

To: Jackie Cupples (USFWS) and Tom Segal (ODFW)
From: Wendy Wentz (MB&G, Inc.) and Brigitte Martin (BKL Consultants, LTD)
Date: 9/15/2023
Re: Response to USFWS' Question Regarding Project-related Access Road Noise and Golden Eagles

Introduction

This memorandum provides a brief response to a request by USFWS to view the potential impacts of the proposed Grassy Mountain Mine project on golden eagles in a figure format. In particular, USFWS is interested in visualizing the potential effects of noise generated by Project-related use of the access road to the proposed mine, and especially the impacts of noise during access road upgrades planned to occur during the construction phase.

Background Information

The following background information was provided by the acoustical consulting firm for the project, BKL Consultants, LTD (BKL). This information supplements the Noise Model Summary (BKL 2023).

The expected noise sources associated with the access road are provided in table below. For the Construction 1a and 1b scenarios, it is estimated that it represents the maximum number of items of equipment that could operate within a 1 to 2 mile (1.6 km to 3.2 km) distance. It is assumed that the loudest item of equipment is located close to the cross-section point of the access road and the other items of equipment are within one mile on either side of the center point. It is expected that each 1 to 2 mile section of road improvements will be completed within a month or less, then the work and equipment will continue to the next 1 to 2 mile section of the access road.

Scenario	Noise Sources	Quantity	Sound Power Level (dBA)	Comment
Construction 1a	Scraper	2	124	These noise sources will not be present along the entire access road at one time. Activities will progress along the road together as the road is constructed and equipment will be localized in a 1 to 2 mile radius at a given time.
	Dozer	1	112	
	Grader	1	110	
Construction 1b	Truck	2	110	These noise sources will not be present along the entire access road at one time. Activities will progress along the road together as the road is constructed and equipment will be localized in a 1 to 2 mile radius at a given time.
	Grader	1	110	
	Roller	1	114	

To obtain a general overview of the noise environment around the golden eagle nests, we assumed the receiver height to be 1.5 m (5 ft). The 28 dBA and 45 dBA setback distances of each scenario (i.e., Construction 1a, Construction 1b) are estimated based on the representative vertical cross sections of the corresponding scenarios illustrated in the Noise Model Summary issued on April 5, 2023 (BKL 2023). The distances provided below should be considered estimates as they are based on an example cross-section and do not consider topography and other local conditions for the entire road alignment. The results are presented in the table below.

Scenario	28 dBA setback distance (m)	45 dBA setback distance (m)
Construction 1a	2600	530
Construction 1b	2000	330

For the Operations phase, the only noise sources on the access road will be individual passenger truck pass-bys, and approximately two semi-trucks per day for deliveries, therefore, the noise source will be of short duration and will not be in any area for an extended period of time. Noise generated by the truck pass-bys is therefore not estimated here.

Figures

The two attached figures depict the Project-related noise expected to be generated under the two construction scenarios described above (Construction 1a and Construction 1b). The first figure shows the approximate distance from the access road where construction noise would attenuate to the 28 dBA level, the wildlife-specific noise threshold, for each of the two construction scenarios. For comparison, the second figure depicts the distance where Project-related noise would be expected to attenuate to 45 dBA for each construction scenario.

Both figures also depict the locations of golden eagle nests detected during the 2020 survey and indicate the nest that was determined to be occupied during that survey (WRC 2020). Golden eagle nest locations are buffered with 0.5-mile and 1.0-mile circles to indicate typical seasonal restriction buffers applied by USFWS under the federal Bald and Golden Eagle Protection Act. Note, the attenuation distances shown in these figures are approximate and do not reflect the individual site characteristics such as topography and other local conditions that would affect the actual noise transmission distances.

Seasonal Restriction Example Scenario

Calico proposed a seasonal avoidance minimization measure for the construction phase of the Project, which is expected to apply to the access road improvements. The measure is presented in Section 5.1 of the August 2023 Wildlife Mitigation Plan (EMS and MB&G 2023) and the golden eagle detail is excerpted below:

“Seasonal Avoidance — The Project is expected to operate year-round and sound and visual disturbances will occur year-round associated with operations. In general, the Project will complete episodic Project related disturbances including vegetation clearing, road improvements, facility construction and other noise and visual disturbance producing activities outside of timing restrictions listed below. If an episodic activity needs to occur within one of the restrictive buffers during one of the timing restrictions described below, the Project’s Environmental and Safety Superintendent (ESS) will coordinate with ODFW (or USFWS in the case of golden eagles) prior to completing the activity to determine the appropriate course of action (e.g. pre-activity nesting surveys to determine current occupancy prior to completing the activity, activity timing adjustments, a need for additional mitigation, etc.).

- *Golden eagle: Within 1.0 mile of the closest nest location within an active territory if the nest is within line-of-site of the activity, or 0.5 mile if topography blocks view of nest (between January 15 -July 15)”*

If the 2020 occupied nest shown in the figures (orange-colored point) was again occupied during the construction year of the Project, Calico would avoid working on the portion of the road within the 1-mile-wide buffer (pink polygon) during the sensitive period extending from January 15th through July 15th, unless an alternative course of action was coordinated with ODFW and USFWS. The application of the 1.0-mile buffer in this example assumes the nest is visible from the road, providing a direct line of sight for the nesting eagles.

References

BKL. 2023. Grassy Mountain Mine, Oregon, Noise Model Summary. Dated April 5, 2023.

EMS and MB&G. 2023. Calico Resources USA Corp. Grassy Mountain Mine Project, Malheur County, Oregon, Wildlife Mitigation Plan, EM Strategies and Mason, Bruce & Girard, Revised August 2023.

WRC. 2020. Grassy Mountain Project, 2020 Golden Eagle and Raptor Nesting Survey, Wildlife Resource Consultants LLC, August 21, 2020. Appendix F to the Wildlife Resources Baseline Report, EM Strategies, Revised October 2020.

Figures

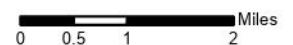
Noise Disturbance Related to Golden Eagles

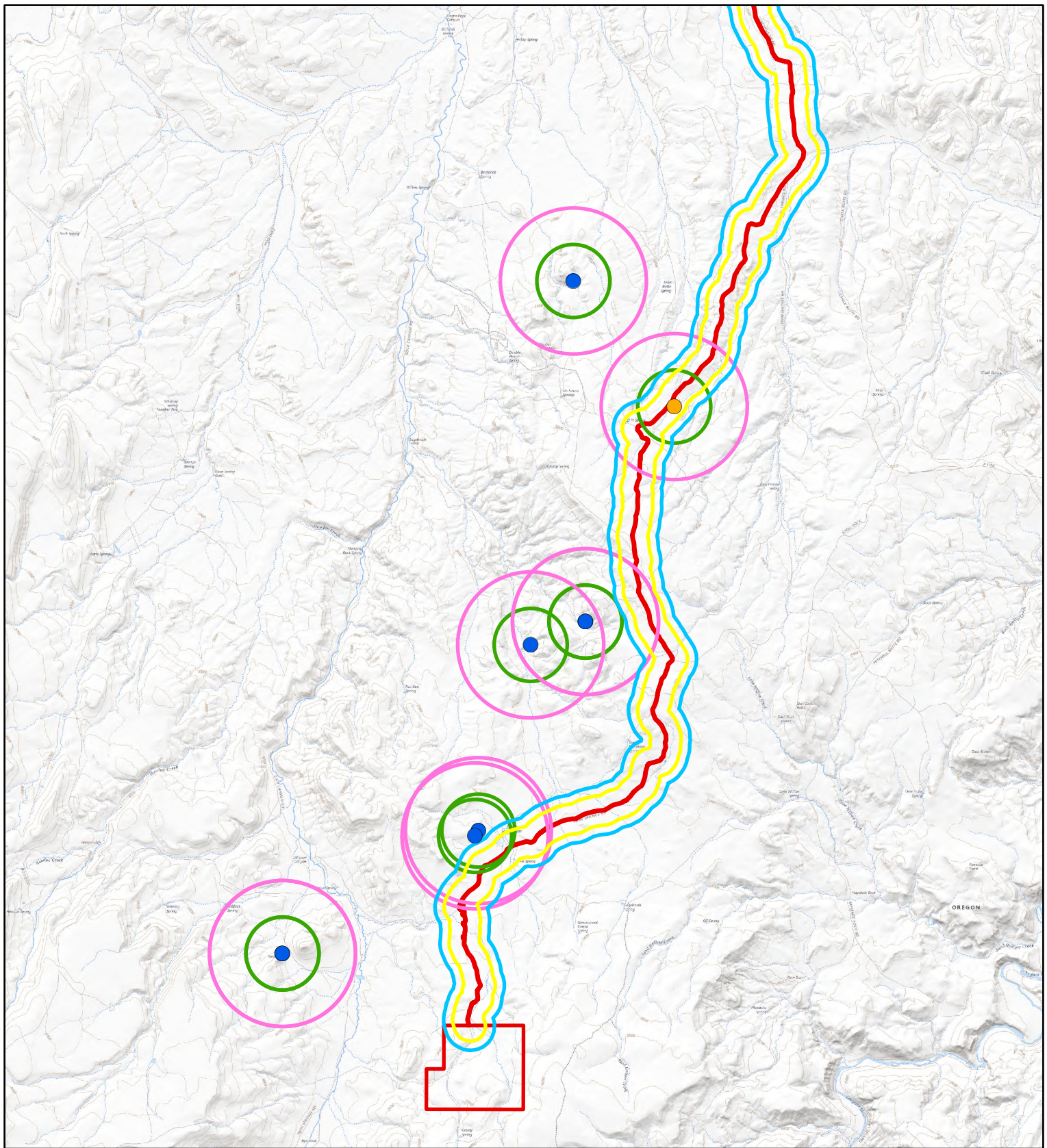


Grassy Mountain Mine Project
Malheur County, Oregon



Source: Base map from USGS; noise data from BKL; project area from SLR; nest sites from Wildlife Resource Consultants in 2020. Reproduced for informational purposes and may not be suitable for legal, engineering, or surveying purposes. Conclusions drawn from such information are the responsibility of the user.





Noise Disturbance Related to Golden Eagles

-  Project Study Area
-  Occupied Golden Eagle Nest
-  Unoccupied Golden Eagle Nest
-  1-mile Noise Restriction Buffer

-  0.5-Mile Noise Restriction Buffer
-  Construction Scenario 1b, 45 dbA
-  Construction Scenario 1a, 45 dbA

Grassy Mountain Mine Project
Malheur County, Oregon



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0 0.5 1 2 Miles