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Date: 9/28/2004 9:36:31 AM
Subject: MSO

Dennis,

The Final Report: Assessing the impact of scale on the performance of GIS habitat models for Mexican Spotted Owl (David Willey, October 22, 2002) evaluates the performance of the 1997 and 2000 models developed by Dr. Willey et. al. for predicting MSO habitat. The study included four project areas near Price. The Lila Mine area is the only mine site that was included in the study. Had the study included other mines, the Permittees could substitute this study for the required ground-truthing survey.

The Division requests a brief summary of the MSO 1997 and 2000 as they pertain to the proposed area and to conduct a ground-truthing survey. If the ground-truthing results are positive, then the Permittee will need to conduct a two-year calling survey.

Below is the basic protocol to follow: Suveyor must have a current permit with USFWS to conduct MSO surveys.

1. Apply the 1997 model to determine if MSO habitat occurs within a planning area.
2. Apply the 2000 model to identify the following habitats:
 - a. Suitable habitat within a one-half mile radius (buffer zones) of mining activities.
 - b. Rugged areas including south-facing cliffs, ridgelines, and escarpments.
 - c. Steep-slope conifer habitats.
 - d. 2x2 rule - canyons less than 2 km wide and at least 2 km long.
3. Conduct ground-truth evaluations.
 - a. Areas shown on the 1997 & 2000 models as suitable habitat.
 - b. Suitable habitat within a one-half mile radius of mining activities (irrespective of model results).
 - c. Rugged areas including south-facing cliffs, ridgelines, and escarpments.
 - d. Steep-slope mixed conifer habitats.
 - e. 2x2 rule - canyons less than 2 km wide and at least 2 km long.
4. Conduct MSO calling survey immediately prior to disturbance. Do not conduct calling survey if the area is not deemed as suitable potential habitat after ground-truthing.
 - a. Two surveys in consecutive years
 - b. Four surveys per year (totaling 8 surveys)
 - i. Nighttime survey
 - ii. One survey per month at the ends of each month
 - No more than one survey prior to end of April
 - At least three surveys prior to end of July
 - c. If an individual is observed, the Permittee must immediately contact the Division.
 - d. If the project is delayed, the Permittee must redo the survey.

The area to survey for the MSO must cover potential cliff habitat within the proposed site. The primary concern is the loss of cliff habitat as a result surface facilities and subsidence. The Division will consult with DWR over this matter. If DWR recommends ground-truthing cliff habitat over expected undermining, the Permittee must submit a survey program similar to the raptor survey program mentioned above. The Permittee must also submit a protection and enhancement plan if the results are positive for MSO. The Division again reminds the Permittee that if the ground-truthing survey is positive for MSO, then the USFWS requires a two-year calling survey before disturbance (subsidence in the case). The Division will provide the Permittee with the agency decision before the Permittee responds to this TA. A protection/mitigation plan may be required. (R645-301-332, R645-301-320).

The Permittee must provide the Division with at least the following information from the MSO

ground-truthing and calling surveys:

- Surveyor name (DOGM requires a copy of license to conduct MSO)
 - Methods
 - Results
 - Raw data sheets
 - Maps showing exact locations (GPS) of habitats
 - Analysis
 - Summary
 - o Occupied and suitable habitat.
 - o Possible impacts to owls and their habitat by the project.
- These requirements will help design a protection and enhancement plan if the results are positive for MSO (R645-301-333).