.

The unique disposition of this "cemetery" led me to the following conclusions:

(A) Procedures for protection of these graves were either non-existent or lax, because if even one grave is discovered, no further disturbance of land should have occurred, and the disturbance of the ground should have stopped immediately, subsequently the Native American Heritage Commission should have been contacted immediately including the coronor. This calls into question what exactly the "monitor" or "archaeologist" was doing and raises the larger question of whether supposed monitoring on Tejón Ranch in general was actually performed.

(B) Not a single funereal artifact accompanied the bones. Not even a single bead. This means, at minimum, that the graves were robbed and looted, even though the cemetery had supposedly just been discovered during excavation. How this is possible remains a mystery, but Indians were never buried without funereal artifacts (such as **clam shell beads).**

(C) Indian cemeteries were not placed in secluded or hidden locations; to the contrary, they were placed in the open near existing settlements. Given the lack of any funereal items whatsoever, and only 2 identifiable graves, (there was only a pile of bones when I

visited), I suspect that this "cemetery" was not actually a cemetery at all but the place where the Ranch would deposit bodies from other Indian cemeteries on the Ranch. This possibility would explain why the "cemetery" was in such a secluded location, and would also explain the lack of funereal items at the site. One possible explanation is that the bones from the cemetery at Kashtiq were deposited here before Tejón flooded the site thru expanding the lake boundaries.

Due to these concerns, this site needs analysis by an independent archaeologist who must determine if there actually was a cemetery at this site. Regardless of the outcome of such an investigation, this site should be considered sacred and protected as such. I had told Andrew Daymude, Tejon Ranch representative to be sure the site had an additional cover of soil, and that no house or buildings be erected there.

In conclusion, I hope the Fish and Wildlife Service will take my concerns into account when assessing the quality of the analysis presented by the Fish and Wildlife Service in the Cultural Resources section of the HCP. Please note that I also find the Archaeology section of the DEIR for Tejón Mountain Village severely flawed, as it misses many sites and fails utterly to protect those sites that are listed. I will comment on the DEIR separately, but I want to make certain that nobody at Fish and Wildlife considers use of the DEIR analysis to be an adequate solution. Therefore, the Fish and Wildlife Service must start over with its analysis, thoroughly document the settlements and cemeteries with in the HCP boundaries, and work to protect and preserve these sites.

Sincerely,

Delia "Dee" Dominguez
Kitanemuk and Yowlumne Tejón Indians