

San Joaquin Valley Oil and Gas Programmatic Opinion Sample Provisions

General Guidelines for Conserving Habitat and Minimizing Project Impacts

Habitat disturbance will be minimized and conducted in a manner that reduces, as much as possible, the potential for take of individuals of a listed species. Existing roads and routes of travel will be used, to the greatest extent practicable. Natural drainage patterns will be maintained to the greatest extent practicable.

Large draws and drainages with saltbush will be avoided to the greatest extent practicable.

The area of disturbance will be reduced to the smallest practical area, considering topography, placement of facilities, location of burrows, nesting sites or dens, public health and safety, and other limiting factors.

Work area boundaries will be delineated with flagging, temporary fencing or other marking to minimize surface disturbance associated with vehicle straying.

To the extent practicable, previously disturbed areas will be used to stockpile excavated materials, storage of equipment, digging of slurry and borrow pits, locations of trailers, parking of vehicles, and other surface-disturbing actions.

All oil spills will be contained closest to the source site as possible. The Service will be notified within 48 hours of any oil spill.

The use of all terrain vehicles (ATVs) will be considered for projects that require cross-country travel (such as project survey staking, geophone placement and retrieval).

Project employees will be directed to exercise caution when commuting within listed species habitats. **T&C**¹ The speed limit on unpaved roads not maintained by the county, shall be a maximum of 20 MPH, in order to minimize wildlife casualties.

Cross-country travel by vehicles is prohibited, unless specifically authorized by BLM for the project.

Project employees will be provided with written guidance governing vehicle use restrictions, speed limits on unpaved roads, and fire prevention and hazards.

A worker education program will be conducted for all employees working on the project sites in listed species habitats. The education program will include identification of listed species and their habitats, project mitigation measures and stipulations, reporting requirements, and penalties for failure of compliance.

T&C All spills of hazardous materials within endangered species habitats shall be cleaned up immediately.

Unless specified for reducing impacts to blunt-nosed leopard lizards, actions during evening hours when some listed species are active and vulnerable to vehicle or equipment-induced injury or mortality will be minimized.

¹

T&C = term and condition from the September 28, 2001 Biological Opinion.
CR = conservation recommendation from the September 28, 2001 Biological Opinion.

Trash and food items will be contained in closed containers and removed daily.

Firearms will be prohibited from project sites.

Trenches or holes should have at least one escape ramp for each 1,000 feet of open trench. Escape ramps should be earthen and at a slope no steeper than 1:1. Trenches will be checked in the morning before beginning work and at the end of the work day. Any entrapped animals will be allowed to escape unharmed.

Pets will not be permitted on construction project sites.

T&C Listed species shall be protected from the hazards posed by oil sumps. All hazardous exposed oil sumps shall be screened or eliminated (California Laws for Conservation of Oil and Gas 1995). All screening of sumps shall meet the following specifications: 1) be not greater than 2 inch nominal mesh, 2) be of sufficient strength to restrain entry of wildlife, and 3) be supported in such a manner so as to prevent contact with the sump fluid. Oil sumps shall be designed, constructed, and maintained as to not be a hazard to people, livestock, or wildlife, including birdlife. Oil sumps shall be filled with earth after removal of harmful materials (California Code of Regulations 1982).

T&C Biologists and law enforcement personnel from the California Department of Fish and Game and the Service shall be given complete access to the project area to review monitoring and mitigation activities.

T&C Project activities that are likely to cause the amount or extent of take to be exceeded shall cease immediately.

CR The protective measures being implemented for listed species shall be extended to candidate and proposed species in the project area to the maximum extent practicable.

Restoration will be required on unused portions of the project area, or oil and gas lease when deemed necessary by the BLM to maintain or improve habitat values. Restoration will be required when a project or lease is abandoned. The BLM will be contacted for specific restoration requirements upon project completion.

Disturbance levels

Surface disturbance on BLM lands in Red Zones will not exceed 10% of any 640 acre section, aliquot section, or aggregate of adjacent aliquot sections.

Surface disturbance on BLM lands in Green Zones will not exceed 25% of any 640 acre section, aliquot section, or aggregate of adjacent aliquot sections.

Projects that will disturb greater than 10% or 25% of any 640 acre section, aliquot section, or aggregate of adjacent aliquot sections in red and green zones, respectively, would be subject to a separate section 7 consultation.

Survey Requirements

Threatened and Endangered (T&E) Management Areas and Habitat Linkages will be presumed to be occupied habitat for listed animal species. Wildlife surveys will determine listed species presence and/or important habitat features for listed species. Surveys will be conducted within 30 days prior to the onset of ground breaking actions and will include daytime line transect surveys which will be conducted by walking the project area and appropriate buffer at 30 to 90 feet intervals. Transect width will be adjusted based on vegetation height, topography, etc. Surveys will include areas of surface disturbance, appropriate buffers, access routes, and cross-country travel routes. Surveys will be designed to identify habitat features such as burrows, dens, and precincts, and not species presence or absence.

During the first year of the programmatic, the BLM will contact the Service to discuss the results of the surveys and the proposed mitigation prior to authorizing surface disturbing actions for an individual

project within a red zone. The Service and BLM may mutually agree to discontinue individual project contact at any time during the first year.

If non-BLM lands are also involved in a project, an applicant may choose to comply with some other Service and California Department of Fish and Game approved program (such as the Metro Bakersfield HCP or the proposed Kern County Valley Floor HCP). If an alternative program is selected, the survey requirements for the alternative program may be substituted at the Service and BLM's discretion.

San Joaquin Kit Fox. Survey for natal, known, occupied, and potential dens in the project area and a 200-foot buffer.

Blunt-Nosed Leopard Lizard. Survey for burrows that may be used by blunt-nosed leopard lizards in the area to be disturbed by the project and a 50-foot buffer.

Giant Kangaroo Rat. Survey for precincts in the area to be disturbed by the project and a 50-foot buffer.

Tipton Kangaroo Rat. Survey for burrows in the area to be disturbed by the project and a 50-foot buffer.

Federal Proposed, Federal Candidate and State Listed Animal Species. Survey for important habitat features in the area to be disturbed by the project and a 50-foot buffer.

Kern Mallow, California Jewelflower, and San Joaquin Woolly-Threads. Survey during the appropriate season in the area to be disturbed by the project and a 50-foot buffer. Reconnaissance level surveys to determine habitat suitability will be conducted using meandering walk-over surveys. Site-specific surveys in appropriate habitat will be conducted by walking transects with 50-foot spacing.

At the discretion of an approved BLM botanist, existing information may be used to conclude that the site is not occupied and surveys are not required, or that project impacts are acceptable without detailed surveys.

Hoover's Woolly-Star. Survey for species in the area to be disturbed by the project and a 50-foot buffer, if season is appropriate. If season is inappropriate to detect species or skeletons, surveys will evaluate potential of a site to support the species. Reconnaissance level surveys to determine habitat suitability will be conducted using meandering walk-over surveys. Site-specific surveys in appropriate habitat will be conducted by walking transects at 50-foot intervals.

At the discretion of an approved BLM botanist, existing information may be used to conclude that the site is not occupied and surveys are not required, or that project impacts are acceptable without detailed surveys.

Bakersfield Cactus. Bakersfield cactus is known to occur on one section of split estate land within the Green Zone. Bakersfield cactus is not known to occur elsewhere in either the Red or Green Zones. Survey project sites in potential habitat using meandering walk-over surveys.

State Listed and Federally Proposed and Candidate Plant Species. Survey in the area to be disturbed by the project and a 50-foot buffer, if season is appropriate. If extant populations or high potential habitat is known to occur in the project area, the BLM may require surveys during the appropriate season. At the Service/BLM's discretion, existing information may be used to conclude that the site is not occupied and surveys are not required.

Measures for Minimizing Take.

Consulting Biologist Recommendations. All mitigation recommendations made by consulting biologist [name, company] on [date] Sensitive Species Review Form, BLM Oil and Gas Programmatic Biological Opinion (1-1-01-F-0063) will be implemented.

San Joaquin Kit Fox. San Joaquin kit fox dens will be protected, to the maximum extent practicable. Known, occupied, and potential non-natal dens will be buffered by 100 feet. Unoccupied natal dens will

be buffered by 200 feet to protect the physical den site. If an active natal den is encountered, the Service will be contacted immediately and before any action is taken.

The project construction area will be delineated with a temporary fence, flagging, or other barrier. Actions within the buffer zone shall be limited to vehicle and equipment operation on existing roads.

T&C Non-fatal disturbance, such as above ground blasting, vibroseis, shothole, etc. shall not occur within 500 feet of an active San Joaquin kit fox natal den between November 1 and August 15 to reduce disruption of kit fox breeding activities.

In the event that a den is encountered that needs to be excavated, the following will apply:

Non-natal dens within a construction area may be carefully excavated at any time of the year by Service-approved biologists or under the supervision of a Service-approved biologist. Prior to the destruction of the den, the den will be monitored for at least three consecutive days to determine its current status. Activity at the den will be monitored by placing tracking medium at the entrance and by spotlighting. If no kit fox activity is observed during this period, the den will be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den will be monitored for at least five consecutive days from the time of observation to allow any resident animal to move to another den during its normal activities. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Destruction of the den may begin when, in the judgment of the Service-approved biologist, the animal has moved to a different den. If the animal is still present after five or more consecutive days of plugging and monitoring, the project biologist shall contact the BLM or the Service to obtain permission to excavate the den when it is temporarily vacant, for example, during the animal's normal foraging activities.

Destruction of the den will be accomplished by careful excavation until it is certain that no kit foxes are inside. The den will be fully excavated and then 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 will cease immediately and monitoring of the den will be resumed. The BLM and the Service will be notified immediately. Destruction of the den may be resumed, when in the judgment of the Service-approved biologist, the animal has escaped from the partially destroyed den.

If an unoccupied natal den cannot be avoided, the den will be carefully excavated by a Service-approved biologist with permission from the Service or the BLM. Excavation of unoccupied natal dens will be allowed only between August 15 and November 1.

Pipes and culverts will be searched for kit fox prior to being moved or sealed, to ensure that kit foxes are not being entrapped. Any kit fox found will be allowed to escape unimpeded. Pipes and culverts with a diameter greater than 4 inches will be capped or taped closed after searching them.

Occupied pipe dens will be protected to the maximum extent practicable. Pipe dens will be buffered to protect the physical den site and kit fox activity. Removal of pipe dens will follow the monitoring and plugging procedure described above for natural dens.

Blunt-Nosed Leopard Lizard.

Avoid burrows that may be used by blunt-nosed leopard lizards.

Locations of activities with potential to collapse or block burrows (sleeper placement; stockpile, storage and parking areas; trenching; etc) will be approved by the biological monitor.

The biological monitor may allow certain activities in burrow areas if, in the judgment of the biological monitor, the combination of soil hardness and activity impact is not expected to collapse burrows. Activities authorized by the biological monitor in burrow areas will be documented and included in any report.

Roadway sections where blunt-nosed leopard lizards have been observed or are likely to occur should be clearly marked to prevent workers from driving off the road and over burrows. Barriers, such as fencing may also be installed.

A brief description of measures taken to avoid burrow collapse will be included in any report, including the post-construction report.

In addition, for project activities that occur during the blunt-nosed leopard lizard active season (approximately April 15 to October 15) the following will apply:

BLM will be notified that blunt-nosed leopard lizard active season measures are being implemented.

When possible, conduct project activities at night or during blunt-nosed leopard lizard inactivity periods (generally when temperatures are below 77 degrees F and above 99 degrees F).

All personnel will be advised to reduce speeds on sections of the access/egress route with potential to support blunt-nosed leopard lizards.

All vehicle operators will check under vehicles and equipment prior to operation.

Any trenches or pits will be inspected by the biological monitor in the morning, late afternoon, at the end of the work day and prior to backfilling to free any blunt-nosed leopard lizards that may become entrapped. Trenches or holes should have at least one escape ramp for each 1,000 feet of open trench. Escape ramps should be earthen and at a slope no steeper than 1:1.

A flashing barrier may be installed around the work area to prevent blunt-nosed leopard lizards from entering the work area. The flashing barrier will be constructed of 18-inch or wider flashing, buried 6-inches in depth and reinforced with rebar or fence posts. Silt fencing will be used to isolate areas inside the exclusion fence. If a blunt-nosed leopard lizard is subsequently found within the fenced area, the fence will be removed (in that area) and the lizard will be allowed to leave the exclusion zone. Surveys will continue until blunt-nosed leopard lizards are no longer observed inside the flashing barrier (i.e. no evidence for one to two weeks dependent upon the discretion of the biologist). Barrier installation may occur prior to emergence of burrows providing that no burrows are destroyed. Avoid burrows during barrier construction. Surveys will occur when temperatures are sufficient for leopard lizards to be above ground. The flashing barrier will remain in place until drilling and sump closure activities have been completed.

Burrows that cannot be avoided may be destroyed under the following circumstances:

If a blunt-nosed leopard lizard is observed exiting a burrow, the burrow may be immediately destroyed. The burrow should be carefully excavated under the supervision of a qualified biologist to verify that it is unoccupied and immediately destroyed.

Burrows inside a flashing barrier may be destroyed after the survey and monitoring requirements described above for flashing barriers has been met. Burrows should be carefully excavated under the supervision of a qualified biologist to verify that it is unoccupied and then destroyed.

If any burrows are destroyed, the following information will be included in the post construction compliance report: the dimensions of the area impacted by burrow destruction/excavation; number of burrows destroyed/excavated; results of burrow excavation, including any observations of wildlife in excavated burrows; and any other information deemed useful by the consulting biologist.

The biological monitor shall check the project area and access route daily during the blunt-nosed leopard lizard active season to determine the presence or absence of lizards in the work area. If

blunt-nosed leopard lizards are observed in the project area or along the access route, the biological monitor will take action to avoid impacts to lizards.

If a blunt-nosed leopard lizard is observed at the project site or along the access/egress route, the biological monitor will notify BLM of the actions being undertaken. Initial notification may be by phone message. Written documentation, including GPS coordinates of lizard observations, will be included in any reports. The post-construction report will include a map showing the location, date and time of any blunt-nosed leopard lizard observations.

Roadway sections where blunt-nosed leopard lizards have been observed should be clearly marked to prevent workers from driving off the road into blunt-nosed leopard lizard habitat or over burrows. Barriers, such as fencing may also be installed.

The biological monitor must be on site during appropriate temperatures for blunt-nosed leopard lizard activity. The biological monitor will escort all traffic through any area where blunt-nosed leopard lizards have been observed. Biological monitors will complete daily compliance reports. Daily compliance reports will be summarized and included in the weekly report sent to BLM.

Large vehicles (tankers, water trucks, drilling rigs, etc.) must be escorted to and from the work site by a biological monitor during appropriate temperatures for blunt-nosed leopard lizard activity.

The biological monitor will provide BLM with a brief weekly report describing any actions taken to avoid blunt-nosed leopard lizard impacts. This report may be submitted by email to BLM.

All reports must be submitted by the biological monitor conducting the work in the field or be reviewed by the field biological monitor. Alternately, the original report prepared by the field biological monitor may be attached to the report.

Upon determination by the biological monitor that temperature patterns at the project site no longer support blunt-nosed leopard lizard activity for the season and receipt of BLM concurrence, these active season measures may be discontinued.

If blunt-nosed leopard lizards have been observed in the project area or along the access route, and operations and maintenance activities will continue into the next blunt-nosed leopard lizard active season, an Operations and Maintenance Plan (O&M Plan) will be submitted to BLM. The O&M Plan will outline the practices and mitigation measures that will be implemented to avoid impacts to blunt-nosed leopard lizards for O&M activities.

Giant Kangaroo Rat and Tipton Kangaroo Rat. Avoid active precincts by a buffer of 50 feet. Actions within the buffer zone will be limited to vehicle and equipment operation on existing roads. Actions within buffer zones will be confined to daylight hours.

On an annual basis, the Service will advise the BLM if applicants should be required to implement the following capture and release program:

If active precincts cannot be avoided, the area will be trapped no greater than 7 days prior to ground disturbing activities for five consecutive nights. On the day following the fifth trap night, burrows will be carefully excavated. Captured animals will be marked and may be released into enclosed artificial burrow systems outside the work area the following night. All work will be supervised by a Service-qualified biologist. At anytime during the year, the Service and the BLM may adjust or decide to discontinue the capture and release program.

Kern Mallow, California Jewelflower, San Joaquin Woolly-Threads and Hoover's Woolly-Star. Extant populations will be avoided, to the greatest extent practicable. The locations of listed plants will be avoided and temporarily fenced or prominently flagged to prevent inadvertent encroachment by vehicles

and equipment during the activity. No extant natural populations of California jewelflower are known from Kern or Kings Counties. If California jewelflower populations and individuals are discovered in these counties, they will be avoided by a 50-foot buffer.

If extant populations of Kern mallow, San Joaquin woolly-threads or Hoover's woolly-star cannot be avoided, surface disturbance should be scheduled after seed set and prior to germination. Collection of seed, with reseeded undertaken at the site following the activity, during seasonal time-frames and weather conditions favorable for germination and growth, may also be required. Topsoil may be stockpiled and replaced after project completion. Topsoil will not be required to be stockpiled for greater than one year.

Impacts to extant populations may be considered minimized when; (a) the number of plants lost is cumulatively less than 3 percent of the impacted population and disturbance is temporary, or (b) the amount of habitat lost is less than 3 percent of the occupied habitat for the impacted population.

Plants that are considered waifs or an incidental, biologically marginal occurrence due to their presence on chronically disturbed habitat and a small population size (less than 50 individuals) may be disturbed at the Service/BLM's discretion.

CR The following guidelines shall be used to determine thresholds for facilities operation and maintenance activities that are within the scope of this biological opinion:

- a. Estimated loss of individuals of plants from project activities will amount to no more than 3 percent of the individuals of the impacted population;
- b. Estimated extent of habitat disturbance amounts to no more than 3 percent of the estimated acreage of occupied habitat for the impacted population;
- c. Formal consultation shall be reinitiated if chronic and cumulative habitat loss and disturbance adversely affects a population that does not qualify as a waif or an incidental, biologically marginal occurrence by virtue of their presence on chronically disturbed habitat or small population size (less than 50 individuals).

Herbicide use will not be permitted within 300 feet of listed plant populations identified during pre-project surveys.

Kern Mallow: The BLM and the Service may delineate a Kern Mallow Specialty Preserve, where special measures to conserve Kern mallow will be required. Delineation will include mapping the current distribution of Kern mallow, particularly the outer boundaries of core and satellite populations. Special measures may include:

1. completely avoiding areas occupied by Kern mallow;
2. conducting all surface disturbing work after seed set and before germination, regardless of the presence or absence of Kern mallow;
3. compensating impacts with lands inside the specialty preserve;
4. stockpiling top soil and replacing after project completion; and
5. modified compensation ratios.

Bakersfield Cactus. Bakersfield cactus is currently known to occur on one section of split estate land within a Green Zone. Bakersfield cactus is not known to occur elsewhere in this zone. If Bakersfield cactus populations or individuals are discovered, they will be avoided by a 50-foot buffer in all areas where they are located.

San Joaquin Antelope Squirrel.

To the maximum extent practicable, the measures described above for blunt-nosed leopard lizards will be applied to San Joaquin antelope squirrel in the project area and along the access/egress route.

In areas where antelope squirrels are suspected to occur and when temperatures are suitable for antelope squirrel activity, all personnel will be advised to check below parked vehicles and equipment before moving such vehicles or equipment.

Project Monitoring.

Each project will have a field contact representative (FCR), who will be responsible for overseeing compliance with protective stipulations for listed species. The FCR may be a project manager, project representative, BLM employee, or contract biologist. The FCR will have the authority to halt all actions that are in violation of the stipulations. The FCR will have a copy of all appropriate stipulations when surface disturbing actions are being conducted on the site. The BLM and Service will be notified of the name and telephone number of the FCR prior to project construction.

A biological monitor **is** required for this project. Biological monitoring will be accomplished by a Service-qualified biologist. The biologist will be responsible for field crews to be in compliance with protection measures, performing surveys in front of crews as needed to locate and avoid sensitive species and habitat features, and monitoring project mitigation compliance. The biological monitor will have the authority to halt all non-emergency actions should danger to a listed species arise. Work will proceed only after hazards to the listed species are removed, the individual(s) is no longer at risk, or the individual(s) has been removed by the biologist.

BLM will be provided with the name, phone number and email of the field biological monitor prior to construction. If not already on file at the Bakersfield BLM Office, a copy of the field biological monitor's resume or *curriculum vitae* will be submitted to BLM prior to construction.

Biological monitors will be required to be present on site during initial surface disturbing actions to minimize direct take of listed species. Subsequent to initial surface disturbing activities, biological monitors are not required to be present, but must be available within 24 hours notice from the applicant, BLM or Service, in order to troubleshoot potential take situations.

Biological monitors are required for kit fox den excavations.

In previously unsurveyed areas, biological monitors are required for routing cross-country travel to minimize impacts to habitat features.

All reports must:

- a. be signed and submitted by the biological monitor conducting work in the field, **OR**
- b. be reviewed and signed by the biological monitor conducting work in the field, **OR**
- c. include, as an attachment, the original report prepared and signed by the field biological monitor.

An email report originating from the field biological monitor may be accepted as signature.

Within 60 days of completion of construction, a brief post-construction compliance report will be provided to the Bureau that addresses:

- a. Any revisions to habitat disturbance estimates.
- b. Any observed impacts to listed species, including take.
- c. A brief description of significant actions taken to comply with the provisions listed above.
- d. An overall evaluation of compliance with the provisions and any suggestions for changes to the provisions.
- e. Any information required due to the sighting of an additional species, such as a blunt-nosed leopard lizard.

Compensation.

The compensation ratio for Kern mallow will be 9:1 for permanent impacts and 6:1 for temporary impacts to known populations. For all other species, the compensation ratio will be 3:1 for permanent impacts and 1.1:1 for temporary impacts to previously disturbed habitat.

If a new compensation ratio becomes established for a county or species, the BLM and Service may decide to modify compensation ratios.

For protected lands (such as Federal lands, State wildlife areas, conservation banks, Lokern Area) a replacement component will be added to the compensation ratio.

Compensation of habitat must be in kind. Land used for compensation must be of equal value or better than the land impacted. The same species must be present and habitat must be of an equal or greater value. Lands used for compensation for project impacts to Kern mallow, San Joaquin woolly-threads, blunt-nosed leopard lizards, and the kangaroo rats, must support these species or be approved by the Service for these species. Lands used to compensate for impacts to a kit fox natal den must support breeding populations of kit foxes.

Ownership of compensation lands will be transferred prior to any surface disturbance to one of the following: the BLM; an entity acceptable to the BLM, Service, and CDFG that can effectively manage listed species and their habitats; the CDFG; or the Service for dedication to listed species habitat management. The Service will be informed prior to the actual transfer when land is transferred.

Areas pre-approved to serve as compensation areas include; Lokern Road Area, Buena Vista Valley, Semitropic Ridge, Allensworth, Kettleman Hills, Kern Water Bank, Carrizo Plain Natural Area, or any Specialty Preserve agreed to by the BLM and the Service. Habitat linkage areas and small specialty preserves determined by the BLM, CDFG, and Service to be important for species conservation and recovery will be acceptable as compensation habitat. Coles Levee Ecosystem Reserve has historically served as a compensation area. The Service is monitoring the long-term viability of the bank and may choose to curtail approval of this area as a compensation area.

As an alternative to the above standard compensation method, the applicant may provide a letter agreeing to dedicate existing mitigation credits or purchase additional mitigation credits at a Service-approved mitigation bank to compensate for any impacts. A preliminary estimate of compensation acres is [#] compensation acres ([#] temporary acres compensated at 1.1 to 1 + [#] permanent acres compensated at 3:1 + [#] replacement acres = [#] temporary compensation acres + [#] permanent compensation acres + [#] replacement acres). The final compensation acreage will be adjusted upon completion of construction based on the actual amount of acreage temporarily and permanently disturbed.