

## **Appendix F Covered Animal Avoidance and Minimization Surveys**

This section describes the pre-project surveys that must be conducted prior to implementation of covered activities within portions of the Los Osos Habitat Conservation Plan (LOHCP) area that have potential to support Morro Bay kangaroo rat (Figure 5-3), to ensure avoidance of this fully protected, endangered animal.

It also describes the process that must be used to capture and relocate Morro shoulderband snails out of harm's way prior to and during initial stages of covered activities in designated portions of the LOHCP Area (Figure 5-2), to minimize impacts of the covered activities on this species.

### **F.1 Morro Bay Kangaroo Rat Pre-Project Survey**

In portions of the LOHCP Area (Figure 5-3), pre-project surveys must be conducted prior to implementation of covered activities to prevent impacts to the Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*). This species is not only federally and State endangered, it is also a State of California fully protected species; therefore, during implementation, steps must be taken to ensure the species is not present in these areas before they are disturbed by the covered activities.

The survey methods were developed by the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) based on the 1996 presence/absence survey protocol for Morro Bay kangaroo rat (MBKR) and modified to address current conditions and circumstances in the LOHCP.

This section identifies the following aspects of the surveys:

1. **Survey Areas:** Areas where pre-project surveys must be conducted prior to County issuance of certificates of inclusion under the LOHCP;
2. **Qualifications:** the qualifications and agency approval requirements for biologists conducting the surveys;
3. **Protocol:** the methods that will be used as part of a two-step process to evaluate presence/absence MBKR through a habitat assessment, and then conduct track plate/diagnostic surveys and live trapping, if warranted;
4. **Reporting:** requirements for reporting results of surveys; and
5. **Survey Results:** the length of time during which the survey results will be applicable to project permitting.

#### **F.1.1 Survey Areas**

Surveys will be required prior to implementation of covered activities within the area depicted in Figure 5-3. Biologists from the USFWS and the CDFW (the wildlife agencies) determined that MBKR has some likelihood of occurring in these areas, based on habitat conditions and historical observations. The survey must be completed prior to vegetation removal or any ground-disturbing activities in the mapped areas.

### **F.1.2 Survey Protocol**

The survey consists of three elements which are conducted in two consecutive phases. The first phase consists of a visual survey. If the wildlife agencies determine results of the visual survey necessitate a more detailed evaluation of MBKR presence within the site, project proponents will be required to conduct the second phase of the protocol, which consists of two elements: track plate and camera stations, and live trapping.

### **F.1.3 Phase 1: Visual Survey**

The first phase of the survey protocol consists of a visual survey to assess suitability of habitat for MBKR and also to look for sign. The following outlines the visual survey protocol.

- The visual survey shall occur between April 1 and August 31, with surveys conducted in the later portion of this season being preferable.
- The property shall be subject to a 100 percent visual examination by a biologist pre-approved by the wildlife agencies. The property shall be traversed in a series of transects close enough together so that all of the ground surface can be visually assessed. In open areas with short vegetation, transect spacing may be up to 10 m apart, while habitats with heavy shrub cover will require spacing as close as three meters. To avoid missing areas, transect routes may be temporarily marked.
- The biologist(s) will evaluate habitat for all types of diagnostic sign for kangaroo rats including burrows, tail drag marks, tracks, scat, dust baths, and surface seed pit caches. The biologist(s) shall thoroughly evaluate the soil surface to determine the likelihood of diagnostic sign being obliterated and thus hiding the presence of MBKR sign.
- Conditions during the visual surveys must allow sign from the daily activity of other small mammals and even tenebrionid beetles to be clearly evident. Visual surveys shall be conducted only during the morning or during late afternoon if there has been no wind; during these times, shadows make tail drag marks easier to detect.
- The wildlife agencies shall be notified immediately if scat considered to be potential sign of MBKR is observed. This scat shall be collected and submitted to CDFW for analysis to determine if it is that of MBKR.
- Areas where potential diagnostic sign is observed shall be mapped and the locations recorded with a global position system (GPS) so that track plate/camera stations may be placed in that location.

The results of the visual survey will be provided to the wildlife agencies within 10 working days of survey completion. For a written determination regarding the need for track plate/camera station and trapping surveys. The wildlife agencies will provide a written determination regarding the need for Phase 2 survey work within 30 days.

### **F.1.4 Phase 2: Track Plate/Camera Station and Live Trapping Survey**

The following two elements of a phase 2 survey must be conducted if the wildlife agencies determine that a more thorough evaluation of MBKR presence is merited, following review of the report of the Visual Survey conducted as part of phase 1.

**F.1.4.1 Track Plate/Camera Station Protocol**

Track plate and camera station surveys will be conducted as follows:

- The track plate and camera station surveys shall be conducted between April 1 and August 31. It is preferable that this survey work be conducted during the latter portion of this designated season, rather than earlier.
- Track plate and camera stations will be located in the area where the potential sign was found during the habitat assessment. After stations are assigned to areas with potential sign, other stations shall be established in a grid pattern with distance between any two stations or a station and parcel boundary no greater than 200 feet. Should any selected sampling site fall outside of potential kangaroo rat/coastal sage scrub habitat (e.g., within horse paddocks, roads, or other areas of human habitation) the station shall be moved to the nearest location where suitable habitat is present. The location of each track plate/camera station shall be recorded using a GPS.
- Each track plate and camera station shall include a track plate which has been smoked or treated to detect small mammals, and a wildlife motion-detection camera suitable for the detection of kangaroo rats and other small mammals.
- Equipment shall be set up at sunset with data collected as soon after sunrise as practical. Equipment may be removed during the day to avoid vandalism or theft.
- Track plate and camera stations shall be deployed and checked each night for seven (7) days; the survey days shall be consecutive, except that track plate and camera stations shall not be deployed if weather and ground conditions are not appropriate for their use, such as during rain or high winds.

**F.1.4.2 Live Trapping**

Live trapping shall be conducted as outlined below.

- Unless otherwise approved in writing by the CDFW and the USFWS, trapping will be conducted between June 1 and August 31.
- Traps will be established at the location of each track plate/camera station, the locations of which shall again be recorded using a GPS.
- Trapping shall begin on the first afternoon when the weather and ground conditions are appropriate. Trap response is variable depending on extraneous factors such as weather conditions and availability of natural forage. To maximize trap response, trapping shall not be performed within three (3) days following inclement or extreme weather (e.g., rain, high winds) when animals are either less active or vulnerable to hypothermia.
- Trapping shall be conducted for a minimum of three consecutive nights. If traps are vandalized or otherwise inappropriately disturbed, trapping may need to be extended to compensate for any lost trapping opportunity.
- Traps shall be concentrated in areas with potential sign. At least one trap shall be placed at each active burrow or dust bath. Traps shall be placed near any tracks, particularly along apparent runways; this may mean 10 or more traps are located in a relatively tight cluster. Trap stations

shall also be set in evenly spaced intervals of 10 to 15 meters with two traps per station along potential movement corridors between areas exhibiting kangaroo rat sign. Where two traps are placed, one of the traps may be of mesh construction.

- Traps shall be baited with a mixture of food items such as crimped oats, wild bird seed, apples, walnuts, and peanut butter, provided that the peanut butter does not act as an ant attractant.
- Traps shall be opened and baited in late afternoon and checked approximately 2 to 4 hours after sunset and again at dawn. Traps may be checked once again during the night. No intervals between checks of any traps shall exceed six (6) hours. Traps shall be closed after they are checked at dawn.
- Unless otherwise notified by CDFW and the USFWS, any captured MBKR individuals will be documented with photos and hair samples collected for analysis by the wildlife agencies. The location of the capture will be recorded with a GPS. Animals will be released back to the wild at the trap location.

### F.1.5 Surveyor Qualifications

Biologists must meet the qualifications outlined below and be approved by CDFW and USFWS (the wildlife agencies) prior to conducting surveys for MBKR. The County will maintain a list of biologists that the wildlife agencies have identified as qualified to perform MBKR surveys.

1. **Visual Assessments and Track Plate/Camera Station Surveys:** The visual assessments, track plates, and camera station work shall only be conducted by biologists with extensive, demonstrable experience with kangaroo rats (*Dipodomys* spp.).
2. **Live Trapping:** Trapping surveys can only be conducted by biologists with a federal recovery permit, issued pursuant section 10(a)(1)(A) of ESA, for Morro Ban kangaroo rat, and who have received authorization from the CDFW. Biologists in possession of a recovery permit for another species of listed kangaroo rat and/or demonstrable small mammal trapping experience that includes work with kangaroo rats may be considered by the wildlife agencies on their individual merit; however, such individuals must be approved, in advance, by both CDFW and the USFWS.

The same biologist shall conduct all of the elements deemed necessary to constitute a complete survey unless otherwise approved in advance and in writing by CDFW and the USFWS.

### F.1.6 Reporting

Reports for the Phase 1 Visual Survey shall be submitted to the wildlife agencies within 10 working days following completion.

A final report shall be prepared following the completion of all elements of the survey to incorporate all survey results for the property. This final report shall be submitted within 15 working days of the completion of the Phase 2 surveys.

The report for will include the following information: the survey date(s) and time(s), survey location on a map, day and night time weather conditions including temperature and wind speed, moon phase, the preceding week's weather conditions, names of biologist(s), number of person-hours spent searching for

sign per hectare searched (i.e., survey effort), a copy of the field notes that list trap check times by date, photographs, and a description of the survey methods and results, including any capture location(s).

All reports should be submitted to the wildlife agencies at the addresses below:

Field Supervisor  
U.S. Fish and Wildlife Service  
Ventura Field Office  
2493 Portola Road, Suite B  
Ventura, California, 93003

Habitat Conservation Planning Branch  
Department of Fish and Wildlife  
1234 E. Shaw Avenue  
Fresno, CA 93710

### **F.1.7 Survey Result**

If the survey is conducted as described in this protocol and the results are negative, as no diagnostic sign is found and no MBKR are trapped, these negative results are considered valid for one year unless otherwise extended, in writing, by the wildlife agencies. If results indicate MBKR is present, the project proponent shall contact the CDFW and USFWS regarding how to proceed.

The wildlife agencies reserve the right to reject the results of Morro Bay kangaroo rat surveys as inadequate if: (1) specific methods described above are not implemented and prior written exception has not been obtained per for any requested modification or (2) survey methods used are inconsistent with this protocol.

## **F.2 Morro Shoulderband Snail Minimization Measure**

This section describes the pre-project surveys that will be conducted to minimize take in the form of injury and mortality of Morro shoulderband snail (*Helminthoglypta walkeriana*; MSS, a federally threatened species, by ensuring that identified individuals are captured and moved out of harm's way into Preserve lands prior to site disturbance that would result from covered activities. The methods were developed by the USFWS to address current conditions and circumstances in the LOHCP.

### **F.2.1 Survey Areas**

Surveys will be required in the portions of the LOHCP Area depicted in Figure 5-2. Biologists from the USFWS determined that larger numbers of MSS are expected to occur in these areas, based on habitat conditions, current and historical observations, and proximity to known occupied areas.

### **F.2.2 Morro Shoulderband Survey Methods**

#### **F.2.2.1 Search**

Preconstruction surveys and minimization measures must be conducted in advance of ground-disturbance in the designated areas (Figure 5-2). A qualified biologist (Section F.2.3) will be present during site disturbance activities and initial grading and excavation including clearing of vegetation and stripping of the surface soil layer to monitor for the presence of MSS.

Surveys for MSS will also include cutting at ground level any native or exotic shrubs that are to be removed as part of site preparation to allow for careful inspection of branches and understory litter to detect any MSS individuals that may be present. Veldt grass (*Ehrharta calycina*) clumps will be carefully inspected and all iceplant species (*Carpobrotus* spp., *Conicosia* spp., and *Mesembryanthemum* spp.) will be removed and stems and duff carefully inspected for individual MSS as well as their egg masses. As vegetation is removed, it will not be stockpiled onsite but rather moved to an offsite location where there is no chance of its re-occupation by the species.

Measures shall be taken during vegetation removal, grading, and excavation to avoid trampling patches of iceplant or perennial veldt grass. The biologist will have the authority to order any reasonable measure necessary to avoid injury or mortality of MSS and stop any work or activity that is not in compliance with the conditions set forth in the ITP. The USFWS will be notified of any “stop work” order and this order will remain in effect until the issue has been resolved.

### F.2.2.2 Relocation

Live MSS in any life stage that are encountered during these monitoring surveys will be captured and moved by the biologist to suitable habitat located within a LOHCP Preserve. The biologist will identify the most suitable receptor site and obtain consent from the receptor-site landowner or manager prior to relocating individuals to the site. To the extent possible, individuals should be relocated to suitable conserved habitat within the LOHCP Preserve closest to the capture site. Within the designated receptor site, MSS shall be placed in or near the center of a habitat patch to maximize chance of survival; habitat edges should be avoided.

Capture of individuals should be done carefully and with a light touch, with time in hand kept to the minimum time necessary. Between the point of capture and the receptor site, individuals should be placed in a protective, secure container that contains a layer of duff comprised of native leaf litter.

Individual MSS should be kept in the protective container for the minimum amount of time necessary to move them to the receptor site. In any case, individuals will not be kept in the container for more than an hour. During this period, the biologist must take measures to keep individuals out of the direct sunlight and situations of excessive heat.

Individuals MSS shall be gently transferred from their protective container to the base of a native shrub species with low-lying branches that can provide cover. The aperture (main opening of the MSS shell) should face the ground surface. The biologist shall gently cover the MSS with one to two inches of leaf litter (duff).

### F.2.2.3 Construction Monitoring

Upon completion of site preparation and grading activities, the biologist will periodically visit the project site throughout the remainder of the project construction period. During periods of rain or heavy fog/dew, the biologist will conduct pre-activity surveys to ensure that no Morro shoulderband snails have migrated into the work area. Any MSS observed during this period shall be relocated as outlined in Section F.2.2.2. No construction work will be initiated until the biologist determines that the work area is clear of Morro shoulderband snails.

### **F.2.3 Surveyor Qualifications**

Biologists who conduct surveys for Morro shoulderband snail shall be in possession of a valid section 10(a)(1)(A) recovery permit for the species that allows for the handling in association with species identification and capture or has been otherwise approved by the USFWS and CDFW. The County will maintain a list of biologists that the USFWS has identified as qualified to perform surveys for Morro shoulderband snail.

### **F.2.4 Reporting**

Reports for monitoring and clearance surveys will be submitted to the USFWS and CDFW within 30 working days following completion and will include the following information: survey date(s) and time(s), parcel identification (street address and APN), names of biologist(s) and permit number(s), number of person-hours spent, number of individuals captured and relocated, location of the receptor site, any take that may have occurred during capture, and a copy of the field notes.

All reports should be sent to the wildlife agencies at the following addresses:

Field Supervisor  
U.S. Fish and Wildlife Service  
Ventura Field Office  
2493 Portola Road, Suite B  
Ventura, California 93003

Habitat Conservation Planning Branch  
Department of Fish and Wildlife  
1234 E. Shaw Avenue  
Fresno, California 93710