



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

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Instruction Memorandum No. CA-2004-029

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To: AFOs

From: State Director

Subject: Managing Bat Habitat When Closing Abandoned Mine Openings

This instruction memorandum reiterates Bureau policy with respect to the closure of abandoned mines that contain known or potential habitat for various species of wildlife, especially bats. Some of the methods used in the past to effect physical closure of abandoned mine openings may prevent bats and other wildlife from entering habitats upon which they have come to depend for their survival. Procedures were outlined in Washington Office Instruction Memorandum No. 93-304 and California Instruction Memorandum Nos. CA-93-138 and CA-98-01 for minimizing conflicts between bat use of abandoned mines and mine closure activities. These procedures are for the most part still valid. Pertinent Bureau regulations and policy are reiterated below.

Bureau regulations at 43 CFR 3802.4-5 require that mine operators maintain facilities in a safe and orderly manner. Specifically, the Bureau has the authority to insure through mining plans of operation that “hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to protect the public in accordance with applicable Federal and State laws and regulations.”

Section 43 CFR 3802.3-2 requires that mining operators take such actions as may be needed to minimize or prevent adverse impacts upon plants, fish, and wildlife, including threatened or endangered species, and habitats that may be affected by the operations. Under this authority the Bureau commonly applies stipulations to approved plans of operation to mitigate potential adverse impacts. Section 43 CFR 3809.420(b)(7) states: “The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.”

Mine openings are commonly used by over 50 species of native wildlife – including various species of bats, carnivores (such as ringtailed cats, *Bassariscus astutus*), a variety of birds (especially owls, swallows and phoebes), rodents, reptiles (such as desert tortoises, *Gopherus agassizii*), and other wildlife. Habitat for several species of bats in California is limited; the

western big-eared bat (*Corynorhinus townsendii*) and the California leaf-nosed bat (*Macrotus californicus*) use mines almost exclusively for their daily roosts. The bat species known to occur in California are shown in Attachment 1; this list also indicates which of these species are California Department of Fish and Game species of special concern or California-BLM sensitive species. Maps showing the approximate distribution of California bat species are presented on pages 35-79 of Volume III of California's Wildlife (1990) by Zeiner, Laudenslayer, Mayer, and White (editors). Your office should have a copy of this California Wildlife Habitat Relationships publication. If you do not have this document, you can obtain copies of the maps by contacting Ed Lorentzen at 916-978-4646. These distribution maps should assist biologists in determining the potential occurrence of bats and other special status species on public lands within their respective administrative areas.

To prevent the unnecessary destruction of bat roosting, breeding, and hibernating habitat, I am directing that, where appropriate, you implement methods for closing abandoned mine openings that do not impede the ingress and egress of wildlife, especially bats. This policy will apply to closure of openings to abandoned mines, whether performed by the Bureau or applied by the Bureau as a stipulation on approvals of mining plans or permits.

Situations vary greatly and, therefore, no specific directions will apply to all cases. It should be kept in mind that a primary consideration in these situations is public safety. The following guidelines should be considered in deciding what actions might be taken or what measures might be applied to mining plans of operation or permits for exploration.

1. For vertical openings less than 20' deep with no horizontal drifts, or debris, or crevices that can shelter bats, the abandoned opening may be filled with dirt or fenced for hazard abatement. No bats are expected in such openings, however they should be checked for bird occupancy.
2. For deeper vertical openings or vertical openings with some horizontal tunneling, the environmentally preferred closure/protection is a fence enclosure. This is preferred since some bats avoid grated openings. Fencing requires some monitoring and maintenance. The enclosure should be posted with a sign that describes the hazard as well as the wildlife values.

If it is judged that an enclosure fence would be inadequate for hazard abatement, the second best alternative is an above-ground cage over the shaft entrance. The cage may not be made of chain-link fencing but must be designed according to the specifications in the attachments. The cage allows horizontal movement of bats through the barring with unimpeded ingress into the vertical entrance. An enclosure fence may be added if judged useful. If any above-ground structure is undesirable (e.g., is a hazardous obstacle to OHV riders or visually impairing to a Wilderness Study Area), a grate or bar structure can be placed horizontally over the entrance. This is the least desirable method since some bat species will avoid vertical entrance through such a structure. The shaft is still available, however, to other wildlife, so this method of closure is preferable to completely blocking the entrance.

3. Short horizontal drifts or adits (15 feet deep or less) may be hazardous due to weathering of the host rock. A fence or other enclosure may be added if deemed necessary. Short diggings are commonly used by carnivores, reptiles, owls, Say's phoebes, and woodrats, and may be used as night roosts by bats. Desert tortoises may also be present.
4. Horizontal openings longer than 15 feet may also be hazardous and should be closed in some manner. These openings may be used by bats as well as other wildlife (see above). A fence enclosure is permissible and is generally the least expensive method. Maintenance may be a problem as the fence and signs are vulnerable to vandalism and natural elements. Gating with welded steel bars or angle-iron insures a permanent, vandal-resistant closure of the entrance. Gating must be consistent with current recommendations for gate design.

Where suitable gating structures are not feasible and the mine entrance must be closed tightly, precluding animal use, a baseline study assessing bat (and other wildlife) use must be conducted prior to closure. It is important that bat use be assessed during the appropriate time of year by a biologist experienced with bats and appropriate survey techniques. For example, maternal roosts are highly susceptible to disturbance, which may result in abandonment of the roost or aborting of embryos. Disturbance of hibernating bats during the winter may result in the expenditure of energy reserves necessary for survival. No closures on mines which could contain hibernating bats should ever be scheduled during the winter months. A scientific collecting permit may be required for studies that involve trapping, handling, or potentially disturbing bats or other wildlife species.

If possible, a monitoring plan should be developed to assess the effectiveness of any gates constructed. When compared to the baseline study, monitoring or studies after closure would reveal any changes in bat use or behavior. Again, such studies should be conducted by biologists experienced with bats, who have whatever permits are required for trapping, handling, or otherwise disturbing bats and other wildlife species.

Questions regarding the implementation of this instruction memorandum may be directed to Ed Lorentzen at 916-978-4646.

Signed by:
James Wesley Abbott
Associate State Director

Authenticated by:
Richard A. Erickson
Records Management

Attachment
1 - List of California Bat Species (1 p.)

Distribution
CA-920
WO-230, MS 204 LS