



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Ventura Fish and Wildlife Office  
2493 Portola Road, Suite B  
Ventura, California 93003

IN REPLY REFER TO:  
PAS: 200.1858.7360

June 1, 2007

Karen Fisbeck, Director  
Base Realignment and Closure Office  
Department of the Army  
P.O. Box 5004, Building #4463 Gigling Road  
Monterey, California 93944-5004

**Subject:** Amendment to Biological Opinion 1-8-04-F-25R, for the Cleanup and Reuse of  
Former Fort Ord, Monterey County, California

Dear Ms. Fisbeck:

This letter constitutes an amendment to our March 14, 2005, biological opinion (1-8-04-F-25R) addressing the effects of cleanup and reuse of former Fort Ord on the federally threatened California tiger salamander (*Ambystoma californiense*) and on critical habitat for the federally endangered Contra Costa goldfields (*Lasthenia conjugens*). The U.S. Fish and Wildlife Service (Service) has received your letters of October 12, 2006, and May 11, 2007, requesting amendments to this biological opinion. The amendments address the recent discovery of California tiger salamanders in the Fort Ord area north of Reservation Road and changes to a Marina Coast Water District project on Fort Ord.

Your request regarding the proposed Marina Coast Water District water storage project indicates that the area graded during project activities would be about 0.4 acre greater than what was anticipated at the time the biological opinion was issued in March 2005. As a result, about 1.5 acres of ground would need to be cleared or otherwise disturbed, rather than 1.1 acre as described in the biological opinion. The additional 0.4 acre will be restored after completion of the project and will not be a permanent loss of habitat.

The discovery on March 28, 2007, of California tiger salamanders breeding in an agricultural pond near the boundary of former Fort Ord and Armstrong Ranch is new information on the extent of the area on former Fort Ord that is likely to be used by the species. At the time biological opinion 1-8-04-F-25R was issued, California tiger salamanders were not known to breed on or adjacent to Fort Ord north of Reservation Road. The new information on the distribution of this species indicates that California tiger salamanders may be affected by the Department of the Army's (Army's) investigation, remediation, and reuse activities not described in the subject biological opinion. Your request of May 11, 2007, and its attached biological evaluation, describe the Army's ongoing activities in this area of the base, including investigation and remediation of contaminated groundwater and land transfers that are anticipated in the next 12 months. This amendment is based on the documents you submitted to us on May 11, 2007, and your October 12, 2006, letter, except where otherwise noted.

The corresponding sections of biological opinion 1-8-04-25R are hereby amended as follows:

## **DESCRIPTION OF THE PROPOSED ACTION**

The following subsections are added under **Pre-disposal Actions**:

### **1.3 Remedial Actions – Contaminated Groundwater Remediation.**

*1.3.1 OU-1 Groundwater Investigation/Remediation.* Groundwater contaminated by trichloroethylene (TCE) at Operable Unit - 1 (OU-1) is being investigated and remediated by HydroGeologic, Inc., under a firm-fixed-price contract with the Army. Quarterly monitoring of groundwater wells within OU-1 is ongoing and planned to continue until the end of the project (approximately 10 years). A groundwater treatment system is also being installed to extract and treat contaminated groundwater. Although most of the groundwater treatment infrastructure has already been installed, approximately 7,040 linear feet of pipeline remain to be installed beginning June 1, 2007, to transport contaminated and treated water. In addition, six groundwater wells will be constructed on Armstrong Ranch property adjacent to former Fort Ord to monitor and treat the TCE plume.

The pipeline system was designed to avoid and minimize impacts to populations of Monterey gilia and Monterey spineflower and designated Monterey spineflower critical habitat to the greatest extent possible. Construction of the remaining pipelines was delayed until the dry season to avoid impacts to these protected plants. Work is being performed in accordance with conservation measures and terms and conditions established in the Army's habitat management plan (HMP) and biological and conference opinions 1-8-99-F/C-39R and 1-8-01-F-70R. Specific conservation measures are described below.

Construction of the pipelines would involve excavation of: (1) a 1,400 foot long trench that is 8 inches wide and 2 feet deep (1,050 square feet (sf) of surface disturbance); (2) a 2,000 foot long trench that is 2 feet wide and 4 feet deep (4,000 sf of surface disturbance); (3) a 3,000 foot long trench that is 2 feet wide and 4 feet deep (6,000 sf of surface disturbance); and (4) two infiltration trenches that are each 320 feet long, 2 feet wide, and 6 feet deep, separated from each other by 20 feet (1,280 sf of surface disturbance). Combined, these pipelines would result in approximately 12,330 sf of disturbance. Installation of 6 wells is expected to disturb approximately 150 sf. In addition to the wells and pipelines, a lay-down yard that is 60 feet by 200 feet (12,000 sf) would be needed to stockpile pipe segments. No digging will occur in the lay-down yard; therefore, only limited disturbance is anticipated in this area. All work will occur during daytime hours.

*1.3.2 Operable Unit Carbon Tetrachloride Plume (OUCTP) Groundwater Investigation/Remediation.* Ongoing groundwater monitoring of OUCTP wells will continue through the end of the project (approximately 5 years). An Enhanced *In Situ* Bioremediation Pilot Study (EISB pilot study) is being planned to gather data and complete the design of the full-scale system for the remediation of the OUCTP. A work plan describing the design, installation, and operation of the EISB pilot study was prepared for the Army by the contractor. The *Draft Operable Unit Carbon Tetrachloride Plume Enhanced In Situ*

*Bioremediation Remedial Design Pilot Study Work Plan, Former Fort Ord, California* describes the details of the proposed action. It involves installation of 26 wells and other temporary infrastructure necessary to inject the bioremediation substrate and monitor changing groundwater conditions. The well installation is scheduled to begin June 1, 2007. The EISB system was designed to avoid populations of Monterey gilia and Monterey spineflower and minimize adverse affects to Monterey spineflower critical habitat. Construction was delayed until the dry season to avoid impacts to these species. As with the OU-1 project, work at OUCTP will be performed in accordance with conservation measures established in the HMP and biological opinions (1-8-99-F/C-39R and 1-8-01-F-70R) and the conservation measures described below.

Construction of the wells involves ground disturbance to approximately 25 sf around each well site for a total of approximately 650 sf. Although above-ground pipelines and electrical lines will connect the wells, this infrastructure will be removed after approximately 4 months of operation. The only other disturbance is expected to be the staking at 20 foot intervals along the length of the pipeline to prevent movement of the pipeline from water hammering and heat expansion that could occur during the injection and circulation of the bioremediation substrate. All intrusive work (i.e, ground disturbance) will occur only during daytime hours. Some limited groundwater monitoring may be conducted at night during the initial system startup.

#### Proposed Conservation Measures for Contaminated Groundwater Remediation

Due to the recent discovery of California tiger salamanders breeding north of Reservation Road, the Army will be requiring its contractors to implement the applicable reasonable and prudent measures and terms and conditions identified in biological opinion 1-8-04-F-25R in addition to the requirements identified in biological opinions #1-8-99-F/C-39R and 1-8-01-F-70R. The Army will require implementation of the conservation measures described in the paragraphs below.

For OU-1:

1. Conduct Employee Education Program. A biologist familiar with HMP species will present the training to all supervisors and field personnel prior to the beginning of intrusive activities and to any new personnel prior to their beginning work on the project. Topics covered in the training will include a description of HMP plant and wildlife species that could be encountered in the project area, environmental laws related to the conservation of these species, guidelines that personnel must follow to reduce or avoid impacts to HMP species, and the appropriate points of contact to report unforeseen impacts on HMP species.
2. Restrict disturbance to the project area to prevent unnecessary disturbance of habitat. Use existing access roads, staging areas, and other necessary support facilities so as to avoid areas containing HMP plant and wildlife species and maritime chaparral vegetation to the extent possible. Use existing roads whenever possible and minimize use of vehicles off roads.
3. In unforeseen circumstances, such as when California tiger salamanders are encountered, Mr. William Collins, Army biologist, may relocate California tiger salamanders out of the path of danger. When Mr. Collins is unavailable, a resident lead field designee who has received

appropriate training by the Service-authorized biologist may handle California tiger salamanders for the sole purpose of removing them from the path of danger.

4. The authorized biologist or lead field designee must record all pertinent information when California tiger salamanders are relocated, including the number of individuals captured, site of capture, site of relocation, habitat at the site of capture, and activity for which the relocation was implemented.
5. To the extent practicable, carry out the project during the dry season or when it is least likely to adversely affect California tiger salamanders depending on the project's proximity to known and potential breeding pools.
6. Use an Environmental Monitor to select lay-down areas void of small mammal burrows, and define staging areas and project boundaries with flagging or fencing.
7. Implement erosion control measures.
8. Prohibit pets from the project site.
9. Clean trash from the project site.
10. Track observations/discoveries of California tiger salamanders encountered during actions and use the information to inform and improve the effectiveness of conservation measures.
11. The Army must contact the Service whenever the number of dead or injured California tiger salamanders found in a given year reaches three, and the cause of death or injury may be due to Army activities or is unknown. Once the cause of death or injury has been determined, the Service and Army must decide whether any additional protective measures are required to address the cause of the loss of California tiger salamanders.
12. An environmental monitor will document site conditions at each construction location (i.e., well site or pipeline trench) once the final layout has been selected. Photographs will be taken at each work site shortly before construction begins, during construction, and after the site is restored to pre-existing site topography. Additional photographs will be taken during construction as needed to document special occurrences, such as discovery of legless lizards, California tiger salamanders, or other species of special concern and to show typical construction activities and impact prevention and mitigation measures.
13. An environmental monitor will be on-site for the initiation of all new types of activities and for pre-construction inspection of well sites and pipeline routes. The purpose of this monitoring effort is to make sure that all field personnel follow the environmental mitigation guidelines established for this project and to ensure that protected species will not be harmed by any project activity. The environmental monitor will conduct the majority of field compliance monitoring tasks under the supervision of the BRAC office. Environmental responsibilities are discussed further in section 7.2.2 of the Work Plan.

14. After major rainfall events, the contractor will check for erosion along the pipeline routes and at the treatment plant site as part of the routine operation and maintenance inspection effort for the treatment system. Operation and maintenance inspections will occur at least twice per month.
15. A reference booklet has been prepared that includes photographs and descriptions of each plant and animal species of concern and a contact list with phone numbers to facilitate communication in the event of questions. The reference booklet also summarizes the work procedures to be followed to minimize impacts. Multiple copies of the reference booklet will be kept on-site and readily available to the construction personnel.
16. Ramps will be placed in any trench deeper than 6 inches to allow animals to exit the trench.
17. Boards will be placed in the bottom of open trenches to provide cover for California tiger salamanders to avoid desiccation. Boards will be removed and trenches inspected for California tiger salamanders before work begins each day.
18. All pipes will be capped in open trenches to prevent California tiger salamanders from becoming trapped inside the pipeline and wells.

For OUCTP:

1. A single staging area void of small animal burrows will be used and specific access routes will be established to minimize impacts to the ground surface (e.g., rutting, erosion).
2. Following well installation activities, disturbed land around each well (5 feet by 5 feet) will be recontoured as close as possible to its original condition by limited grading.
3. Access routes will be delineated to maintain personnel and vehicles in designated work areas and limit access to protected areas.
4. Monitoring will be conducted by a biologist during pilot study activities to ensure mitigation measures are implemented. The biologist will record any protected species encountered as described in appendix F of the Work Plan.

The corresponding subsections under **Pre-disposal Actions** are altered as follows:

3.4 Interim Uses – Marina Coast Water District Project. The second through fourth sentences are replaced with: “The proposed project consists of installation of two potable water storage reservoirs to replace the existing tank that is out-of-service, demolition of the existing storage tank, and the construction of an overflow pipe, a pipeline connection to the existing system, and on-site facilities. The grading design would involve the excavation of 4,000 cubic yards of material. The grading disturbance area would be 1.5 acres.”

The paragraph is appended with: “The 0.4-acre area of grading outside of the 1.1-acre parcel boundary will be restored to existing habitat conditions at the completion of the project.”

The following paragraph is added under **Disposal Actions**:

Within the next 12 months, the Army is expecting to transfer 43 acres of land designated as Development, that are within 2 kilometers of the California tiger salamander breeding site discovered in 2007 north of Reservation Road. These transfers are consistent with the HMP and existing biological opinions. Two of the transfers will be to the Fort Ord Reuse Authority: parcels E5a.1 (31 acres on the south side of Reservation Road) and L5.10.1 (8 acres adjacent to E5a.1, containing the existing Reservation Road and its right-of-way). The third transfer of 4 acres of asphalt-covered land north of Reservation Road will be to the University of California, Santa Cruz.

## **ENVIRONMENTAL BASELINE**

This section is amended with the following paragraph:

On March 28, 2007, biological consultants authorized to conduct surveys for California tiger salamanders discovered California tiger salamander eggs and larvae in an agricultural water storage basin located north of Reservation Road on Armstrong Ranch, approximately 400 feet north of the former Fort Ord boundary. Based on this recent discovery, about 20,000 acres of former Fort Ord's 28,000 acres are within 2 km (an estimate of upland habitat use) of known or potential breeding sites and constitute upland habitat for California tiger salamanders.

## **EFFECTS OF PRE-DISPOSAL ACTIONS**

The following subsection is added:

### Remedial Actions – Contaminated Groundwater Remediation at OU-1 and OUCTP

#### ***California tiger salamanders***

The use of large vehicles for drilling and excavating on existing roads, and the use of vehicles on a minimum number of new vehicle routes, may crush or injure California tiger salamanders residing in burrows. The Army has proposed to use existing roads as much as possible and to conduct all ground disturbing work during daylight hours when California tiger salamanders are not active. Some well monitoring may occur at night during startup of the system and could result in vehicle strike of California tiger salamanders if the monitoring coincides with wet weather. We expect this to be a rare occurrence. We expect the adverse effects of vehicle use to be small due to the limited extent of activity and their distance from the breeding site.

Excavation of approximately 12,550 sf (0.29 acre) for the remainder of the wells and pipeline system of OU1, and 650 sf, plus staking, for OUCTP, would destroy small mammal burrows and could injure or kill California tiger salamanders or displace them to the soil surface where relocation would be needed. The temporary pipe lay-down yard covering an additional 12,400 sf of area and the construction of above-ground pipeline and electrical systems may result in crushed burrows and injury or mortality of California tiger salamanders as pipes are moved. It is unlikely that California tiger salamanders would be sheltering in the pipe, because the pipeline is anticipated to be installed during the dry season when California tiger salamanders reside in burrows.

The following paragraph replaces the existing paragraph under Caretaker Actions – Interim uses, Marina Coast Water District Project, California tiger salamanders:

Demolition of the existing tank, replacement with two tanks, and construction of a pump station and pipeline system would permanently eliminate up to 1.1 acres of habitat and any California tiger salamanders within it. An additional 0.4 acre would be disturbed by grading and then restored to existing conditions, resulting in injury or death to California tiger salamanders sheltering there, but not permanent loss of habitat. Burial of the pipeline and its future maintenance may adversely affect California tiger salamanders through vehicle strike on the road, excavation of burrows which extend into the dirt road, or crushing by heavy machinery used to excavate the road during initial installation. Effects will be minimized by restoring the road and the 0.4 acre of temporary disturbance to its current condition, with no widening or modification of the road other than placement of the pipeline and back-filling of the trench.

The following paragraphs are added to **Effects of Disposal**:

As a result of the 2007 discovery of California tiger salamanders breeding near the Armstrong Ranch/Fort Ord boundary, the area within 2 km of known or potential California tiger salamander breeding sites on former Fort Ord has increased to approximately 20,000 acres of former Fort Ord’s total approximately 28,000 acres. Approximately 15,290 of those 20,000 acres are in areas designated as Habitat Reserve, and 1,120 acres are in areas designated as Habitat Corridor with Development or Development with Reserves. Approximately 3,500 of the 20,000 acres are designated for Development.

In the next year, approximately 43 acres of uplands that function as California tiger salamander habitat, or that may be traversed by individuals of the species (e.g., asphalt roads), will be transferred out of Army ownership. This acreage is in the Reservation Road area and is designated for Development, so we anticipate it will be converted to uses that would no longer support habitat for the species.

**INCIDENTAL TAKE STATEMENT**

The following additions are made to table 1, under the **Incidental Take Statement for Army Pre-disposal Actions, Acreage on which take will occur due to actions with temporary or intermittent effects, without permanent conversion of habitat**:

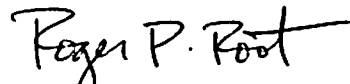
General Action	Army Action	Breeding habitat affected: acres (# wetlands)	Affected life stage	Upland habitat affected	Affected life stage
Remedial Action	Groundwater Remediation	0	None	Less than 0.6 acre of direct soil disturbance; ongoing vehicle use	Juveniles, Adults
Interim Use Action	Marina Coast Water District Project	0	None	0.4 acre	Juveniles, Adults

Consistent with the existing biological opinion, the process of the Army transferring lands will not result in take; therefore, none has been authorized.

This concludes the amendment to biological opinion 1-8-04-F-25R. It is our understanding that within the next 8 to 10 months, the Army intends to reinitiate formal consultation with the Service, under section 7(a)2 of the Endangered Species Act, as amended, on all Army actions at former Fort Ord in order to provide additional details not available at the time of previous consultations, particularly on prescribed fire activities. We anticipate that this will result in one biological opinion that will address all Army projects that may affect listed species and critical habitat at former Fort Ord.

If you have any questions about this amendment, please contact Diane Steeck of my staff at (805) 644-1766, extension 318.

Sincerely,

Handwritten signature of Roger P. Root in black ink.

Roger P. Root  
Acting Assistant Field Supervisor