

**CATEGORICAL EXCLUSION CHECKLIST**  
***License to Del Puerto Water District for New Discharge Point at Mile Post  
58.60L on the Delta-Mendota Canal***

South-Central California Area Office

February 28, 2011

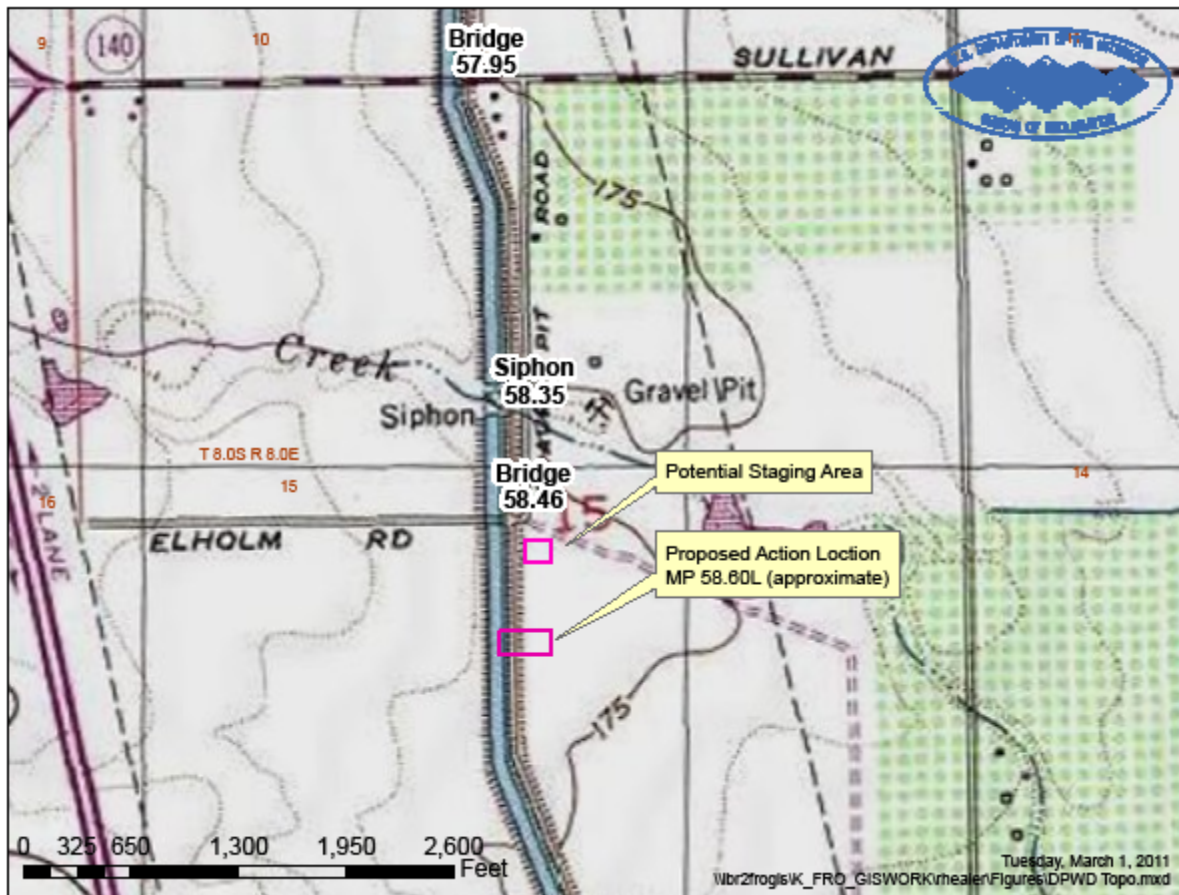
**Background:** Del Puerto Water District (DPWD) provides irrigation water to over 45,000 acres of high-value permanent crops in the San Joaquin, Stanislaus and Merced Counties. DPWD is a Delta Division Central Valley Project (CVP) contractor with the Bureau of Reclamation (Reclamation) which receives surface water from the Delta-Mendota Canal (DMC). DPWD is also one of 30 member agencies within the San Luis & Delta-Mendota Water Authority (SLDMWA).

In 2010, SLDMWA, on behalf of seven of its member agencies, requested approval from Reclamation for two-year Exchange Agreements and/or Warren Act contracts to pump groundwater into the DMC for delivery to contractors during the period March 1, 2011 through February 28, 2013 (Contract Years 2011-2012). The two-year Exchange Agreements and/or Warren Act contracts were analyzed in Environmental Assessment (EA)-10-072 *Two-Year Exchange Agreements and/or Warren Act Contracts for Conveyance of Groundwater in the Delta-Mendota Canal – Contract Years 2011 through 2012 (March 1 2011 – February 28, 2013)* and a Finding of No Significant Impact was signed by Reclamation on February 28, 2011. FONSI/EA-10-072 was found to have no indirect, direct, or cumulative adverse impacts and is hereby incorporated by reference.

DPWD has since approached Reclamation for a license to install a pipeline across Reclamation right-of-way (ROW) at milepost (MP) 58.60L for a new discharge point on the DMC (Figure 1). The new discharge point was included as part of the Proposed Action analyzed under FONSI/EA-10-072; however, installation of the pipeline was not included as details for the pipeline were not available at that time.

**Purpose and Need for Action:** California has experienced severe droughts in recent years that have reduced water supplies to many water districts. South-of Delta (SOD) CVP water service contractors experienced reduced water supply allocations in 2007, 2008, 2009, and 2010 due to hydrologic conditions and/or regulatory constraints. The hydrologic conditions for 2011 have increased SOD CVP agricultural water allocations to 80 percent; however, operations of the Federal Jones Pumping Plant will continue to be limited due to the various constraints on Delta operations, which will reduce available CVP contract supplies. SOD CVP contractors thus need to identify additional supplies to avoid shortages for their customers.

The purpose of the Proposed Action is to provide infrastructure for delivery of up to 90 acre-feet per year (AFY) of groundwater as an additional water supply for DPWD to augment reduced contract allocations.



**Figure 1. Proposed Action Location of MP 58.60L (approximate)**

**Proposed Action:** Reclamation proposes to issue a 25 year license to DPWD for the installation of a 6-inch diameter steel pipeline through approximately 120 feet of Reclamation ROW and a new discharge point at MP 58.60L on the DMC for discharge of up to 90 AFY. The Proposed Action area is within Section 15 of Township 8 South, Range 8 East, Mount Diablo Base and Meridian in Merced County, California (Figure 1).

Installation of the pipeline would require connecting to an existing well within an orchard located northeast of the DMC, trenching through 200 feet of the privately-owned almond orchard, and trenching through 120 feet of Reclamation ROW including the paved canal operation and maintenance (O&M) road (Figure 2). No almond trees would be removed during installation of the pipeline within the orchard as the pipeline would be placed within the watering channel between the rows.

Trenching would be 3.8 feet deep by 1-foot wide. Native soil removed during excavation would be used to fill the trench. Pavement for the canal O&M road would be saw-cut during installation of the pipeline and removed offsite for disposal. The removed portion of the O&M road would be backfilled with 95% ASTM fill material before being repaved with asphalt.

The new discharge point would surface for 15 feet along the DMC canal bank for discharge of groundwater over and into the DMC. A 1-foot by 1-foot by 6-inch concrete

pad would be placed under the pipeline, 1-foot in from the canal liner, to insure that the pipe does not rest on the canal liner. As the water to be discharged is non-CVP water, an MP620 permit (Reclamation Mid-Pacific Region-specific permit for additions or alterations to Reclamation-owned conveyance and distribution facilities) is not required. Additionally, there would be no modifications to the DMC as the pipeline would cross above the DMC to discharge groundwater.



**Figure 2. Aerial View of Proposed Action Location (approximate)**

Construction would begin in April 2011 and take approximately 2 days to complete. Construction equipment would include a backhoe and portable soil compactor. If necessary, staging would occur within the northwest corner of the almond orchard. Access to the site would be through existing access roads to the orchard and the DMC.

Discharge of groundwater from the existing well into the DMC was included in FONSI/EA-10-072. Any subsequent Warren Act Contracts, other than that analyzed under FONSI/EA-10-072, would require additional environmental review.

**Exclusion Category:** 516 DM 14.5 D (10). Issuance of permits, licenses, easements, and crossing agreements which provide right-of-way over Bureau lands where action does not allow for or lead to a major public or private action.

### **Evaluation of Criteria for Categorical Exclusion**

- |  |                 |                         |     |
|--|-----------------|-------------------------|-----|
| 1. This action would have a significant effect on the quality of the human environment.  | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 2. This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources. | No <u>  X  </u> | Uncertain <u>      </u> | Yes |

### **Evaluation of Exemptions to Actions within Categorical Exclusion**

- |  |                 |                         |     |
|--|-----------------|-------------------------|-----|
| 1. This action would have significant adverse effects on public health or safety.  | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 2. This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; national monuments; migratory birds; and other ecologically significant or critical areas. | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 3. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.   | No <u>  X  </u> | Uncertain <u>      </u> | Yes |

- |  |                 |                         |     |
|--|-----------------|-------------------------|-----|
| 4. This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.   | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 5. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.   | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 6. This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau (in coordination with a Reclamation cultural resources professional). | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 7. This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species.                  | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 8. This action would violate a Federal, State, local, or tribal law or requirement imposed for protection of the environment.  | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 9. This action would affect Indian Trust Assets (ITA) (To be completed by Reclamation official responsible for ITA).   | No <u>  X  </u> | Uncertain <u>      </u> | Yes |
| 10. This action would have a disproportionately high and adverse effect on low income or minority populations.   | No <u>  X  </u> | Uncertain <u>      </u> | Yes |



11. This action would limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. No X Uncertain \_\_\_\_ Yes

12. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species. No X Uncertain \_\_\_\_ Yes

**NEPA Action:** Categorical Exclusion X

**Environmental commitments, explanation, and/or remarks:**

☒ Yes ☐ No Environmental commitments are required and attached.

- ☒ San Joaquin Kit Fox Avoidance and Minimization Measures
- ☐ Giant Garter Snake Avoidance and Minimization Measures
- ☐ California Tiger Salamander Avoidance and Minimization Measures
- ☐ California Red-Legged Frog Avoidance and Minimization Measures
- ☒ Other: Burrowing Owl Avoidance and Minimization Measures

**Air Quality:**

Dust control best management practices would be employed by DPWD during construction activities. Construction emissions would be well below the *de minimis* thresholds for the San Joaquin Valley Air Pollution Control Board.


Prepared by:

Rain HealerDate: March 1, 2011

South-Central California Area Office

Regional Archeologist concurrence with Item 7:  
See attachment.ITA Designee concurrence with Item 10:  
See attachment.

Concur:

Date: April 27 2011

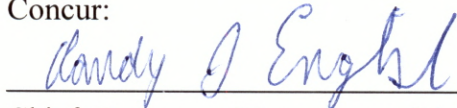
Wildlife Biologist, South-Central California Area Office

Concur:

Date: 4/27/11

Supervisory Natural Resources Specialist, South-Central California Area Office

Concur:

Date: 5/2/11

Chief, Resources Management Division, South-Central California Area Office

Approved:

Date: 5/6/11

Deputy Area Manager, South-Central California Area Office

**U.S. FISH AND WILDLIFE SERVICE  
STANDARDIZED RECOMMENDATIONS  
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX  
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office  
January 2011

## INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

## IS A PERMIT NECESSARY?

**Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens.** Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,



gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

### **SMALL PROJECTS**

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

**If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.**

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

### **OTHER PROJECTS**

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

## EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

**\*Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

**\*\*Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

## **DESTRUCTION OF DENS**

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

**Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.**

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

**Natal/pupping dens:** Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

**Known Dens:** Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

**The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.**

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

## **CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS**

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe

may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is

disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division  
2800 Cottage Way, Suite W2605  
Sacramento, California 95825-1846  
(916) 414-6620 or (916) 414-6600



**EXHIBIT “A” - DEFINITIONS**

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

## M e m o r a n d u m

: "Div. Chiefs - IFD, BDD, NED, & WMD  
Reg. Mgrs. - Regions 1, 2, 3, 4, & 5

Date : October 17, 1995

From : Department of Fish and Game

Subject :  
Staff Report on Burrowing Owl Mitigation

I am hereby transmitting the Staff Report on Burrowing Owl Mitigation for your use in reviewing projects (California Environmental Quality Act [CEQA] and others) which may affect burrowing owl habitat. The Staff Report has been developed during the last several months by the Environmental Services Division (ESD) in cooperation with the Wildlife Management Division (WMD) and regions 1, 2, and 4. It has been sent out for public review and redrafted as appropriate.

Either the mitigation measures in the staff report may be used or project specific measures may be developed. Alternative project specific measures proposed by the Department divisions/regions or by project sponsors will also be considered. However, such mitigation measures must be submitted to ESD for review. The review process will focus on the consistency of the proposed measure with Department, Fish and Game Commission, and legislative policy and with laws regarding raptor species. ESD will coordinate project specific mitigation measure review with WMD.

If you have any questions regarding the report, please contact Mr. Ron Rempel, Supervising Biologist, Environmental Services Division, telephone (916) 654-9980.

**COPY** Original signed by  
C.F. Raysbrook

C. F. Raysbrook  
Interim Director

Attachment

cc: Mr. Ron Rempel  
Department of Fish and Game  
Sacramento

# STAFF REPORT ON BURROWING OWL MITIGATION

## Introduction

The Legislature and the Fish and Game Commission have developed the policies, standards and regulatory mandates to protect native species of fish and wildlife. In order to determine how the Department of Fish and Game (Department) could judge the adequacy of mitigation measures designed to offset impacts to burrowing owls (*Speotyto cunicularia*; A.O.U. 1991) staff (WMD, ESD, and Regions) has prepared this report. To ensure compliance with legislative and commission policy, mitigation requirements which are consistent with this report should be incorporated into: (1) Department comments to Lead Agencies and project sponsors pursuant to the California Environmental Quality Act (CEQA); and (2) other authorizations the Department gives to project proponents for projects impacting burrowing owls.

This report is designed to provide the Department (including regional offices and divisions), CEQA Lead Agencies and project proponents the context in which the Environmental Services Division (ESD) will review proposed project specific mitigation measures. This report also includes preapproved mitigation measures which have been judged to be consistent with policies, standards and legal mandates of the Legislature, the Fish and Game Commission and the Department's public trust responsibilities. Implementation of mitigation measures consistent with this report are intended to help achieve the conservation of burrowing owls and should compliment multi-species habitat conservation planning efforts currently underway. The *Burrowing Owl Survey Protocol and Mitigation Guidelines* developed by The California Burrowing Owl Consortium (CBOC 1993) were taken into consideration in the preparation of this staff report as were comments from other interested parties.

A range-wide conservation strategy for this species is needed. Any range-wide conservation strategy should establish criteria for avoiding the need to list the species pursuant to either the California or federal Endangered Species Acts through preservation of existing habitat, population expansion into former habitat, recruitment of young into the population, and other specific efforts.

California's burrowing owl population is clearly declining and, if declines continue, the species may qualify for listing. Because of the intense pressure for urban development within suitable burrowing owl nesting and foraging habitat (open, flat and gently rolling grasslands and grass/shrub lands) in California, conflicts between owls and development projects often occur. Owl survival can be adversely affected by disturbance and foraging habitat loss even when impacts to individual birds and nests/burrows are avoided. Adequate information about the presence of owls is often unavailable prior to project approval. Following project approval there is no legal mechanism through which to seek mitigation other than avoidance of occupied burrows or nests. The absence of standardized survey methods often impedes consistent impact assessment.

## **Burrowing Owl Habitat Description**

Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation (Zarn 1974). Suitable owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat. Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls (Henny and Blus 1981). Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement.

## **Occupied Burrowing Owl Habitat**

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Occupancy of suitable burrowing owl habitat can be verified at a site by detecting a burrowing owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance. Burrowing owls exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992). A site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years (Rich 1984).

## **CEQA Project Review**

The measures included in this report are intended to provide a decision-making process that should be implemented whenever there is potential for an action or project to adversely affect burrowing owls. For projects subject to the California Environmental Quality Act (CEQA), the process begins by conducting surveys to determine if burrowing owls are foraging or nesting on or adjacent to the project site. If surveys confirm that the site is occupied habitat, mitigation measures to minimize impacts to burrowing owls, their burrows and foraging habitat should be incorporated into the CEQA document as enforceable conditions. The measures in this document are intended to conserve the species by protecting and maintaining viable populations of the species throughout their range in California. This may often result in protecting and managing habitat for the species at sites away from rapidly urbanizing/developing areas. Projects and situations vary and mitigation measures should be adapted to fit specific circumstances.

Projects not subject to CEQA review may have to be handled separately since the legal authority the Department has with respect to burrowing owls in this type of situation is often limited. The burrowing owl is protected from "take" (Section 3503.5 of the Fish and Game Code) but unoccupied habitat is likely to be lost for activities not subject to CEQA.

## **Legal Status**

The burrowing owl is a migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21). Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. To avoid violation of the take provisions of these laws generally requires that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle (February 1 to August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered “take” and is potentially punishable by fines and/or imprisonment.

The burrowing owl is a Species of Special Concern to California because of declines of suitable habitat and both localized and statewide population declines. Guidelines for the Implementation of the California Environmental Quality Act (CEQA) provide that a species be considered as endangered or “rare” regardless of appearance on a formal list for the purposes of the CEQA (Guidelines, Section 15380, subsections b and d). The CEQA requires a mandatory findings of significance if impacts to threatened or endangered species are likely to occur (Sections 21001 (c), 2103; Guidelines 15380, 15064, 15065). To be legally adequate, mitigation measures must be capable of “avoiding the impact altogether by not taking a certain action or parts of an action”; “minimizing impacts by limiting the degree or magnitude of the action and its implementation”; “rectifying the impact by repairing, rehabilitating or restoring the impacted environment”; “or reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action” (Guidelines, Section 15370). Avoidance or mitigation to reduce impacts to less than significant levels must be included in a project or the CEQA lead agency must make and justify findings of overriding considerations.

## **Impact Assessment**

### **Habitat Assessment**

The project site and a 150 meter (approximately 500 ft.) buffer (where possible and appropriate based on habitat) should be surveyed to assess the presence of burrowing owls and their habitat (Thomsen 1971, Martin 1973). If occupied habitat is detected on or adjacent to the site, measures to avoid, minimize, or mitigate the project’s impacts to the species should be incorporated into the project, including burrow preconstruction surveys to ensure avoidance of direct take. It is also recommended that preconstruction surveys be conducted if the species was not detected but is likely to occur on the project site.



## **Burrowing Owl and Burrow Surveys**

Burrowing owl and burrow surveys should be conducted during both the wintering and nesting seasons, unless the species is detected on the first survey. If possible, the winter survey should be conducted between December 1 and January 31 (when wintering owls are most likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of the breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are also preferable.

Surveys should be conducted by walking suitable habitat on the entire project site and (where possible) in areas within 150 meters (approx. 500 ft.) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors -such as noise and vibration (heavy equipment, etc.) during project construction. Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approx. 100 ft.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To effectively survey large projects (100 acres or larger), two or more surveyors should be used to walk adjacent transects. To avoid impacts to owls from surveyors, owls and/or occupied burrows should be avoided by a minimum of 50 meters (approx. 160 ft.) wherever practical. Disturbance to occupied burrows should be avoided during all seasons.

## **Definition of Impacts**

The following should be considered impacts to the species:

- Disturbance within 50 meters (approx. 160 ft.) Which may result in harassment of owls at occupied burrows;
- Destruction of natural and artificial burrows (culverts, concrete slabs and debris piles that provide shelter to burrowing owls); and
- Destruction and/or degradation of foraging habitat adjacent (within 100 m) of an occupied burrow(s).

## **Written Report**

A report for the project should be prepared for the Department and copies should be submitted to the Regional contact and to the Wildlife Management Division Bird and Mammal Conservation Program. The report should include the following information:

- Date and time of visit(s) including name of the qualified biologist conducting surveys, weather and visibility conditions, and survey methodology;
- Description of the site including location, size, topography, vegetation communities, and animals observed during visit(s);
- Assessment of habitat suitability for burrowing owls;
- Map and photographs of the site;
- Results of transect surveys including a map showing the location of all burrow(s) (natural or artificial) and owl(s), including the numbers at each burrow if present and tracks, feathers, pellets, or other items (prey remains, animal scat);
- Behavior of owls during the surveys;
- Summary of both winter and nesting season surveys including any productivity information and a map showing territorial boundaries and home ranges; and
- Any historical information (Natural Diversity Database, Department regional files? Breeding Bird Survey data, American Birds records, Audubon Society, local bird club, other biologists, etc.) regarding the presence of burrowing owls on the site.

## **Mitigation**

The objective of these measures is to avoid and minimize impacts to burrowing owls at a project site and preserve habitat that will support viable owls populations. If burrowing owls are detected using the project area, mitigation measures to minimize and offset the potential impacts should be included as enforceable measures during the CEQA process.

Mitigation actions should be carried out from September 1 to January 31 which is prior to the nesting season (Thomsen 1971, Zam 1974). Since the timing of nesting activity may vary with latitude and climatic conditions, this time frame should be adjusted accordingly. Preconstruction surveys of suitable habitat at the project site(s) and buffer zone(s) should be conducted within the 30 days prior to construction to ensure no additional, burrowing owls have established territories since the initial surveys. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site should be resurveyed.

Although the mitigation measures may be included as enforceable project conditions in the CEQA process, it may also be desirable to formalize them in a Memorandum of Understanding (MOU) between the Department and the project sponsor. An MOU is needed when lands (fee title or conservation easement) are being transferred to the Department.

## Specific Mitigation Measures

1. Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
2. To offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of foraging habitat (calculated on a 100 m {approx. 300 ft.} foraging radius around the burrow) per pair or unpaired resident bird, should be acquired and permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to the Department. *Protection of additional habitat acreage per pair or unpaired resident bird may be applicable in some instances.* The CBOC has also developed mitigation guidelines (CBOC 1993) that can be incorporated by CEQA lead agencies and which are consistent with this staff report.
3. When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site. One example of an artificial burrow design is provided in Attachment A.
4. If owls must be moved away from the disturbance area, passive relocation techniques (as described below) should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and allow the owls to acclimate to alternate burrows.
5. The project sponsor should provide funding for long-term management and monitoring of the protected lands. The monitoring plan should include success criteria, remedial measures, and an annual report to the Department.

## Impact Avoidance

If avoidance is the preferred method of dealing with potential project impacts, then no disturbance should occur within 50 meters (approx. 160 ft.) of occupied burrows during the nonbreeding season of September 1 through January 31 or within 75 meters (approx. 250 ft.) during the breeding season of February 1 through August 31. Avoidance also requires that a minimum of 6.5 acres of foraging habitat be *permanently* preserved contiguous with occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident bird. The configuration of the protected habitat should be approved by the Department.

### **Passive Relocation - With One-Way Doors**

Owls should be excluded from burrows in the immediate impact zone and within a 50 meter (approx. 160 ft.) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) should be left in place 48 hours to insure owls have left the burrow before excavation. Two natural or artificial burrows should be provided for each burrow in the project area that will be rendered biologically unsuitable. The project area should be *monitored daily for one* week to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe should be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.

### **Passive Relocation - Without One-Way Doors**

Two natural or artificial burrows should be provided for each burrow in the project area that will be rendered biologically unsuitable. The project area should be *monitored daily until the owls have relocated to the new burrows*. The formerly occupied burrows may then be excavated. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe should be inserted into burrows during excavation to maintain an escape route for any animals inside the burrow.

## **Projects Not Subject to CEQA**

The Department is often contacted regarding the presence of burrowing owls on construction sites, parking lots and other areas for which there is no CEQA action or for which the CEQA process has been completed. In these situations, the Department should seek to reach agreement with the project sponsor to implement the specific mitigation measures described above. If they are unwilling to do so, passive relocation without the aid of one-way doors is their only option based upon Fish and Game Code 3503.5.

## Literature Cited

- American Ornithologists Union (AOU). 1991. Thirty-eighth supplement to the AOU checklist of North American birds. *Auk* 108:750-754.
- Feeney, L. 1992. Site fidelity in burrowing owls. Unpublished paper presented to Raptor Research Annual Meeting, November 1992. Seattle, Washington.
- Haug, E. A. and L. W. Oliphant. 1990. Movements, activity patterns, and habitat use of burrowing owls in Saskatchewan. *J. Wildlife Management* 54:27-35.
- Henny, C. J. and L. J. Blus. 1981. Artificial burrows provide new insight into burrowing owl nesting biology. *Raptor Research* 15:82-85.
- Martin, D. J. 1973. Selected aspects of burrowing owl ecology and behavior. *Condor* 75:446-456.
- Rich, T. 1984. Monitoring burrowing owl populations: Implications of burrow re-use. *Wildlife Society Bulletin* 12:178-180.
- The California Burrowing Owl Consortium (CBOC). 1993. Burrowing owl survey protocol and mitigation guidelines. Tech. Rep. Burrowing Owl Consortium, Alviso, California.
- Thomsen, L. 1971. Behavior and ecology of burrowing owls on the Oakland Municipal Airport. *Condor* 73:177-192.
- Zarn, M. 1974. Burrowing owl. U. S. Department of Interior, Bureau of Land Management. Technical Note T-N 250. Denver, Colorado. 25 pp.

# Reproductive Success of Burrowing Owls Using Artificial Nest Burrows in Southeastern Idaho

by Bruce Olenick

Artificial nest burrows were implanted in southeastern Idaho for burrowing owls in the spring of 1986. These artificial burrows consisted of a 12" x 12" x 8" wood nesting chamber with removable top and a 6 foot corrugated and perforated plastic drainage pipe 6 inches in diameter (Fig. 1). Earlier investigators claimed that artificial burrows must provide a natural dirt floor to allow burrowing owls to modify the nesting tunnel and chamber. Contrary to this, the artificial burrow introduced here does not allow owls to modify the entrance or tunnel. The inability to change the physical dimensions of the burrow tunnel does not seem to reflect the owls' breeding success or deter them from using this burrow design.

In 1936, 22 artificial burrows were inhabited. Thirteen nesting attempts yielded an average clutch size of 8.3 eggs per breeding pair. Eight nests successfully hatched at least 1 nestling. In these nests, 67 of 75 eggs hatched (59.3%) and an estimated 61 nestlings (91.0%) fledged. An analysis of the egg laying and incubation periods showed that incubation commenced well after egg lay-

ing began. Average clutch size at the start of incubation was 5.6 eggs. Most eggs tended to hatch synchronously in all successful nests.

Although the initial cost of constructing this burrow design may be slightly higher than a burrow consisting entirely of wood, the plastic pipe burrow offers the following advantages: (1) it lasts several field seasons without rotting or collapsing; (2) it may prevent or retard predation; (3) construction time is min-

imal; (4) it is easy to transport, especially over long distances; and (5) the flexible tunnel simplifies installation. The use of this artificial nest burrow design was highly successful and may prove to be a great resource technique for future management of this species.

*For additional information on constructing this artificial nest burrow, contact Bruce Olenick, Department of Biology, Idaho State University, Pocatello, ID 83209.*

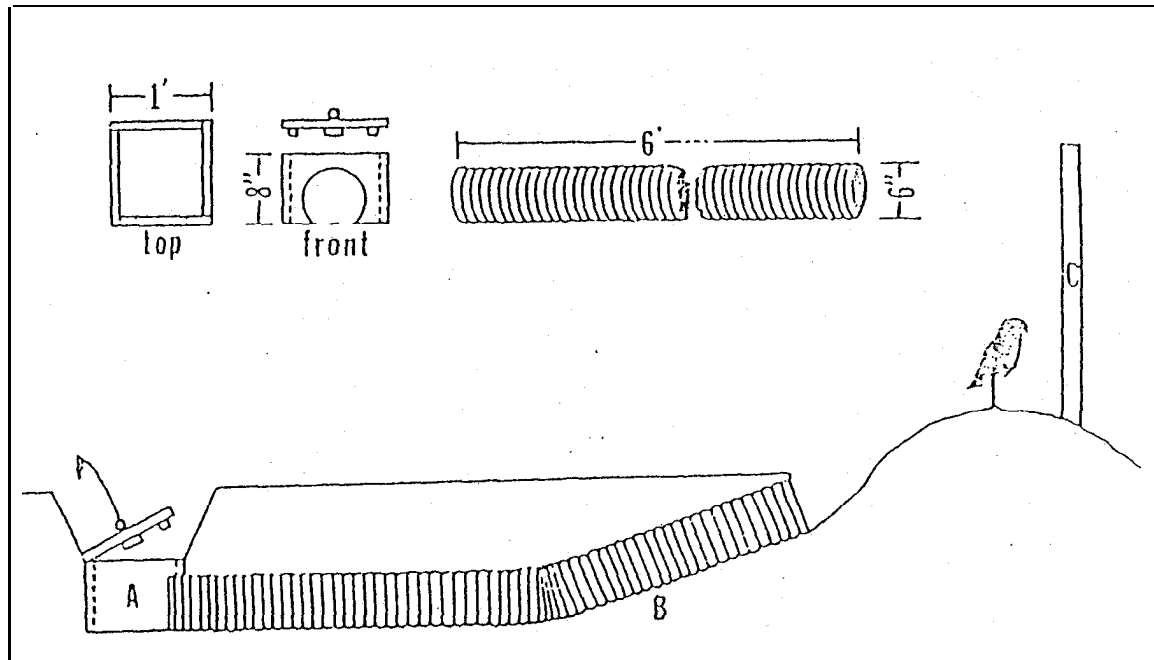


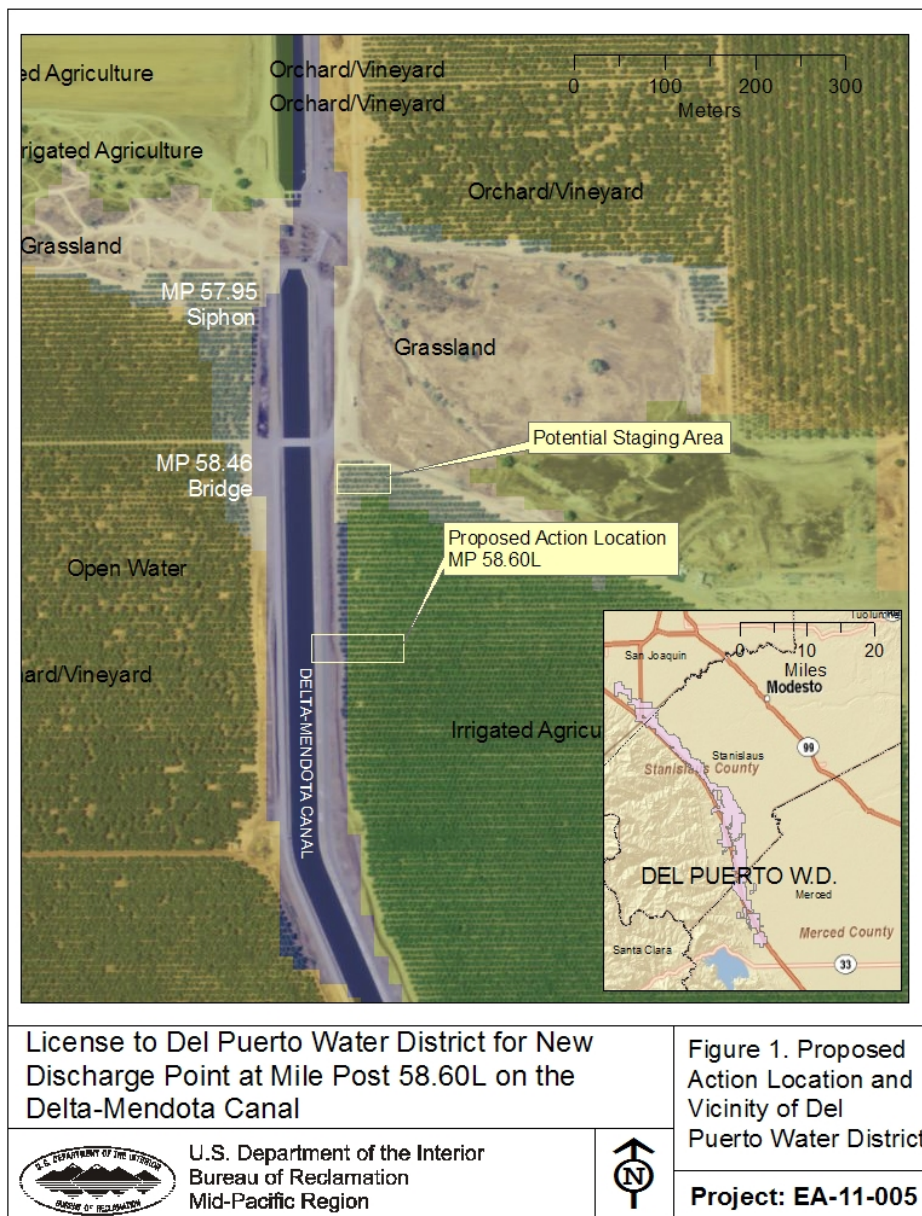
fig. 1 Artificial nest burrow design for burrowing owls. Entire unit (including nest chamber) is buried 12" -- 18" below ground for maintaining thermal stability of the nest chamber. A = nest chamber, B = plastic pipe. C = perch.



**ESA Analysis**

**1. Background and Description of the Proposed Action**

The Bureau of Reclamation (Reclamation) has reviewed Del Puerto Water District (DPWD) request to install a discharge pipeline on the Delta-Mendota Canal (DMC) in Merced County for any potential impacts to biological resources. The proposed project involves the issuing of a 25-year Permit to DPWD for the installation of a pipeline across Reclamation's Right-of-Way (ROW) and a new discharge point on the DMC (Figure 1). The purpose of the project is to provide infrastructure for delivery of groundwater as an additional water supply for DPWD to augment reduced contract allocations.



The proposed action includes the installation of a 6-inch diameter steel pipeline and a new discharge point at MP 58.60L on the DMC (Figure 1) for discharge of up to 90 acre-feet (AF). Installation of the pipeline would require connecting to an existing well within an orchard located northeast of the DMC, trenching through 200 feet of the privately-owned almond orchard, and trenching through 120 feet of Reclamation ROW including the paved canal operation and maintenance (O&M) road.

Trenching would be 3.8 feet deep by 1-foot wide with the spoils used as backfill for the trench. Installation through the O&M road would be saw-cut and removed offsite for disposal. The removed portion of the O&M road would be backfilled with 95% ASTM fill material before being repaved with asphalt.

A 1-foot by 1-foot by 6-inch concrete pad would be placed under the pipeline, 1-foot in from the canal liner, to insure that the pipe does not rest on the canal liner. Construction equipment would consist of a backhoe and portable soil compactor.

Construction would begin in April 2011 and take approximately 2 days to complete. Construction equipment would include a backhoe and portable soil compactor. If necessary, staging would occur within the northwest corner of the almond orchard (Figure 1). Access to the site would be through existing access roads to the orchard and the DMC.

## **2. Environmental Protection Measures**

The following environmental protection measures would be implemented to avoid and minimize environmental consequences associated with the proposed project. Environmental affects, if any, for resource(s) assume the measures specified would be fully implemented by DPWD.

- i. A pre-construction/pre-activity survey shall be conducted 14 to 30 days prior to ground disturbance to determine whether San Joaquin kit fox or kit fox dens are present within the action area (USFWS 2011). All small mammal burrows within the proposed construction zone would be identified during this pre-activity survey. The survey would identify habitat features and evaluate use by Kit fox to determine potential impacts to the Kit fox by the proposed project. Project site development may not begin until the results have been submitted Reclamation and U.S. Fish and Wildlife Service. If no individuals are found, no further mitigation is necessary. Should evidence of a kit fox or kit fox den be found, appropriate consultation with U.S. Fish and Wildlife Service's shall be followed (USFWS 2011).
- ii. A survey shall be conducted for nesting burrowing owls 14 to 30 days prior to the start of construction according to established guidelines (CDFG 1995). Appropriate avoidance, minimization, or protection measures shall be determined in consultation with CDFG in the event an active nest is located in an area subject to disturbance, or within the typical setback (i.e., occupied burrows or nests within 150 feet of an area subject to disturbance during the non-breeding season, or within 250 ft of an area subject to disturbance during the breeding season).

## **3. Habitat and Special-Status Species Status**

The action area is located on the east side of the DMC and an almond orchard (Photos 1 and 2). Land uses in the vicinity include cultivated fields, the canal, and grasslands (Figure 1).



A list of federally threatened and endangered species that may occur within or near the proposed action was obtained on April 11, 2011, by accessing the USFWS Database: [http://www.fws.gov/sacramento/es/spp\\_list.htm](http://www.fws.gov/sacramento/es/spp_list.htm) (Document Number: 110420114135). This list is for the following 7 ½ minute U.S.G.S. Survey quadrangles: Ingomar, Howard Ranch, Crevison Peak, Gustine, Orestimba Peak, and Newman. Reclamation further queried the California Natural Diversity Database for records of protected species within the vicinity of the project location (CNDDB 2011). These two lists, in addition to other information within Reclamation's files, were combined to determine the likelihood protected species occur within the action area. A map was created to illustrate the location of federally listed species within the project footprint (Figure 2).

Many of the special-status species have no potential to occur in the action area due to a lack of suitable habitat. Much of the remaining habitat consists of isolated fragments supporting small, highly vulnerable animal and plant populations (Reclamation 2001). Federal protected species with the potential to be in the action area include the San Joaquin kit fox (*Vulpes macrotis mutica*; SJKF) and burrowing owl (*Athene cunicularia*), a bird protected by the Migratory Bird Treaty Act (MBTA) (Figure 2).

No designated or proposed Critical Habitat exists within the proposed project area (Figure 2: CNDDB 2011).

### **3.1. San Joaquin Kit Fox**

SJKF is federally listed as an endangered species. Their diet varies based on prey availability, and includes small to mid-sized mammals, ground-nesting birds, and insects. SJKF excavate their own dens, or use other animals, and human-made structures (culverts, abandoned pipelines, and banks in sumps or roadbeds). Primary reasons for the species decline include loss and degradation of habitat (USFWS 1998).

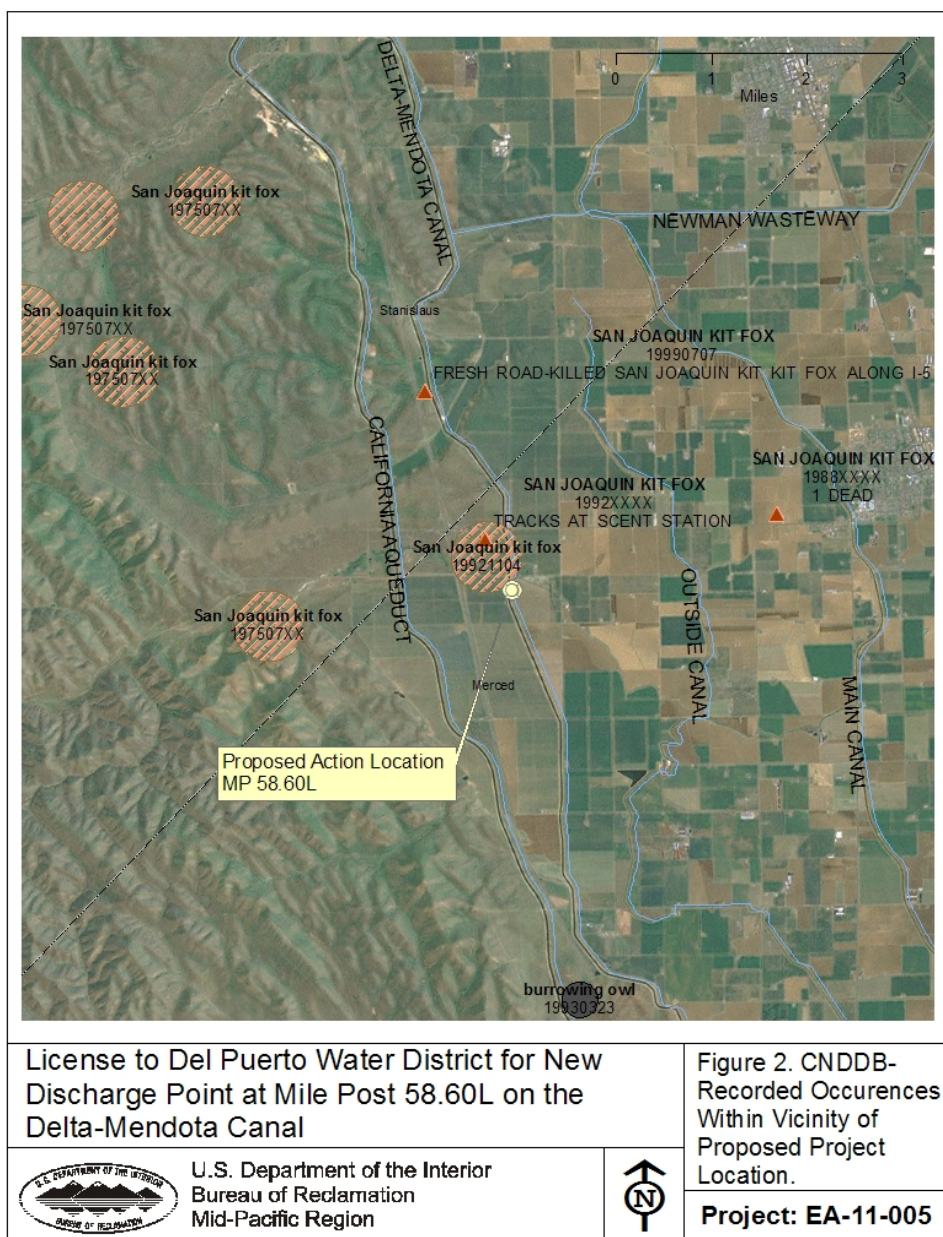
There are several CNDDB-recorded occurrences within a 10-mile radius of the project site (Figure 2: CNDDB 2011). Agricultural practices such as cultivation, irrigation, and chemical treatments result in elevated disturbances within this area, thus limiting SJKF food availability. However, the northern border of the action area is grassland habitat (Figure 2) which could provide a movement corridor and foraging habitat for the SJKF by providing rodent and insect prey.



**CEC-11-005 License to Del Puerto Water District for New Discharge Point at Mile Post 58.60L on the Delta-Mendota Canal**

JLLewis

April 2011



### 3.2. Burrowing Owl

The burrowing owl is a federally protected bird under MBTA. This small ground-dwelling owl is a yearlong-resident that exhibits high site fidelity to breeding areas and nesting burrows (Rich 1984, Lutz and Plumpton 1999). They live in ground squirrel and other mammal burrows that it appropriates and enlarges for its own purposes (Martin 1973, CDFG 1995). Burrowing owls are typically found in short-grass grasslands, open scrub habitats, and a variety of open, human-altered environments, such as the edges of canals or roadways, and agricultural fields. There are two CNDDDB-recorded occurrences within a 10-mile radius of the proposed action site, with the closest 4.4 miles south along the DMC (Figure 2). Therefore, burrowing owls do have the potential to occur at the proposed action site.

#### **4. Special-Status Species Effects**

Most of the land within DPWD is devoted for agricultural production (Figure 1). Fields are irrigated and intensively managed, like much of the remaining San Joaquin Valley, and consequently have limited wildlife habitat value. Some species have adapted to portions of the new landscape and are able to maintain populations; however, as a result of the largely fragmented habitats, the potential for expansion or growth of populations is greatly reduced. Because of the reduction in the acres of habitat available to these species, remnants of habitats such as degraded grasslands are increasingly valuable.

##### **4.1. San Joaquin Kit Fox**

SJKF are known within the vicinity of the project area and potential foraging habitat is present. Because this project falls under the qualifications of a Small Project (USFWS 2011), pre-construction biological surveys for SJKF would be completed from 14 to 30 days prior to any ground disturbance activities. In addition, DPWD personnel would follow the Construction and Operational Requirements presented in *USFWS Standardized Recommendations for Protection of the Endangered San Joaquin kit fox Prior to or During Ground Disturbance* (USFWS 2011). Therefore, with the implementation of the Environmental Protection Measures as described above, there would be no effect to this species.

##### **4.2. Burrowing Owl**

Areas subject to ground disturbance shall be surveyed 14 to 30 days prior to start of construction for nesting avian species, including burrowing owls, according to established guidelines (CDFG 1995). With implementation of the Environmental Protection Measures as described above, there would be no effect to burrowing owls.

#### **5. Conclusion**

Reclamation has determined that the proposed action would not impact SJKF or migratory birds, including the burrowing owl. This determination is based on their current status and habitat conditions, the environmental baseline in the action area, and the effects of the project with the incorporation of Environmental Protective Measures.

## **6. References**

- CDFG (California Department of Fish & Game). 1995. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game, Sacramento, CA.
- CNDDDB (California Natural Diversity Database). 2011. California Department of Fish and Game's Natural Diversity Database, Version 3.1.1. RareFind 3. March 2011.
- Lutz, R.S. and D.L. Plumpton. 1999. Philopatry and nest site reuse by Burrowing Owls: implications for productivity. *Journal of Raptor Research* 33:149-153.
- Martin, D.J. 1973. Selected aspects of Burrowing Owl ecology and behavior. *Condor* 5: 446-456.
- Reclamation (U.S. Bureau of Reclamation). 2001. Biological Opinion on U.S. Bureau of Reclamation Long Term Contract Renewal of Friant Division and CVC Contractors. January, 2001. Prepared by United States Bureau of Reclamation and U.S. Fish and Wildlife Service, Sacramento, CA.
- Rich, T. 1984. Monitoring burrowing owl populations: Implications of burrow re-use. *Wildlife Society Bulletin* 12:178-180.
- USFWS (U.S. Fish and Wildlife Service). 1998. Recovery plan for the upland species of the San Joaquin Valley, California. Portland, OR.
- USFWS (U.S. Fish and Wildlife Service). 2011. Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. Sacramento Fish and Wildlife Office, US Fish and Wildlife Service, January, 2011.



## Healer, Rain L

---

**From:** Goodsell, Joanne E  
**Sent:** Tuesday, April 26, 2011 3:30 PM  
**To:** Healer, Rain L  
**Cc:** Barnes, Amy J; Bruce, Brandee E; Dunay, Amy L; Fogerty, John A; Goodsell, Joanne E; Leigh, Anastasia T; Nickels, Adam M; Overly, Stephen A; Perry, Laureen (Laurie) M; Williams, Scott A; Siek, Charles R  
**Subject:** CEC-11-005 / 11-SCAO-005.1 DPWD discharge point at MP 58.60L on DMC  
**Attachments:** 11-SCAO-005.1.SHPO.consult.pdf; 11-SCAO-005.1.SHPO.concur.pdf

Tracking #: 11-SCAO-005.1

Location: Milepost 58.60L, Delta Mendota Canal – NW ¼ SE ¼ sec. 15, T. 8 S., R. 8 E., Mount Diablo Meridian, as depicted on the Howard Ranch and Newman 7.5' USGS topographic quadrangles.

Rain,

The proposed action to issue a 25 year license to Del Puerto Water District for the installation of a 6-inch diameter steel pipeline through approximately 120 feet of Reclamation right of way and a new discharge point at milepost 58.60L on the Delta Mendota Canal was determined to be the type of activity that has the potential to cause effects on historic properties pursuant to Section 106 of the National Historic Preservation Act, as detailed in the regulations at 36 CFR Part 800.

Through the Section 106 process, Reclamation cultural resources staff reached a finding of no adverse effect to historic properties for the proposed action and in a letter dated March 25, 2011, entered into consultation with the California State Historic Preservation Officer (SHPO) on this finding of effect (attached). The SHPO concurred with Reclamation's finding in a letter dated April 22, 2011, and received in our office on April 26, 2011 (attached).

Concurrence from the SHPO completes the Section 106 process for this action. I am now able to concur with item 6 on CEC-11-005. Please retain a copy of this e-mail and the attached letters in your files. Please note that if the project activities or footprint changes, additional Section 106 review, including further consultation with SHPO, may be necessary.

Thank you for considering cultural resources during project planning.

Sincerely,

Joanne Goodsell  
Archeologist, Bureau of Reclamation  
Mid-Pacific Regional Office  
2800 Cottage Way, MP-153  
Sacramento, CA 95825  
(916) 978-5499 [jgoodsell@usbr.gov](mailto:jgoodsell@usbr.gov)

Classification ENV 3.00  
Project 214  
Control No. 11032744  
Folder I.D. 1147982  
Date Input & Initials 4-26-2012 W



The BUR has determined that there will be no adverse effects to historic properties by this undertaking. Pursuant to 36 CFR 800.5(c)(1), I have no objection to your finding of No Adverse Effects.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, especially for contamination mitigation if necessary, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact Trevor Pratt of my staff at phone 916-445-7017 or email [tpratt@parks.ca.gov](mailto:tpratt@parks.ca.gov).

Sincerely,

*Susan H Stratton for*

Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer

## Healer, Rain L

---

**From:** Rivera, Patricia L  
**Sent:** Tuesday, March 08, 2011 8:36 AM  
**To:** Healer, Rain L  
**Subject:** RE: CEC-11-005 for review

Rain,

I reviewed the proposed action to issue a 25 year license to Del Puerto Water District (DPWD) for the installation of a 6-inch diameter steel pipeline through approximately 120 feet of Reclamation right-of-way (ROW) and a new discharge point at Milepost (MP) 58.60L on the Delta-Mendota Canal (DMC) for discharge of up to 90 acre-feet (AF).

Installation of the pipeline would require connecting to an existing well within an orchard located northeast of the DMC, trenching through 200 feet of a privately-owned almond orchard, and trenching through 120 feet of Reclamation ROW including the paved canal operation and maintenance (O&M) road. No almond trees would be removed during installation of the pipeline within the orchard as the pipeline would be placed within the watering channel between the rows.

Trenching would be 3.8 feet deep by 1-foot wide. Native soil removed during excavation would be used to fill the trench.

Pavement for the canal O&M road would be saw-cut during installation of the pipeline and removed offsite for disposal. The removed portion of the O&M road would be backfilled with 95% ASTM fill material before being repaved with asphalt.

The new discharge point would surface for 15 feet along the DMC canal bank for discharge of groundwater over and into the DMC. A 1-foot by 1-foot by 6-inch concrete pad would be placed under the pipeline, 1-foot in from the canal liner, to insure that the pipe does not rest on the canal liner. As the water to be discharged is non-Central Valley Project water, an MP620 permit (Reclamation Mid-Pacific Region-specific permit for additions or alterations to Reclamation-owned conveyance and distribution facilities) is not required. Additionally, there would be no modifications to the DMC as the pipeline would cross above the DMC to discharge groundwater.

Construction would begin in April 2011 and take approximately 2 days to complete. Construction equipment would include a backhoe and portable soil compactor. If necessary, staging would occur within the northwest corner of the almond orchard. Access to the site would be through existing access roads to the orchard and the DMC.

Discharge of non-CVP water into the DMC by the pipeline was analyzed in FONSI/EA-10-072. Any subsequent Warren Act Contracts, other than that analyzed under FONSI/EA-10-072, would require additional environmental review.

The proposed action does not have a potential to impact Indian Trust Assets. The nearest ITA is Chicken Ranch Rancheria approximately 58 miles NE of the project location.

Patricia