

0006

November 19, 1985

TO: Coal File

FROM: Kathy M. Mutz, Reclamation Biologist *Kmm*

RE: U. S. Fish & Wildlife Service Subsidence and Golden Eagle Monitoring and Mitigation Plan, Utah Power & Light Company, Wilberg/Cottonwood Mines, ACT/015/019, #2 and #10, Emery County, Utah

A draft of the U. S. Fish & Wildlife Service (USFWS) plan to monitor raptor nests and subsidence and to mitigate damage from longwall mining in the Wilberg/Cottonwood Mines was provided to the Division of Oil, Gas and Mining (DOG M) for comment October 24, 1985. After discussing the plan with Rick Smith, Sue Linner and others, the following comments were discussed in a phone conversation with Bruce Waddell on October 31, 1985.

1. "Monitoring schedules were developed under the assumption that mining will be completed on schedule and subsidence will take place within two years of mining." The majority of subsidence may take place within the projected two years but additional subsidence can/is likely to continue for years after. The plan includes no monitoring of long-term effects.
2. "Subsidence monitoring will be the primary responsibility of Utah Power & Light Company (UP&L)." The techniques (e.g., aerial photo interpretation or ground study), frequency of sampling and the resolution required of the subsidence monitoring are not detailed in the plan. Cost and the suitability of these data will depend on these factors.
3. "Competency of resultant cliffs and mechanics of subsidence" would be difficult to determine from monitoring data during the study. The goals of the subsidence monitoring should be clearly defined and reasonable.
4. Plan suggests mining under the nest strata July 1 to November 1, 1986 so that major subsidence will occur July 15, 1986 to February 1, 1987 to avoid the breeding season. Likelihood of this precision of the subsidence is questionable.

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Requiring UP&L to mine under the nest strata during a four month period would probably require the longwall machine to be idle or moved. This is an unreasonable requirement given the problems with precise subsidence prediction.

5. The budget includes \$6,000.00-\$7,500.00 for USFWS employee hours. While helicopter time for the raptor monitoring seems to be a reasonable UP&L expense, it would seem that employee time should be a USFWS expense. (Additional comment: projected hours for helicopter survey should be more specifically justified in the plan.)

kmm

0528R-6 & 7



United States Department of the Interior

FISH AND WILDLIFE SERVICE
AREA OFFICE COLORADO-UTAH
1311 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138-1197

RECEIVED

IN REPLY REFER TO:

(ES)

October 23, 1985

OCT 24 1985

MEMORANDUM

DIVISION OF OIL
GAS & MINING

TO: Don Wood, Forest Service, Price, Utah
Jeff Carrol, Bureau of Land Management, Price, Utah
Joe Cresto, Bureau of Land Management, Moab, Utah
Larry Dalton, Utah Division of Wildlife Resources,
Price, Utah
Kathy Mutz, Utah Division of Oil, Gas and Mining,
Salt Lake City, Utah
Richard Hollbrook, Office of Surface Mining, Denver,
Colorado
Dale Hoffman, Fish and Wildlife Service (HR), Denver,
Colorado

FROM: Acting Field Supervisor

SUBJECT: Draft Golden Eagle Nest Monitoring and Mitigation Plan,
Cottonwood Mine

Please review and phone comments and suggested improvements to the attached draft plan by COB Monday, October 30, 1985. Contact Bruce Waddell at 801/524-5649 or FTS 588-5649. Your interest and suggestions are greatly appreciated.

Attachment

*phone comments 10/31/85
to Bu
HW*

DRAFT

Proposed Golden Eagle/Cliff Subsidence Monitoring and Mitigation Plan

Cottonwood Mine

The effects of cliff subsidence on local populations of birds of prey is not well documented. Long wall mining techniques proposed by Utah Power and Light (UP&L) at their Cottonwood Mine will likely cause subsidence of cliffs supporting several nests for two pair of golden eagles. Under provisions of the Eagle Protection Act (16 U.S.C. 668-668d), disturbance to golden eagles, their eggs or nests is prohibited. Although the Fish and Wildlife Service (FWS) can permit "take" of golden eagle nests when deemed compatible with the preservation of the species, mitigation losses of nest sites that may directly affect annual reproduction or the long term viability of breeding pairs are not supportable. Insofar as this issue is not well understood, FWS recommends development, as a permit condition) of a cooperative UPL/FWS monitoring study to determine the effects of mining subsidence on cliff faces and responses of golden eagles to nest losses. In keeping with Service policy on maintenance of local golden eagle populations, FWS further recommends as part of the study to mitigate any nest site impacts that may be realized.

This monitoring plan is proposed subject to the condition that UP&L successfully obtain a permit(s) to "take" subject nests. If a permit is granted, it would in no way relieve UP&L of its obligations under the Eagle Protection Act in regard to protecting active nests. Should escarpments fail resulting in

the loss of birds or eggs, UP&L will still be subject to the penalties of this Act.

Study Objectives

1. Determine impacts of subsidence on nests and nesting success for cliff nesting raptors.
2. Mitigate impacts due to subsidence.

Schedule/Methods

Monitoring should be conducted by a helicopter and observer(s) from FWS using techniques similar to surveys completed by FWS in 1981. All potential cliff sites will be checked throughout the survey area (Map 1) in early spring of each year. Surveys will begin in early morning and will terminate when weather prevents further flight or the study area has been completely examined.

A follow-up aerial survey of much shorter duration will concentrate on rechecking breeding success at active nests within the study area. Monitoring efforts should begin in 1986 and continue through 1990.

Monitoring schedules have been developed under the assumption that mining will be completed as scheduled and that subsidence will take place within 2 years of mining. If delays occur, the

1 majority is greatest and
3

schedule will be extended to include two post mining years.

Likewise, costs will also need to be adjusted.

The feasibility and desirability of monitoring active nests by remote video camera will be given further consideration. This

monitoring should be done in a way that does not disturb the birds and nesting success. The cost of this monitoring should be included in the schedule.

The schedule should be revised to include the following:

1. Remote video camera monitoring

Monitoring should be done in a way that does not disturb the birds and nesting success.

The schedule should be revised to include the following: 1. Remote video camera monitoring. The cost of this monitoring should be included in the schedule. 2. The schedule should be revised to include the following: 1. Remote video camera monitoring. The cost of this monitoring should be included in the schedule. 2. The schedule should be revised to include the following: 1. Remote video camera monitoring. The cost of this monitoring should be included in the schedule.

2. Remote video camera monitoring. The cost of this monitoring should be included in the schedule. 3. Remote video camera monitoring. The cost of this monitoring should be included in the schedule.

4. Remote video camera monitoring. The cost of this monitoring should be included in the schedule.

would require acquisition and installation of appropriate equipment.

*ground
in pits*

internal

Subsidence monitoring will be primarily the responsibility of UP&L. UP&L will be required to determine the following data on cliff subsidence: amount of subsidence, time of subsidence, percent spalling of cliff face, change in tilt of cliff faces, competency of resultant cliffs and mechanics of subsidence.

UP&L is additionally required to determine mining timing and full advance rate to minimize the stress to the nest strata so that the nest strata will subside as a block and optimize the chance that major subsidence activity will occur in the non-breeding period, July 15 - February 1; by mining under the nest strata between July 1 and November 1.

Mitigation

Mitigation of lost nest sites will be determined on a case by case basis. Possible mitigation measures may include but are not limited to:

- salvage or relocation of nestlings
- creation of artificial nest structures
- modification of cliffs
- offsite mitigation to be determined

Costs resulting from mitigation efforts would be the

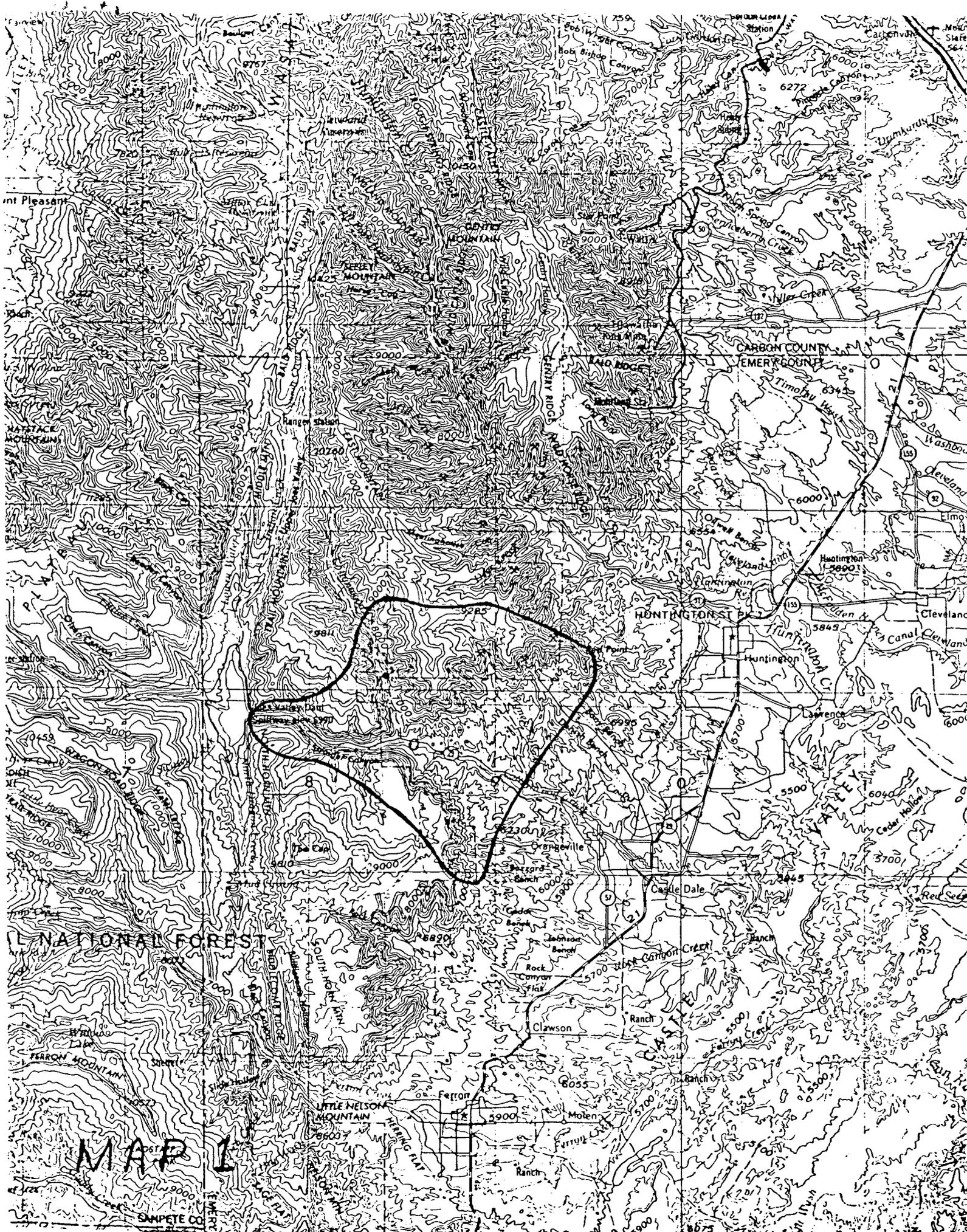
responsibility of UP&L. It is impossible to predict such costs at this time but they would be compensatory with resource losses.

Monitoring Costs:

Helicopter - \$14,000-\$35,000 14 hours/year at \$200-\$500
FWS - \$6,000 - \$7,500 10 work days/year at \$150 per day
Remote Observation Equipment, if feasible Not to exceed \$5,000

Estimated costs of monitoring activities are not expected to exceed \$45,000 (\$50,000 if remote observation capabilities prove feasible) after miscellaneous costs of helicopter ferrying, pilot and crew travel expenses, maps, etc. are considered. Actual costs are anticipated to be less.

Attachment



MAP 1

SANPETE CO.