EXECUTIVE SUMMARY

This Draft Environmental Impact Statement (DEIS) was developed in response to a Minute Order issued by The Honorable Judge Howard D. McKibben, U.S. District Court, District of Nevada, CV-N-013-197-HDM (VFC). The DEIS is intended to determine impacts of livestock grazing (including both sheep and cattle) with respect to sensitive raptors and sage grouse that are present on three allotments/allotment complexes within the Elko Field Office area, Elko County, Nevada. The allotments include the Sheep Allotment Complex (nine allotments), the Big Springs Allotments (two allotments), and the Owyhee Allotment.

The DEIS evaluates the direct, indirect, and cumulative impacts of four grazing systems and associated range improvements on the sensitive species and the habitats on which they depend.

PURPOSE AND NEED

The purpose of the proposed action is to manage livestock grazing in the subject allotments to maintain and enhance productivity for all rangeland values, including habitat of the sensitive bird species. The need for action is to adjust grazing management to make significant progress toward meeting the *Standards and Guidelines for Rangeland Health* for the Northeastern Great Basin area and achieve the multiple use objectives established by the Elko or Wells Resource Management Plan, and Rangeland Program Summary.

ALTERNATIVES

Alternative 1 (Re-issue Grazing Permits at Historic Levels) is the grazing system that was evaluated in the allotment evaluations conducted in 2000. The allotment evaluation determined that this grazing system was not achieving rangeland health standards; therefore, this alternative is used for comparative purposes only and is not considered a viable alternative for selection by the authorized officer.

Alternative 2 (Implement the Multiple Use Decision) is the grazing system that BLM developed as a result of the allotment evaluation process. This alternative includes a grazing system that is dependent upon implementation of various range improvements that facilitate the grazing system. Under this alternative, protection of riparian areas is dependent, in part, on construction of riparian exclosures or fences to exclude livestock and/or wild horses from access to the riparian vegetation associated with the springs or creeks. Water developments, such as wells, or piping water from the springs to troughs outside the riparian exclosures are also integral to this alternative.

Alternative 3 (Permit Grazing without Riparian Exclosures and Vegetation Treatments) is the grazing system that was developed as a result of public scoping comments expressing concern about these types of range improvement projects. The grazing system was modified to achieve riparian objectives without these range improvements. Permitted use was reduced under this alternative to accommodate the riparian protection goals.

Alternative 4 (Adjust Grazing in Key Sensitive Species Habitats) is the grazing system that was developed as a result of public scoping comments expressing concern about grazing impacts to range, wildlife, and the potential for range improvements to increase the establishment and spread of non-native, invasive species. Under this alternative, range improvement projects proposed in Alternative 2 were evaluated and projects were eliminated. As practicable, grazing season of use was adjusted to address specific key sensitive species habitats. Permitted use was reduced under this alternative.

IMPORTANT ISSUES AND IMPACT CONCLUSIONS

Public comments were obtained during a public information meeting and public scoping letters. While many of the comments were beyond the scope of the EIS as defined by the Minute Order, other comments were used to develop alternatives and/or identify issues.

Through the public scoping process, it was determined that grazing effects on sage grouse and the sensitive raptors were most likely to occur as a result of changes to the species' habitats. The habitats for these species include the sagebrush-bunchgrass communities, salt desert shrub community, riparian zones, and woodlands.

The analyses with respect to vegetation included short-term and long-term effects from herbivory. These effects were analyzed with respect to the time (i.e., season of use), duration (i.e., the period of time over which the vegetation was subject to grazing), and the intensity (i.e., the amount of live tissue removed from the plant with respect to photosynthetic tissue, growing points, and carbohydrate production/storage). Each alternative was analyzed to determine if the proposed grazing systems would allow grazed plants to maintain vigor over the entire grazing cycle (i.e., short-term, from one to four years), as well as over multiple grazing cycles (i.e., the long-term). Grazing systems that permitted grazing during a season, over too long a period, or at too high an intensity level without some opportunity for plants to develop new growing points, restore photosynthetic tissue (i.e., leaves), and/or complete root growth and replacement, were considered detrimental to the health of the plants, and therefore had potential for long-term impacts to the plant community.

In addition to the removal of plant tissue, the analysis also included effects to vegetation from concentration of livestock at water sources and bedding areas (for sheep). These areas are not only subject to the herbivory, but also to hoof action that can result in shearing action to remove the plant.

The public also expressed concern about the effects of grazing and implementation of range improvements with respect to the establishment and spread of non-native, invasive species and subsequent reduction in habitat quality for the subject species. The analysis focused on the potential for surface disturbance, such as the construction of a pipeline or areas of

concentrated livestock use. Linear type projects and road corridors were considered pathways for non-native, invasive species to spread. These areas of disturbance provide suitable seedbed conditions for many of the non-native, invasive species. In addition, alternatives which included areas where plant health was adversely impacted (such as areas of livestock concentration) were considered as having high potential for non-native, invasive species to establish.

Riparian habitat is used in some way by all of the subject species, and therefore, this habitat component was also included in the analyses of each alternative on each of the subject allotments. For riparian vegetation, the analysis was similar to the analysis of the upland vegetation – the effects of herbivory and the effects of concentrated use of these areas by livestock (and wild horses). In addition, the range improvements proposed in Alternatives 2 and 4 included troughs supplied by spring flows. The amount of water removed from the spring area and diverted to the trough was considered as a potential for reducing the area of the riparian vegetation associated with the spring.

Because riparian areas have higher soil moisture longer into the season, they are prime areas for non-native, invasive species to establish if the riparian vegetation is not healthy. Each of the alternatives was evaluated with respect to the effects of the grazing system and range improvements on riparian vegetation.

For each of the subject avian sensitive species, the impacts analysis for vegetation, non-native, invasive species, and riparian areas for each alternative was examined to determine if the alternative would improve or degrade the species' habitat(s) or result in some other effect (e.g., disturbing sage grouse at leks during breeding season). For the raptor species, the potential impacts of each alternative on prey habitat was also examined, as number of prey species and prey abundance would be a function of the habitat quality.

Through this process, the effects of each alternative on vegetation, establishment and

spread of noxious weeds, riparian habitats, and the subject avian sensitive species were determined.

For the Sheep Allotment Complex the analysis concluded that:

Alternative 1 (Re-Issue Grazing Permits at Historic Levels) was determined to have long-term adverse effects to shrub and grass vigor, high potential for establishment and spread of non-native, invasive species, long-term degradation of riparian zones, and long-term degradation of habitat for sage grouse, long-eared owl, short-eared owl, and to a lesser extent, the other raptors.

Alternative 2 (Implement the Multiple Use Decision) was determined to have potential to improve the upland vegetation (with some areas of continued adverse impact), decrease the establishment and spread of non-native species, improve the riparian vegetation, and improve brood habitat for sage grouse in the short-term. But could adversely impact sage grouse brood habitat over the long-term, improve sage grouse nesting habitat, and habitat for long-eared and short-eared owls. This alternative would also improve the overall habitat for the other raptor species.

Alternative 3 (Permit Grazing without Riparian Exclosures and Vegetation Treatments) was determined to have potential to improve the upland vegetation (with some areas of continued impact), continue the establishment and spread of non-native, invasive species, and permit only modest improvement in riparian zone vegetation (impacts primarily by wild horses). Over the long-term, minimal improvement in raptor habitat, especially for long-eared and short-eared owls, and minimal improvement in sage grouse brood habitat would occur.

Alternative 4 (Adjust Grazing in Key Sensitive Species Habitats) was determined to have potential to improve upland vegetation greater than for Alternative 2 and 3, decrease the establishment and spread of non-native, invasive species, improve riparian zones, improve long-eared and short-eared owl habitats, improve sage grouse brood habitat over the short-term. There is potential for some adverse effect to sage grouse nesting habitat.

For the Big Springs Allotment the analysis concluded that:

Alternative 1 (Re-Issue Grazing Permits at Historic Levels) was determined to have long-term adverse effects to shrub (in areas of concentration) and grass vigor (in spring use areas), high potential for establishment and spread of non-native, invasive species, long-term degradation of riparian zones, and long-term degradation of brood and nesting habitat for sage grouse.

Alternative 2 (Implement the Multiple Use Decision) was determined to have potential to improve the upland vegetation (with some areas of continued adverse impact), decrease the establishment and spread of non-native species, improve the riparian vegetation, improve brood and nesting habitat for sage grouse and reduce disturbance at leks. There is potential to reduce the amount of winter habitat as a result of vegetation treatments.

Alternative 3 (Permit Grazing without Riparian Exclosures and Vegetation Treatments) was determined to have potential to improve the upland vegetation (with some areas of continued impact), but result in the establishment and spread of non-native, invasive species in the short-term. Improvement in riparian vegetation (but not to the extent of Alternative 2), some sage grouse nesting and some brood habitat would take place while other areas of sage grouse nesting and brood habitat would decline.

Alternative 4 (Adjust Grazing in Key Sensitive Species Habitats) was determined to have potential to improve upland vegetation, but some possibility for change in species composition would remain. The establishment and spread of non-native, invasive species would be decreased. Riparian habitat would improve more than Alternative 3, but not as much as Alternative 2. Sage grouse nesting and some brood habitat would improve while sage grouse brood habitat in other areas could decline.

For the Owyhee Allotment Complex the analysis concluded that:

Alternative 1 (Re-Issue Grazing Permits at Historic Levels) was determined to improve grass and shrub vigor in the uplands with some areas of livestock concentration with adverse impacts to vegetation. The grazing system had moderate potential for establishment and spread of non-native, invasive species in the uplands, high potential in the riparian zones. The riparian areas were at risk of long-term degradation. The system would result in adverse

impacts to sage grouse brood habitat, potential for long-term impacts to nesting habitat, and disturbance at leks during the breeding season. Degradation of habitat for long-eared owl and short-eared owl was likely to occur and habitat for prey species for most raptors would not be improved in the riparian habitats.

Alternative 2 (Implement the Multiple Use Decision) was determined to have potential to improve the upland vegetation (with some areas of continued adverse impact), decrease the establishment and spread of non-native species, and improve the riparian vegetation. Brood and nesting habitat for sage grouse would improve and disturbance at leks would be reduced. Habitat for long-eared and short-eared owls, and general improvement in habitat for prey species would take place.

Alternative 3 (Permit Grazing without Riparian Exclosures and Vegetation Treatments) was determined to have potential to improve the upland vegetation (with some areas of continued impact), result in the establishment and spread of non-native, invasive species, and improve riparian vegetation (but not to the extent of Alternative 2). Some sage grouse nesting and some brood habitat would improve while some sage grouse nesting and brood habitat would decline. Disturbance at the leks would be reduced. Long-eared and short-eared owl habitats, and habitats for prey species would improve.

Alternative 4 (Adjust Grazing in Key Sensitive Species Habitats) was determined to have potential to improve upland vegetation (with some areas of continued impact), decrease the establishment and spread of non-native, invasive species, and improve riparian habitat more than Alternative 3, but not as much as Alternative 2. Sage grouse nesting and some brood habitat would be improved and disturbance at leks would be reduced. Habitat for burrowing owl, short-eared owl, and long-eared owl, and habitat for prey species would improve.

AGENCY-PREFERRED ALTERNATIVES

In accordance with the National Environmental Policy Act, Federal agencies are required by the Council on Environmental Quality (40 Code of Federal Regulations 1502.14) to identify their preferred alternative for a project in the Draft EIS, if a preference has been identified. The preferred alternative is not a final agency decision; it is rather an indication of the agency's preliminary preference. The alternatives identified below are the BLM's preferred alternative at the Draft EIS stage in the environmental analysis and review process. This preference may be change based on the agency and public comments that are received on the Draft EIS. The BLM's preference at this time considers all information that has been received and reviewed relevant to the proposed project. The agency-preferred alternatives are described in detail in the Draft EIS, with all appropriate mitigation.

The BLM preferred alternative for the Sheep Allotment Complex is Alternative 2 – Implement the Multiple Use Decision.

The BLM preferred alternative for the Big Springs Allotment is Alternative 2 – Implement the Multiple Use Decision.

The BLM preferred alternative for the Owyhee Allotment is Alternative 2 – Implement the Multiple Use Decision.