

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
2850 YOUNGFIELD STREET
LAKEWOOD, COLORADO 80215-7093

May 23, 2000

In Reply Refer To:
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Instruction Memorandum No. CO-2000-027
Expires: 9/30/2001

To: All Field Officials

From: Deputy State Director, Division of Resource Services

Subject: Policy for Closure of Abandoned Mines with Bat Grates

Program Areas: Abandoned Mine Land Program and Wildlife/T&E Program

ISSUE

When mine openings are determined to be beneficial as habitat for bats, the Bureau of Land Management (BLM) field offices must consider installing a bat grate (sometimes referred to as bat gate) or permanently closing the mine opening. Bat grates protect and promote bat habitat by allowing bats to pass in and out of a mine while blocking human entry. Several sensitive bat species use abandoned mines as roosting habitat. The impacts to bat populations from human disturbance, wanton destruction, and improper closing of mine/cave roost sites are well documented. Although mines are man-made habitats, it is important to understand that as we disturb, alter, or destroy habitats for bats, even man-made habitat becomes critical in the conservation of bat species.

Bat grates like most man-made structures located on public lands are prone to vandalism. The most secure closure method is backfilling the mine opening. Even this method has been breached by determined vandals. Vandalism to a bat grate exposes the mine opening, and the opening again becomes a safety risk to public land users. To minimize BLM liability, field offices are expected to monitor not only bat grates, but all mine closures. Mine closures that fail will require repair.

Some field offices have few mine closures, and the additional monitoring work load is not significant. Other field offices have a large number of abandoned mines that are used by bats. The additional work

load and liability of large numbers of bat grates are a concern for these field offices.

BACKGROUND

Washington Office Policy Instruction Memorandum (IM) No. 93-304 (expired 9-30-95) that is attached, states "all abandoned mines on the BLM-administered lands, prior to their closure, will be evaluated/ investigated to determine if they are of value to sensitive wildlife, especially bats. Complete closure of abandoned mines known to support bats should be considered only as a last resort, and be done in consultation with qualified biologists experienced with bats." The IM also states that, "We realize situations vary greatly and, therefore, no specific directions will apply to all cases."

The BLM also executed a Memorandum of Understanding (attached) with Bat Conservation International. The purpose of this memorandum is to "provide a frame work for cooperative activities necessary to maintain and enhance the productivity of bats and their habitats on public lands."

Sensitive Species Colorado BLM State Director's Sensitive Species List (attached) has six bat species. These species also are considered imperiled by the State of Colorado. The USDA Forest Service is concerned with the viability of three of the six species. According to Kirk Navo, bat specialist for the Colorado Division of Wildlife (CDOW), the States' bat program is intended to "prevent threatened and endangered status" for the six listed species.

Bat Grates Recommendations for bat grates come from Colorado's most experienced bat biologist, Kirk Navo of the CDOW. Prior to closure, each mine is surveyed by Navo, his staff of field biologists, and volunteers for bat use at critical times in the life cycle of bats including hibernation, maternity, and swarming. In addition, some mines having water are important for drinking particularly in dry areas. A mine having bats is recommended for a bat grate based on:

- status of the species found (40 percent of Colorado's bat species are sensitive species),
- whether the species is a cave/mine obligate,
- whether the mine is a special site such as hibernation, maternity, drinking, or swarming, and,
- the number of bats and activity level.

Very few maternity roosts have been discovered in Colorado, and whenever one is discovered in a mine, it is recommended for a bat grate regardless of species. Generally, the best mines for bat habitat have multiple openings to the surface, and complex underground workings. In areas having a high concentration of mine openings, bat grates are not recommended for mines with marginal bat usage in terms of numbers, species, and type of usage such as night roosting.

Bat grates were first introduced to Colorado in 1991 by the CDOW and Colorado Division of Minerals and Geology. Since that time, these agencies have installed over 200 bat grates. Post closure monitoring by Navo indicates that bats have continued to use the grated mines except for four or five out of the 200 total bat grates installed. A total of six grates have been vandalized and replaced. Most of these

vandalized grates are in view of high human traffic. In the immediate future, there is not expected to be any cost to the BLM for maintenance of bat grates installed on public lands. The Colorado Division of Minerals and Geology has a maintenance program funded by the Surface Mining Control and Reclamation Act.

Risks Cost-benefit of the bat grating program is difficult to assess. There is no meaningful way of attaching monetary value to the bat resource. Bats are the largest consumer of night time flying insects, and it might be possible to estimate the cost-benefit of an alternative pest control program. However, such an approach belittles the resource to an anthropogenic value. Another approach might assess the differences in liability between no closure and the various closure types by estimating a rate of vandalism and a risk of human injury. However, without meaningful statistics, any cost-benefit calculation would be nothing more than a guesstimate mostly reflecting the estimator's bias. Although bat grates are more susceptible to vandalism than other closure methods, the difference measured on some sort of scale probably would be small. In the last ten years, six out of 200 have required repair. The bat grates can be broken open by only very determined vandals. They cannot be pulled out by a typical pickup truck, the metal cannot be cut with home use torches, and locks are positioned so that they cannot be cut or shot off. Hopefully, in future, engineers will come up with evermore vandal proof bat grate designs.

If any of the sensitive bat species are reduced to threatened and endangered status, we may be faced with reopening previously sealed mines in the hope of creating bat habitat. Bats have taken up roosting in some mines that have been mined fairly recently, in the period from 1950 to 1970. What are marginal use mines at present, may be high use mines in future as more bats are driven out of their traditional habitat.

Colorado BLM Issues On February 29, 2000, a meeting was held to discuss bat grating policy and other topics. The meeting was attended by the BLM abandoned mine land coordinators and several Field Office biologists, and included representatives from the CDOW, Colorado Division of Minerals and Geology, and Department of Energy.

- There was a consensus in the group that bat habitat should be protected where feasible.
- There was not a consensus on what is a feasible bat grating program.

Divergence of opinion centers on the numbers of bat grates that require inspection and repair, the time required for inspections, and the possible increased liability of bat grates over other closure methods. The possible number of bat grates within the four Field Offices ranges from 60 to 200. The following table summarizes the divergent opinions.

Maximize Use of Bat Grates

Manage Costs and Liability

What is man-made bat habitat now may become more significant as human disturbance and encroachment continues. All recommended openings should be grated to make progress towards meeting health standards and to stave off threatened and endangered status for the bats.

This group points out that the cost difference is small, the increased liability insignificant, and closure recommendations already are conservative.

For marginal bat habitat, it is not good management to incur additional monitoring, limited maintenance, and increased potential liability claims if there is marginal benefits for these openings as bat habitat, or no beneficial impact on bat habitat.

This group points out that in areas of large concentrations of mine openings, permanent closure of marginal use openings may simply displace bats to other grated openings.

Unfortunately, there is not adequate information on bat habitat to resolve the preceding differences on a factual basis. The current bat monitoring program is simply a reaction to the mine closure program. There is limited baseline information on bat habitat. In an effort to correct this data gap, the group recommended and subsequently submitted grant proposals for a state wide survey of non-mine maternity, hibernation, and high density roosts. Grant proposals were/will be submitted to the Director's Field Incentive, National Fish and Wildlife Foundation, and Great Outdoors Colorado program.

This memorandum was circulated to Colorado BLM staff involved in bat conservation, and to the State Management Team. The BLM staff continued to be divided on the issue. No members of the State Management Team responded to the draft memorandum.

POLICY

The following policy attempts to maximize protection of bat habitat with the minimum increase in inspection and maintenance work load, and minimum increase in liability risk.

- In areas of low mine density, install bat grates on all openings recommended by the CDOW.
- In areas of high mine density, install bat grates on all openings having high activity; maternity, hibernating, and swarming roosts; drinking sites (only in areas having less than 20 inches of rainfall per year); and all openings having any special status species. Seal only marginal use openings that are near other mines having complex workings (multiple surface openings and a labyrinth of underground passages).

CONTACTS: At the State Office contact Rob Robinson, abandoned mine land coordinator (303) 239-3642 or Lee Upham, wildlife biologist (303) 239-3723.

Signed by
Dave Strunk
DSD, Division of Resource Services

Authenticated by
Sharon Deuter
EMS Operator

Attachments:

Washington Office Instruction Memorandum No. 93-304
Memorandum of Understanding, Bat Conservation International