

Effects of the Proposed Action on Listed and Proposed Plants

Project-related vehicular traffic, grading of new and improved roads, excavation for transmission lines, and wildfires, should they inadvertently be started during project activities, could negatively affect local populations of all the listed plant species addressed in this biological opinion. Except for the possibility of wildfires, these hazards will be greatest in the immediate vicinities of roads, the transmission corridor, and along overland travel routes. Actions related to construction, such as grading, excavation, clearing for staging/storage areas, and other ground-disturbing activities, may cause direct loss of plants and loss of occupied and potential habitat. In addition, these activities will increase the opportunities for introduction and dominance of aggressive, non-native plant species that are competitive with the listed and proposed plants. Construction through occupied habitat fragments populations and may restrict gene flow, thereby reducing the species' ability to survive. Species that may occur in the project area, such as Hoover's eriastrum, and San Joaquin woolly-threads may be damaged or destroyed by subsequent routine maintenance.

Potential effects to listed plants include direct mortality from earth grading or excavation or crushing by vehicles. Adverse effects also could result from soil erosion resulting in loss of the supporting substrate for plants, or from soil compaction resulting in reduced germination rates. Impacts to plants occurring after seed germination but prior to seed set could be particularly harmful as both current and future generations would be adversely affected.

San Joaquin woolly-threads and Hoover's eriastrum have not been observed along the transmission line corridor. Low to average precipitation during the survey period may have precluded the surveyor's ability to locate the plants. If found during pre-construction surveys, listed plants will be avoided by rerouting access routes. Construction of the transmission line will permanently and temporarily impact an unknown amount of Hoover's eriastrum and San Joaquin woolly-threads habitat. Measures contained in the Biological Assessment and Mitigation Action Plan will minimize impacts to listed plant species associated with the proposed project.

However, avoidance measures to be taken for these species should minimize the chance of mortality. If populations of these plants are observed in subsequent surveys, exclusion zones and topsoil stockpiling would be implemented to reduce the effects of the temporary impacts. Furthermore, because Hoover's eriastrum readily colonizes disturbed areas, the impacts of construction activities on that species may be reduced.

Indirect effects of project activities on all listed plant species include loss of soil structure, fertility, water holding capacity, and cryptogamic crusts, which seem to be an essential microhabitat feature for some rare plant species. Fragmentation essentially isolates locations of plants from other locations so that cross-pollination between locations becomes unlikely. This isolation can result in distinct genetic populations and the ultimate decline in some species because of the lack of genetic variability within populations. Development of roads associated with transmission lines and associated facilities increase access for off-road vehicle use, fragment populations, and contribute to additional habitat damage.

However, avoidance and minimization in the form of (1) pre-project surveys for listed and proposed plants and animals, (2) avoidance of impacts in listed and proposed plant and animal habitat, (3) avoidance of vernal pools and swales and associated watersheds, and (4) acquisition of appropriate compensation areas, will likely minimize the effects of the proposed action.

Other Species of Concern. Loggerhead shrikes, western burrowing owls, California horned larks, tri-colored blackbirds, golden eagles, northern harriers, prairie falcons, San Joaquin antelope squirrels, rayless ragwort, round-leaved filaree, California androsace, Lost Hills crownscale, crownscale, recurved larkspur, gypsum-loving larkspur, protruding buckwheat, cottony buckwheat, Idria buckwheat, San Benito poppies, and forked fiddleneck are other species of concern found during the surveys. All of these species are often found in habitats associated with the listed species discussed above. Mitigation measures designed to minimize impacts to the listed species will also minimize impacts to these species. One proposed structure location (structure 40/2) will have an impact on a San Joaquin antelope squirrel burrow complex (Jones & Stokes 2003b).

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Numerous non-Federal activities continue to eliminate habitat for the San Joaquin kit fox, giant kangaroo rat, blunt-nosed leopard lizard, bald eagle, California condor, Hoover's eriastrum, or San Joaquin woolly-threads in the action area. Loss and degradation of habitat affecting both animals and plants continues as a result of urbanization; oil and gas development on private lands; road and utility right-of-way management; flood control and water banking projects that may not be funded, permitted, or constructed by a Federal agency; overgrazing by livestock; and continuing agricultural expansion. Listed and proposed animal species are also affected by poisoning, shooting, increased predation associated with human development, ground squirrel reduction efforts, mosquito control, and reduction of food sources. Extinction of several remaining populations of some of these species appears likely, due to chance fluctuation of small populations, or due to one of the factors cited above, unusual climatic events, or to the loss of genetic fitness commonly associated with very small population sizes. The cumulative effects of these known actions pose a significant threat to the eventual recovery of these species.

The current strategy for recovery of listed species is to secure large contiguous blocks of habitat to support core populations. In addition, land connecting the large core areas would be managed to support scattered populations and to serve as corridors between core areas. Rehabilitation of disturbed lands may also be necessary to provide sufficient habitat to support populations that will remain stable in perpetuity.

Agencies and organizations, such as the CDFG, The Nature Conservancy, the Center for Natural Lands Management, the BLM, and the Service, have begun to secure some of the core lands identified as important for recovery. Several local planning efforts which are focused on reducing the impacts of urbanization and industrialization on listed species are also underway. These positive actions may reduce the likelihood that the continued existence of these species will be jeopardized in the short term. These actions, however, are not expected to be sufficient to lead to the downlisting of these species in the long term, and may not be sufficient to protect the species from extinction in the long term.

WAPA's objective for developing the Path 15 Project is to transfer power to a mix of wholesale and retail customers in the newly deregulated California electricity market. The Service acknowledges that the Path 15 Project may have growth-inducing effects within its service area. However, the location and extent of service area effects from the project has not been determined. To the extent that action areas for future section 7 consultations will overlap with the service area of the Path 15 Project, the Service believes these potential indirect, service area effects will be addressed. For example, the Service expects to address many of these effects in future consultations on Central Valley Project (CVP) water contract renewals which will also address growth-induced service area effects. To the extent that power from the Path 15 Project has service area effects beyond areas also served by CVP water, the location of those effects has not been determined. For the purposes of this consultation, the action area for the Path 15 Project is considered to be western Fresno and western Merced Counties.

Conclusion

After reviewing the current status of the San Joaquin kit fox, giant kangaroo rat, bald eagle, California condor, blunt-nosed leopard lizard, Hoover's eriastrum, and San Joaquin woolly-threads, the environmental baseline for the action area, the effects of the proposed Path 15 Project, and cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the listed species covered under this biological opinion, and is not likely to destroy or adversely modify designated critical habitat.

No critical habitat has been designated for San Joaquin kit fox, giant kangaroo rat, bald eagle, blunt-nosed leopard lizard, Hoover's eriastrum or San Joaquin woolly-threads, therefore, none will be affected. Critical habitat has been designated for the California condor, however no destruction or adverse modification of that critical habitat is anticipated from this project.

INCIDENTAL TAKE STATEMENT

Section 9(a)(1) of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened fish and wildlife species without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent

as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

Sections 7(b)(4) and 7(o)(2) of the Act, which refer to terms and conditions and exemptions on taking listed fish and wildlife species do not apply to listed plant species. However, section 9(a)(2) of the Act prohibits removal or reduction to possession and malicious damage or destruction of such species on Federal lands and the removal, cutting, digging up, or damaging or destroying such species in knowing violation of any State law or regulation, including State criminal trespass law. Actions funded, authorized or implemented by a Federal agency that could result in the removal or destruction of such species on Federal lands are not a violation of the Act, provided the actions are not likely to result in jeopardy to the species. The California Native Plant Protection Act prohibits the take of State-listed plants. The California Endangered Species Act regulates the take of State-listed animals.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to WAPA, as appropriate, in order for the exemption in section 7(o)(2) to apply. WAPA has a continuing duty to regulate the activity covered by this incidental take statement. If WAPA (1) fails to adhere to the terms and conditions of the incidental take statement, and/or (2) fails to retain contractor oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

San Joaquin Kit Fox, Giant Kangaroo Rat, and Blunt-nosed Leopard Lizard

The Service expects that incidental take of San Joaquin kit foxes, giant kangaroo rats, and blunt-nosed leopard lizards will be difficult to detect or quantify for the following reasons: Their relatively small body size make the finding of a dead specimen unlikely, losses may be masked by seasonal fluctuations in numbers or other causes, and the species occur in dens and burrows. Due to the difficulty in quantifying the number of San Joaquin kit foxes, giant kangaroo rats, and blunt-nosed leopard lizards that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of individuals that are present in the habitat that will become unsuitable for the species as a result of the action.

Therefore, the Service estimates that 299.72 acres of habitat for the San Joaquin kit fox will become permanently unsuitable as a result of the proposed action, and 442.43 acres of San Joaquin kit fox habitat will become temporarily unsuitable. The Service estimates that 289.89 acres of habitat for the giant kangaroo rat, and blunt-nosed leopard lizard will become permanently

unsuitable as a result of the proposed action, and 409.38 acres of habitat for these species will become temporarily unsuitable. Upon implementation of the following reasonable and prudent measures, incidental take associated with the Path 15 Project on these acres in the form of harm, harassment, or mortality to San Joaquin kit foxes, giant kangaroo rats, and blunt-nosed leopard lizards from habitat loss, capture, relocation, excavation of dens and burrows, and loss of forage/prey will become exempt from the prohibitions described under section 9 of the Act for direct impacts. Harassment from project-related noise and vibration, and the displacement of individuals within the above acreages, and an additional 100-foot area adjacent to the project and any access routes will be exempt from the prohibitions described under section 9 of the Act, provided that such harassment: (1) is the result of bona fide project activities; and (2) that all terms and conditions specified below are fully implemented. In addition, incidental take in the form of harm, harassment, or mortality associated with the Path 15 Project on these acres of habitat will be exempt from the prohibitions described under section 9 of the Act for indirect impacts as a result of the management activities described.

California Condor and Bald EagleThe Service anticipates incidental take of California condors and bald eagles may occur as a result of implementing the proposed project. Incidental take is possible in two forms. One form is harassment associated with the maintenance of the transmission line which could disturb perching or feeding California condors or bald eagles. The second form of take is likely to occur in the form of killing or harm from collision and/or electrocution with the proposed transmission line. The Service is quantifying take incidental to the project as one California condor and one bald eagle.

The incidental take statement associated with the proposed action is hereby exempted from prohibitions of take under section 9 of the Act. It does not address the restrictions or requirements of other applicable laws.

Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the listed wildlife species in this opinion or result in destruction or adverse modification of critical habitat.

Reasonable and Prudent Measures

The following reasonable and prudent measures are necessary and appropriate to minimize the impact of the Path 15 Project on San Joaquin kit foxes, blunt-nosed leopard lizards, giant kangaroo rats, bald eagles and California condors exempted by this opinion.

1. Implement conservation measures for the San Joaquin kit foxes, blunt-nosed leopard lizards, giant kangaroo rats, bald eagles and California condors to minimize (1) the effects of the loss of habitat that will occur as a result of the project; (2) the potential for harassment, harm, injury, and mortality to the San Joaquin kit foxes, blunt-nosed leopard lizards, giant kangaroo rats, bald eagles and California condors; and (3) the potential for

inadvertent capture or entrapment of federally listed wildlife species during construction and operation activities.

2. Ensure compliance with this opinion by WAPA and their contractors.

Terms and Conditions

In order to be exempt from section 9 of the Act, the WAPA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

1. To implement reasonable and prudent measure number one, the WAPA shall comply with the following conditions:
 - a. Construction of the proposed project will start within 3 years of the date of this Biological Opinion or WAPA will reinitiate consultation.
 - b. A qualified biologist will be designated to supervise pre-activity surveys, and construction activities as they relate to listed species. The Service will approve the selection of the qualified biologist.
 - c. A sensitive species awareness education training will be mandatory for all on-site personnel through both construction and operational phases of the Path 15 Project. The training will provide workers with information on their responsibilities with regard to listed species, an overview of the life-history of the species, information on take prohibitions, and an explanation of the relevant terms and condition of this opinion.
 - d. New workers to the project will receive training within the first 3 days of their start date.
 - e. Pre-activity surveys will be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. Surveys will be conducted of the proposed work zones and a 1000 foot buffer area for San Joaquin kit fox dens, and a 100 foot buffer area for all other biological resources.
 - f. Minimum exclusion zone radii for all project activities are as follows:
 - (1) 1000 feet from occupied San Joaquin kit fox natal or pupping dens, and notify the Service
 - (2) 150 feet from known San Joaquin kit fox natal or pupping dens
 - (3) 100 feet from occupied San Joaquin kit fox dens
 - (4) 100 feet from known San Joaquin kit fox dens

- (5) 50 feet from potential San Joaquin kit fox dens
 - (6) 50 feet from giant kangaroo rat burrow systems
 - (7) 50 feet from potential or known San Joaquin antelope squirrel burrows
 - (8) 50 feet from potential or known blunt-nosed leopard lizard burrows
 - (9) 50 feet from Hoover's eriastrum (Hoover's woolly-star)
 - (10) 100 feet from all other listed plants
 - (11) Natural vernal pools and natural ponded waters will be avoided by 30 feet unless specifically authorized under a U.S. Army Corps of Engineers Section 404 permit.
- g. Ground-disturbing activities are restricted during the following time periods to protect the indicated species:
- (1) Kit foxes: if occupied natal dens are found, surface-disturbing activities within a quarter mile of natal dens shall not occur between December and May.
 - (2) Blunt-nosed leopard lizards: surface-disturbing activities that occur in areas where blunt-nosed leopard lizard habitat has been identified shall occur only during daylight hours (a) from April 15 to June 30 and August 1 to September 15 and (b) only during daylight hours on other dates if air temperatures are between 25 and 35 degrees Centigrade and soil temperatures are between 30 and 50 degrees Centigrade. Air and soil temperature measurements must be taken in accordance with CDFG 2003b and recorded and reported to the Service when surface-disturbing activities occur as in (b) above. During times of the year not included in (a) or (b) above, burrows can be excavated by hand, if necessary, and any lizards found shall be held for relocation. Any relocation plan shall require approval by the Service prior to release of any listed species.
- h. All handling of endangered species will be done by biologists in possession of a valid 10(a)(1)(A) permit for that species.
- i. The following measures and practices, provided in the Avian Power Line Interaction Committee's 1994 and 1996 State of the Art Handbooks (APLIC 1994 and 1996), shall be implemented for the entire proposed transmission line:
- (1) All transmission lines shall be equipped with line markers every 50 feet, staggered on each wire to appear 25 feet apart from the side, to minimize risk of bald eagle and California condor collisions; and

- (2) Suitable spacing shall be provided between conductor wires to minimize risk of electrocution for California condors, bald eagles and other birds.
- j. WAPA has committed to purchase, protect, and manage 574.78 acres of upland habitat as a measure to conserve and assist in the recovery of listed species, as presented in the Project Description. WAPA shall ensure that all parcels identified for compensation acreage are reviewed by the Service for approval before purchase. Wildlands, Inc. has been identified as a potential agent for WAPA in identifying, acquiring, and/or managing compensation parcels.
 - (1) WAPA shall ensure that compensation lands are protected in perpetuity by means of a conservation easement. WAPA shall ensure that any proposed conservation easements are reviewed by the Service prior to signing. WAPA shall have compensation acreage protection actions, such as a conservation easement, legally recorded and provided to the Service before construction begins.
 - (2) The Service shall review and approve a management plan for the compensation land before construction begins.
 - (3) WAPA shall conduct a Parcel Analysis Record (PAR) to determine the appropriate amount for a non-wasting endowment that will be used to manage the compensation land. The results of the PAR will be approved by the title holder (conservation organization) and the Service. WAPA shall provide the identified endowment amount to the management entity before the start of project construction.
- k. The Service will approve any transfer in ownership or management of the compensation lands.
- l. No firearms or pets shall be allowed in the project area.
2. To implement reasonable and prudent measure number two, the WAPA shall ensure that:
 - a. Any changes to the Mitigation Action Plan referred to in the Project Description (WAPA 2003b) shall be reviewed and approved by the Service prior to implementing those changes.
 - b. Any new owners/operators of the proposed project must agree to the commitments made by WAPA, and agree to abide by the Terms and Conditions of this permit.
 - c. The WAPA shall ensure compliance with the Reporting Requirements below.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take on a species that might result from the proposed action. If, during the course of the action, the level of incidental take is determined to be excessive, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Reporting Requirements

All written reports pertaining to this project shall refer to Service file number 1-1-03-F-0101. The following reporting requirements apply to this project:

1. The reporting requirements outlined in the biological assessment or approved revisions shall be complied with, as well as the following additions:
 - a. In the case of take or suspected take of listed wildlife species not exempted in this opinion, the Sacramento Fish and Wildlife Office is to be notified within 24 hours.
 - b. Contact information:
 - (1) The Service contact for Fresno and Merced Counties is Chief, Endangered Species Division at (916) 414-6600. The address is Sacramento Fish and Wildlife Office, 2800 Cottage Way, W-2605, Sacramento, California 95825.
 - (2) The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045 (24 hours) or the Fresno Region 4 Office at (559) 222-3761.
 - c. All relevant field survey data will be submitted to the CDFG Natural Diversity Database, and to the Service within 90 days of survey completion.
2. Within 90 calendar days following the end of each Federal fiscal year, the WAPA must submit to the Service a brief annual report detailing the following information: (1) pertinent information concerning the WAPA's success in implementing all of the commitments in the Conservation Measures and Terms and Conditions sections of this biological opinion; (2) an explanation of failure to meet such measures, if any; (3) known project effects on federally listed species, including an estimate of the number of San Joaquin kit fox dens, giant kangaroo rat burrows, and blunt-nosed leopard lizard burrows destroyed, a general estimate of other small mammal burrows impacted, and an estimate of acreage of listed plant habitat impacted, if any; (4) known occurrences of incidental take of listed species, if any; and (5) other pertinent information. The first report is due December 30, 2003.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that can be implemented to further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases. Actions WAPA can take that are necessary to prevent a species from declining irreversibly in the foreseeable future include the following:

1. WAPA should assist the Service in the implementation of recovery plans for the listed plant and animal species addressed in this biological opinion, including the Valley Recovery Plan (Service 1998a). Specifically, for western Fresno County and western Merced County, these tasks include:
 - a. Encourage and assist local entities in developing and implementing large-area habitat conservation plans (Task 1.2.3 in the Valley Recovery Plan);
 - b. Restore habitat for the California jewelflower (Task 3.2.8);
 - c. Restore habitat for San Joaquin Le Conte's thrasher (*Toxostoma lecontei lecontei*)(Tasks 2.1.10, 2.1.14, 5.3.5, and 5.3.6); and
2. The Service encourages WAPA to continue existing plant inventory and monitoring pursuits in the project area. Recent inventory and monitoring efforts have been valuable in discovering new populations and contributing to better understanding of the species' status.
3. The following measure should be taken to minimize impacts to Hoover's eriastrum: Ground disturbing activities within Hoover's eriastrum habitat should be conducted prior to germination or after seed scatter.
4. The Service encourages WAPA to work in concert with the Service and CDFG in developing plans for hold and release of blunt-nosed leopard lizards and giant kangaroo rats.
5. WAPA should extend the protective measures being implemented for listed species to all proposed and candidate species, unless coordination between the Service and WAPA indicates that these measures are not warranted.
6. The Service requests that restoration goals for mountain plover (*Charadrius montanus*) be considered. The mountain plover is proposed for listing as a threatened species. Since foraging habitat needs of the mountain plover overlap extensively with those of other listed grassland species, additional goals for the plover would primarily consist of adequate winter refugia, native ecosystem biodiversity (for prey species), minimizing disturbance of winter populations (e.g., from grading or conversion), and minimizing pesticide applications.

7. WAPA should work with the Service, CEC, Bureau of Reclamation, and California Department of Fish and Game to further investigate the possible effects of new and existing transmission lines, including maintenance activities, on burrowing animals.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION--CLOSING STATEMENT

This concludes formal consultation on the action(s) outlined in the (request or reinitiation request). As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) unanticipated impacts to California condors are observed from transmission line collision or electrocution; (4) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Please contact Larry Butcher or Susan Jones (San Joaquin Valley Branch) of this office at (916) 414-6600, if you have any questions.

Sincerely,



Ken Sanchez
Acting Field Supervisor

Enclosure: Proposed Location of the Path 15 Transmission Line Project (Figure 1)

cc:

California Department of Fish and Game, Fresno (attn: Donna Daniels, Steve Juarez)

Literature Cited

Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: State of the Art in 1994. Edison Electric Institute. Washington, D.C.

_____. 1996. Suggested Practices for Raptor Protection on Lines: The State of the Art in 1996. Edison Electric Institute/Raptor Research Foundation. Washington, D.C.

California Department of Fish and Game, 1990. California Department of Fish and Game Region 4 Survey Methodologies for San Joaquin Kit Fox, Blunt-Nosed Leopard Lizard, San Joaquin Antelope Squirrel, Tipton Kangaroo Rat, and Giant Kangaroo Rat. Compiled by R. Rempel and G. Presley.

_____. 2000. Guidelines for assessing effects of proposed developments on rare and endangered plants and plant communities. May 4, 1984, revised May 8, 2000. California Department of Fish and Game, Sacramento, California.

_____. 2003a. Natural Diversity Data Base. RareFind 2. Version 2.0.8 (March 30, 1998). Computer report for U.S. Geological Survey 7.5-minute quadrangles covering the AT&T cable upgrade project area and vicinity. California Department of Fish and Game, Sacramento, California.

_____. 2003b. Approved Survey Methodology for the Blunt-Nosed Leopard Lizard. California Department of Fish and Game Region 4. Habitat Conservation Division, Fresno, California. April 2003.

California Public Utilities Commission, 2002. Draft and Final Supplemental Environmental Impact Report, Los Banos-Gates 500kV Transmission Project. Prepared by Aspen Environmental Group. Sacramento, California. February 2002.

City of Merced, 2003. Merced Opportunities. City of Merced Development Services and Office of Economic Development. www.mercedcondev.com 2003.

County of Fresno, Council of Fresno County Governments, 2000. Population Forecast for Fresno County to 2025. Prepared by Central California Futures Institute, Fresno, California. April 2000.

Detrich, P.J. 1986. Status and distribution of the bald eagle in California. M.S. Thesis. California State University. Chico, California.

Germano, D.J., E. Cypher, and R. McCormick. 1993. Use of a barrier to exclude blunt-nosed leopard lizards from a construction zone. Transactions of the Western Section of the Wildlife Society. 29:16-19.

Gertsch, M., B. Walton, and D. Van De Water. 1994. The Bald Eagle, in Life on the Edge, A Guide to California's Endangered Natural Resources. C.G. Thelander and M. Crabtree editors. Biosystem Books, Santa Cruz, California.

Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California.

Jones & Stokes, 2001. Letter to PG&E regarding results of Blunt-Nosed Leopard Lizard Surveys for the Path 15 Project. Sacramento, California. October 23, 2001.

_____. 2003a. Letter to WAPA regarding Blunt-Nosed Leopard Lizard Habitat Suitability Surveys for the Path 15 Project. Sacramento, California. May 6, 2003.

_____. 2003b. Letter to WAPA regarding San Joaquin Kit Fox Natal Den Surveys for the Path 15 Project. Sacramento, California. May 6, 2003.

Jurek, R.M. 1988. Five-year status report. Bald Eagle. Calif. Dept. Fish and Game. Sacramento, California. 15 pp.

Jurek, R.M. 2000. Unpublished data presented by Jan Johnson, U.S. Fish and Wildlife Service. Falconiformes of Northern California: Natural History and Management Workshop. October 24-26, 2000, North Coast Inn, Arcata, California. The Wildlife Society, California North Coast Chapter, Arcata, California.

- National Park Service. 2003. Environmental Assessment of California Condor Reestablishment in Pinnacles National Monument. Pinnacles National Monument, Paicines, California. April 2003.
- Nelson, J.R. 1985. Rare plant surveys: Techniques for impact assessment. *Natural Areas Journal*. 5(3): 18-30.
- Otten, M.R.M., and B.L. Cypher. 1997. Conservation plan for protected species on Naval Petroleum Reserve No. 1, Kern County, California. U.S. Department of Energy Topical Report EASI 97-2. 39 pp. + appendices.
- Pacific Gas and Electric Company. 2001a. Conditional Application for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Los Banos-Gates 500kV Transmission Project. San Francisco, California. 2001.
- Pacific Gas and Electric Company. 2001b. Results of the Special-Status Plant and Wildlife Surveys Conducted along the Proposed Path 15 Transmission Line Project in Fresno and Merced Counties. Prepared by Jones & Stokes, Sacramento, California. September 2001.
- Randall, J.A. 1997. Social organization and communication in *Dipodomys ingens*. Report for Research during 1995-96, Permit PR-799486, on the endangered giant kangaroo rat, *Dipodomys ingens*, to U.S. Fish and Wildlife Service.
- Sawyer, J., and L. Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society.
- Single, J.R., D.J. Germano, and M.H. Wolfe. 1996. Decline of kangaroo rat populations during the winter of 1994-1995 in the southern San Joaquin Valley, California. Naval Petroleum Reserve Complex Endangered Species and Cultural Resources Annual Program Review, FY 95. Unpublished report, 33 pages.
- Small, A. California Birds. Their Status and Distribution. Ibis Publishing. Vista, California. 342 pp.

- Spiegel, L.K. 1996. Studies of San Joaquin kit fox in undeveloped and oil-developed areas: an overview. Pages 1-14 in L.K. Spiegel (principal author), Studies of the San Joaquin kit fox in undeveloped and oil-developed areas. August 1996. (P700-96-003.) California Energy Commission. Sacramento, California.
- Spiegel, L.K. and J. Tom. 1996. Reproduction of San Joaquin kit fox in undeveloped and oil-developed habitats of Kern County, California. Pages 53-69 in L.K. Spiegel (principal author), Studies of the San Joaquin kit fox in undeveloped and oil-developed areas.
- Taylor, D.W. 1989. Status survey of San Joaquin woolly-threads (*Lembertia congdonii*). U.S. Fish and Wildlife Service, Sacramento, California. Unpublished report. 27 pp.
- Taylor, D.W. and R.E. Buck. 1993. Distribution of San Joaquin woolly-threads (*Lembertia congdonii*) in the vicinity of Lost Hills, Kern County, California. Lost Hills Utility District Lost Hills, California. Unpublished report. 17 pp.
- Taylor, D.W. and W.B. Davilla. 1986. Status survey of three plants endemic to the San Joaquin Valley and adjacent areas, California. U.S. Fish and Wildlife Service, Sacramento, California. Unpublished report, 131 pp.
- TOVA Applied Science & Technology. 2001. Biological Assessment for Path 15 Transmission Line Project: Los Banos to Gates Substations, Fresno and Merced Counties, California.
- U.S. Department of Energy. 1998. Biological Assessment of the Proposed Site Remediation and Archaeological Data Recovery Programs on Naval Petroleum Reserve No. 1, Kern County, California. Prepared by Critique, Inc., Bakersfield, California. July 1998.
- U.S. Department of Energy and Chevron U.S.A. Production Company. 1996. Annual Report FY95, Endangered Species and Cultural Resources Program, Naval Petroleum Reserves in California, Tupman, California. Prepared by EG&G Energy Measurements, Inc.
- _____. 1998. Endangered Species and Cultural Resources Program, Naval Petroleum Reserves in California, Annual Report FY97 (EASI 98-1). Prepared by Enterprise Advisory Services, Inc., Naval Petroleum Reserve (NPR) Endangered Species and Cultural Resources Program.

U.S. Fish and Wildlife Service. 1986. Pacific Bald Eagle Recovery Plan. Region 1, Portland, Oregon. 164 pp.

_____. 1996. California Condor Recovery Plan, Third Revision. Portland, Oregon. 62 pp.

_____. 1998*a*. Recovery Plan for Upland Species of the San Joaquin Valley, California. Region 1, Portland, Oregon. 319pp.

_____. 1998*b*. California Condor Recovery Program, Reintroduction Efforts, and Hopper Mountain National Wildlife Refuge Complex, California Condor Recovery Program. Hopper Mountain National Wildlife Refuge, Ventura, California. Both March 23, 1998.

_____. 1999. Standard Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance. Prepared by the Sacramento Fish and Wildlife Office. June.

Western Area Power Administration. 1986. Draft Environmental Impact Statement/Environmental Impact Report for the California-Oregon Transmission Project and the Los Banos-Gates Transmission Project. Sacramento, California. November 1986.

_____. 1988. Final Environmental Impact Statement/Environmental Impact Report for the California-Oregon Transmission Project and the Los Banos-Gates Transmission Project. Sacramento, California. January 1988.

_____. 2001. Supplement Analysis, Los Banos-Gates Transmission Project. Sierra Nevada Customer Service Region. Sacramento, California. August 2001.

_____. 2003*a*. Biological Assessment for Path 15 Transmission Line Project: Los Banos to Gates Substations, Fresno and Merced Counties, California. Corporate Services Office, Lakewood, Colorado. January 2003.

_____. 2003*b*. Mitigation Action Plan for the Los Banos-Gates (Path 15) Transmission Project. Corporate Services Office, Lakewood, Colorado. January 28, 2003.

- _____. 2003c. Path 15 Transmission Line Project: Habitat Loss Compensation Credits Computation. Corporate Services Office, Lakewood, Colorado. May 29, 2003.
- _____. 2003d. Results of the Spring 2003 Special-Status Surveys Conducted Along the Proposed Path 15 Transmission Line Project in Fresno and Merced Counties. Prepared by Jones & Stokes, Sacramento, California. May 2003.
- _____. 2003e. Preliminary Delineation of Waters of the United States, Including Wetlands, Path 15 Project, Merced and Fresno Counties. Prepared by Jones & Stokes, Sacramento, California. March 2003.
- _____. 2003f. Divisions 2A and 13 of the Construction Specifications for the Path 15 Project, Merced and Fresno Counties. Corporate Services Office, Lakewood, Colorado. 2003.
- Williams, D.F. 1985. A review of the population status of the Tipton kangaroo rat, *Dipodomys nitratoides nitratoides*. Final report. U.S. Fish and Wildlife Service, Endangered Species Office. Sacramento, California.
- _____. 1992. Geographic distribution and population status of the giant kangaroo rat, *Dipodomys ingens* (Rodentia, Heteromyidae). Pp. 301-328, in Endangered and sensitive species of the San Joaquin Valley, California (D.F. Williams, S. Byrne, and T.A. Rado, eds.). California Energy Commission, Sacramento, 388 pp.
- Williams, D.F., and D.J. Germano. 1993. Recovery of endangered kangaroo rats in the San Joaquin Valley, California. 1992 Transactions of the Western Section of the Wildlife Society 28:93-106.

Personal Communications

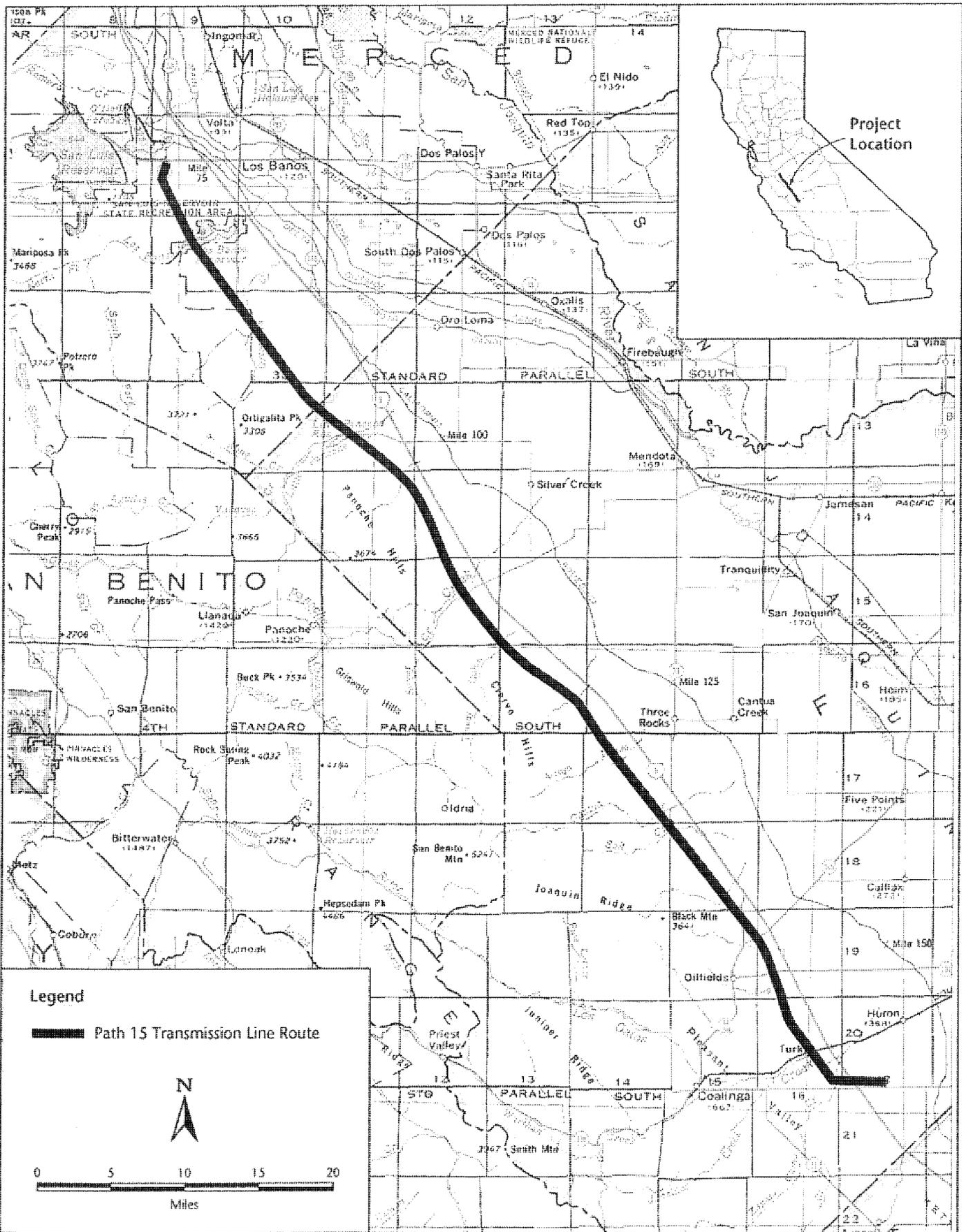
Asserson, W. 1999. Biologist. California Department of Fish and Game, Region 4, Fresno, California. Personal communication.

Mesta, R. 1999. Ornithologist. Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, Ventura, California. Personal communication.

Mitchell, L. 1998. Former resident and frequent visitor to Taft, California. Communication with S.P. Jones, Biologist, U.S. Fish and Wildlife Service. [Subject: recent sighting of California condor in Taft, California.]

Palmer, B. 2003. California Condor Recovery Program Coordinator, Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, Ventura, California. Personal communication.

Williams, D. 1999. Director and Coordinator. Endangered Species Recovery Program, Fresno, California. Personal communication.



02172.02 (9/02)

Figure 1
Proposed Location of the
Path 15 Transmission Line Project