

HUMBOLDT-TOIYABE NATIONAL FOREST

SPRING MOUNTAINS NATIONAL RECREATION AREA

~~SUPPLEMENTAL~~ <sup>BL</sup>

BIOLOGICAL EVALUATION/BIOLOGICAL ASSESSMENT

LAS VEGAS SKI AND SNOWBOARD RESORT  
AVALANCHE CONTROL EQUIPMENT STORAGE PROJECT

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PREPARED BY \_\_\_\_\_ DATE \_\_\_\_\_

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- The potential effects of avalanche control on habitat and on botanical and wildlife resources in the avalanche release zone (or to the avalanche chute below) due to the proposed action would be comparable with historic and current operations; no increase in effects or cumulative effects are expected to occur. Based on recent vegetation and butterfly surveys (NewFields 2006a, 2007a, 2007b), as well as a Screening-Level Ecological Risk Assessment (SLERA) (NewFields 2006b), these potential effects are expected to be negligible and insignificant.
- Potential effects to individual Flammulated owls, Jaeger draba, Charleston tansy, and Charleston kittentails are negligible (refer to Species Accounts in "Species Descriptions and Effects").
- To further ensure that any potential effects are minimized, the conservation measures presented in Appendix 1 would be implemented.

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### **Project Purpose and Need**

The purpose of this project is to implement a specific safety and hazard reduction measure called for in a recent USFS avalanche hazard reduction program review for the Las Vegas Ski and Snowboard Resort (LVSSR). There is a need for a more accurate and flexible explosive projectile delivery to improve avalanche hazard reduction and increase employee and public safety.

LVSSR is a private company that operates and manages a ski area in the Humboldt-Toiyabe National Forest under a Special Use Permit (SUP) issued by the USFS. LVSSR is responsible for avalanche control activities within their permit boundary.

Past avalanche hazard reduction methods at LVSSR were comparable to many ski areas worldwide and consisted of placing hand-thrown charges on avalanche prone areas and the use of a compressed nitrogen powered launch system to place charges in areas not accessible to hand-charge placement. This type of system has been in use for over 20 years. The compressed nitrogen system was operated at near its maximum range. To adequately cover all target areas, the equipment was transported by a snow grooming machine to several designated firing locations.

Truly accurate targeting requires that the weapon be stationary and fired from the same location each time; this was not possible with the compressed nitrogen. In addition, the projectiles are comparatively slow moving and subject to winds blowing them off target thus requiring additional launches. This lack of accuracy increases the number of projectiles used, increases the probability of a non-detonation (duds), and therefore could heighten the potential safety risk for LVSSR employees and visitors.

During the 2004–2005 seasons, the USFS conducted an annual review of LVSSR's Winter Operating and Snow Safety Plans, including the avalanche hazard reduction program at LVSSR. The primary conclusion of the review was that a safer, more targeted avalanche reduction technique is needed at LVSSR. Specific elements of the review included measures for: (1) improvements to operating plans, (2) strengthening the search and rescue program, (3) improving avalanche forecasting, (4) providing additional equipment and training, and (5) enhancing the avalanche hazard reduction tools. Several of these measures are in progress or have been completed and are included in the current Winter Operating and Snow Safety Plan.

The enhancement of the avalanche hazard reduction tool focuses on LVSSR's ability to: (1) improve explosive projectile accuracy, (2) improve the ability to target avalanche-starting zones in poor visibility, (3) significantly reduce the percentage of non-detonating rounds or "duds," and (4)