

## APPENDIX C. SECTION 1 RESOURCE PROGRAM BEST MANAGEMENT PRACTICES

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### **1.1 Introduction**

Section 1 contains best management practices developed by the Ely District Office. They have been organized by the primary resource the best management practices would benefit or protect. Each best management practice could actually be implemented by a number of resource programs within the Field Office. Between the Draft RMP/EIS and the Proposed RMP/Final EIS, certain best management practices have been incorporated into Chapter 2.0 as management actions, edited for clarity, or deleted because they are no longer appropriate. Best management practices would be implemented at the discretion of the Ely District Office on a project-specific basis, depending on the specific characteristics of the project area and the types of disturbance being proposed. They may not be appropriate to implement in all cases. It has been assumed for impact analysis that best management practices would be implemented wherever appropriate.

### **1.2 Air Resources**

- 1.2.1 Use dust abatement techniques on unpaved, unvegetated surfaces to minimize airborne dust.
- 1.2.2 Post and enforce speed limits (e.g., 25 miles per hour) to reduce airborne fugitive dust.
- 1.2.3 Cover construction materials and stockpiled soils if they are a source of fugitive dust.
- 1.2.4 Use dust abatement techniques before and during surface clearing, excavation, or blasting activities.

### **1.3 Water Resources**

- 1.3.1 Avoid the application of fire retardant or foam within 300 feet of a stream channel or waterway, when possible, except for the protection of life and property. Aerial application and use of retardants and foams would be consistent with national policy guidelines established by the National Office of Fire and Aviation, as amended.
- 1.3.2 Fire engines that have surfactant foam mixes in tanks must be fitted with an anti-siphon (back flow protection valve) if filled directly from a stream channel.
- 1.3.3 Construct a containment barrier around all pumps and fuel containers utilized within 100 feet (30.5 meters) of a stream channel. The containment barrier would be of sufficient size to contain all fuel being stored or used on site.
- 1.3.4 Prior to use on lands administered by the Ely Field Office, all fire suppression equipment from outside the planning area utilized to extract water from lakes, streams, ponds, or spring sources (e.g., helicopter buckets, draft hoses, and screens) will be thoroughly rinsed to remove mud and debris and then disinfected to prevent the spread of invasive aquatic species. Rinsing equipment with disinfectant solution will not occur within 100 feet of natural water sources (i.e., lakes, streams, or springs). Ely suppression equipment utilized to extract water from water sources known to be contaminated with

invasive aquatic species, as identified by the U.S. Fish and Wildlife Service and Nevada Department of Wildlife, also will be disinfected prior to use elsewhere on lands administered by the Ely Field Office.

1.3.5 Do not dump surfactant foam mixes from fire engines within 600 feet of a stream channel.

1.3.6 Do not conduct fire retardant mixing operations within 600 feet of a stream channel.

1.3.7 Remove all modifications made to impound or divert stream flow by mechanical or other means to facilitate extraction of water from a stream for fire suppression efforts when suppression efforts are completed.

1.3.8 When drafting or dipping water during fire operations, continuously monitor water levels at the site that water is being removed from. Do not allow water extraction to exceed the ability of the recharge inflow to maintain the water levels that exist at the time initial attack efforts began. If the water level drops below this predetermined level, all water removal would cease immediately until water levels are recharged.

1.3.8 When possible, do not cross or terminate fire control lines at the stream channel. Terminate control lines at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety.

1.3.10 Construct access roads and fords that cross stream channels to BLM road standards.

1.3.11 Do not construct new roads or mechanical fire control lines or improve existing roads within 300 feet of a stream channel unless authorized by the BLM Field Manager or Authorized Officer.

1.3.12 Limit stream crossings on travel routes and trails to the minimal number necessary to minimize sedimentation and compaction. The BLM Authorized Officer will determine if any impacts need to be rehabilitated by the permittee.

1.3.13 Conduct mixing of herbicides and rinsing of herbicide containers and spray equipment only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).

1.3.14 A water well may be accepted by the BLM Ely Field Office upon completion of operations. The BLM authorized officer will make the determination whether to accept the well based upon the submission of the well completion forms and relevant hydrogeologic data reports. The well must be installed by drillers licensed by the state of Nevada according to specifications in Nevada Revised Statutes Title 48, Chapter 534.

## **1.4 Soil Resources**

1.4.1 Require the use of specialized low-surface impact equipment (e.g., balloon tired vehicles) or helicopters, as determined by the BLM Authorized Officer, for activities in off-road areas where it is deemed necessary to protect fragile soils and other resource values.

1.4.2 During periods of adverse soil moisture conditions caused by climatic factors such as thawing, heavy rains, snow, flooding, or drought, suspend activities on existing roads that could create excessive surface rutting. When adverse conditions exist, the operator would contact the BLM Authorized Officer for an evaluation and decision based on soil types, soil moisture, slope, vegetation, and cover.

1.4.3 When preparing the site for reclamation, include contour furrowing, terracing, reduction of steep cut and fill slopes, and the installation of water bars, as determined appropriate for site-specific conditions.

1.4.4 Upon completion or temporary suspension of mining operations, backfill all holes and trenches and re-contour the pit to the natural slope, if possible, with pit walls greater than 3 feet in height knocked down and sloped at 3 horizontal to 1 vertical or to the original topography, whichever is less.

1.4.5 Restoration requirements include reshaping, re-contouring, and/or resurfacing with topsoil, installation of water bars, and seeding on the contour. Removal of structures such as culverts, concrete pads, cattle guards, and signs would usually be required. Fertilization and/or fencing of the disturbance may be required. Additional erosion control measures (e.g., fiber matting and barriers) to discourage road travel may be required.

## **1.5 Vegetation Resources**

1.5.1 Where seeding is required, use appropriate seed mixture and seeding techniques approved by the BLM Authorized Officer.

1.5.2 The BLM Authorized Officer will specify required special handling and recovery techniques for Joshua trees, yucca, and some cactus in the southern part of the planning area on a site-specific basis.

1.5.3 Keep removal and disturbance of vegetation to a minimum through construction site management (e.g., using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.).

1.5.4 Generally, conduct reclamation with native seeds that are representative of the indigenous species present in the adjacent habitat. Document rationale for potential seeding with selected nonnative species. Possible exceptions would include use of nonnative species for a temporary cover crop to out-complete weeds. In all cases, ensure seed mixes are approved by the BLM Authorized Officer prior to planting.

1.5.5 Certify that all interim and final seed mixes, hay, straw, and hay/straw products are free of plant species listed on the Nevada noxious weed list.

1.5.6 An area is considered to be satisfactorily reclaimed when all disturbed areas have been recontoured to blend with the natural topography, erosion has been stabilized, and an acceptable vegetative cover has been established. Use the Nevada Guidelines for Successful Revegetation prepared by the Nevada Division of Environmental Protection, the BLM, and the U.S. Department of Agriculture Forest Service (or most current revision or replacement of this document) to determine if revegetation is successful.

1.5.7 Reclamation bond release criteria would include the following:

The perennial plant cover of the reclaimed area would equal or exceed perennial cover of selected comparison areas (normally adjacent habitat). If the adjacent habitat is severely disturbed, an ecological site description may be used as a cover standard. Cover is normally crown cover as estimated by the point intercept method. Selected cover can be determined using a method as described in Sampling Vegetation Attributes, Interagency Technical Reference, 1996, BLM/RS/ST-96/002+1730. The

reclamation plan for the area project would identify the site-specific release criteria and associated statistical methods in the reclamation plan or permit.

1.5.8 Utility companies will manage vegetation in their rights-of-way for safe and reliable operation while maintaining vegetation and wildlife habitat.

1.5.9 Respread weed-free vegetation removed from the right-of-way to provide protection, nutrient recycling, and seed source.

## **1.6 Fish and Wildlife**

1.6.1 Install wildlife escape ramps in all watering troughs, including temporary water haul facilities, and open storage tanks. Pipe the overflow away from the last water trough on an open system to provide water at ground level.

1.6.2 As appropriate, mark certain trees on BLM-administered lands for protection as wildlife trees.

1.6.3 Consider seasonal distribution of large wildlife species when determining methods used to accomplish weed and insect control objectives.

1.6.4 Protect active raptor nests in undisturbed areas within 0.25 mile of areas proposed for vegetation conversion using species-specific protection measures. Inventory areas containing suitable nesting habitat for active raptor nests prior to the initiation of any project.

1.6.5 When used to pump water from any pond or stream, screen the intake end of the draft hose to prevent fish from being ingested. Screen opening size would be a maximum of 3/16 inch (4.7 millimeters).

1.6.6 Special recreation use permittees will take action to ensure that race participants and spectators do not harass wildlife.

## **1.7 Special Status Species**

1.7.1 Avoid line-of-sight views between the power poles along powerlines and Sage-Grouse leks, whenever feasible.

1.7.2 Use current science, guidelines, and methodologies (Avian Power Line Interaction Committee 1994, 1996, 2005) for all new and existing powerlines to minimize raptor and other bird electrocution and collision potential.

1.7.3 When managing weeds in areas of special status species, carefully consider the impacts of the treatment on such species. Wherever possible, hand spraying of herbicides is preferred over other methods.

1.7.4 Do not conduct noxious and invasive weed control within 0.5 mile of nesting and brood rearing areas for special status species during the nesting and brood rearing season.

1.7.5 To the greatest extent possible, survey all mine adits and shafts slated for closure for bat presence and use prior to being closed. Minimize impacts to bat roosts and bat habitat through the use of current science, guidelines, and methodologies when closing and abandoning mine adits.

1.7.6 Develop grazing systems to minimize conflicts with special status species habitat.

1.7.7 For streams currently occupied by any special status species, do not allow extraction of water from ponds or pools if stream inflow is minimal (i.e., during drought situations) and extraction of water would lower the existing pond or pool level.

1.7.8 When new spring developments are constructed on BLM lands and BLM has the authority to design the project, the source and surrounding riparian area will be fenced, the spring will be developed in a manner that leaves surface water at the source and maintains the associated riparian area, water will be provided outside the enclosure in a manner that provides drinking water for large ungulates, wild horses, and/or livestock so they are less likely to break into the enclosure.

1.7.9 Salt and mineral supplements:

- Base placement of salt and mineral supplements on site-specific assessment.
- Normally place salt and mineral supplements at least 0.5 mile away from riparian areas, sensitive sites, populations of special status plant species, cultural resource sites.
- Place salt at least 0.5 mile from any water source including troughs.
- Place salt and mineral supplements at least 1 mile from Sage-Grouse leks.

1.7.9 Water hauling:

- Place water haul sites at least 0.5 mile away from riparian areas, cultural sites, and special status species locations.
- Limit water hauling to existing roads when possible.

## **1.8 Wild Horses**

1.8.1 To protect wild horses and wildlife flag all new fences every 16 feet with white flagging that is at least 1 inch wide and has at least 12 inches hanging free from the top wire of the fence.

1.8.2 If a project involves heavy or sustained traffic, require road signs for safety and protection of wild horses and wildlife.

## **1.9 Cultural Resources**

1.9.1 Ensure that all activities associated with the undertaking, within 100 meters of the discovery, are halted and the discovery is appropriately protected, until the BLM authorized officer issues a Notice to Proceed. A Notice to Proceed may be issued by the BLM under any of the following conditions:

- Evaluation of potentially eligible resource(s) results in a determination that the resource(s) are not eligible;
- The fieldwork phase of the treatment option has been completed; and
- The BLM has accepted a summary description of the fieldwork performed and a reporting schedule for that work.

1.9.2 The operator will inform all persons associated with the project that knowingly disturbing cultural resources (historic or archaeological) or collecting artifacts is illegal.

1.9.3 The BLM may approve cross-country operations of seismic trucks and support vehicles on bare frozen ground or over sufficient snow depth (vehicle traffic does not reveal the ground) so as to prevent surface disturbance.

1.9.4 Perform viewshed reclamation when the setting of a site contributes to the significance of the property

## **1.10 Paleontological Resources**

1.10.1 When paleontological resources of potential scientific interest are encountered (including all vertebrate fossils and deposits of petrified wood), leave them intact and immediately bring them to the attention of the BLM Authorized Officer.

### **1.11 Visual Resources**

1.11.1 On industrial facilities authorized by the Ely Field Office, utilize anti-glare light fixtures to limit light pollution.

1.11.2 During the implementation of vegetation treatments, create irregular margins around treatment areas to better maintain the existing scenic character of the landscape.

1.11.3 When feasible, bury utility lines on public land when in the viewshed of residential or community development.

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## **1.12 Travel Management and Off-highway Vehicle Use**

1.12.1 Design access roads requiring construction with cut and fill to minimize surface disturbance and take into account the character of the landform, natural contours, cut material, depth of cut, where the fill material would be deposited, resource concerns, and visual contrast. Avoid construction of access roads on steep hillsides and near watercourses where alternate routes provide adequate access.

1.12.2 Where adverse impacts or safety considerations warrant, limit or prohibit public access when authorizing specific routes to areas or sites under permit or lease.

## **1.13 Recreation**

1.13.1 Do not allow surface or underground disturbance to occur within 100 yards (horizontally or vertically) of known cave resources.

1.13.2 Where appropriate, do not allow ground disturbing activities within 100 yards of cave entrances, drainage areas, subsurface passages, and developed recreation sites. Do not dispose of waste material or chemicals in sinkholes or gates by cave entrances. If during construction activities any sinkholes or cave openings are discovered, cease construction activities and notify the BLM authorized officer.

## **1.14 Livestock Grazing**

### **1.14.1 Water troughs**

- Place troughs connected with spring developments outside of riparian and wetland habitats to reduce livestock trampling damage to wet areas.

- Control trough overflow at springs with float valves or deliver the overflow back into the native channel.

1.14.2 Based on allotment situations and circumstances associated with livestock grazing and multiple use management, implement any or all of the following appropriate management practices on winterfat dominated ecological sites.

- Develop grazing systems to control or rest grazing use on winterfat sites after March 1 or when the critical growing season begins. Allow spring grazing use during the critical growing period if a grazing rotation system that provides rest from grazing during the critical growing period at least every other year for all areas is in place. Utilization during the critical growth period should not exceed 35 percent under any circumstances.

- Place salt and supplements at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.

- Locate sheep bedding grounds and camps at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.

- Locate water haul sites at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.

- Construct livestock reservoirs away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.

- If water wells are approved to be drilled in winterfat dominated sites, strive to pipe the water at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.

## **1.15 Mineral Extraction**

1.15.1 Applications for permit to drill would follow the best management practices as outlined in the BLM oil and gas Gold Book ([http://www.blm.gov/wo/st/en/prog/energy/oil\\_and\\_gas/best\\_management\\_practices/gold\\_book.html](http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/gold_book.html)), as well as on-shore regulations, individual surface use plans, and conditions of approval that may be part of the Record of Decision for EISs or Decision Records for environmental assessments/Findings of No Significant Impacts, Documentation of NEPA Adequacy, and Categorical Exclusions prepared for site-specific projects.

1.15.2 Do not permit blasting if it would be detrimental to the significant characteristics of archeological or historical values, recreation areas, known caves, water wells, or springs.

1.15.3 Notify the BLM authorized officer within 5 days of completion of reclamation work so that timely compliance inspections can be completed.

## **1.16 Watershed Management**

1.16.1 Manage activities, uses, and authorizations on burned areas to best meet resource management objectives established for the area in specific stabilization, restoration, or activity plans. The BLM authorized officer may open areas to livestock grazing based upon those considerations.

## **1.17 Fire Management**

1.17.1 Notify valid existing land users (such as mine claimants, holders of rights-of-way, and livestock permittees) prior to implementation of prescribed fires that may affect their investments.

1.17.2 Remove vegetation, where appropriate, to protect facilities (e.g., range improvements, communication sites, and recreation sites).

1.17.3 Within the area of operation, every effort will be made to prevent, control, or suppress any fire. Firefighting equipment may be required to be on site while operations are in progress, depending on hazards inherent in the type of operation and fire hazard levels. Report uncontrolled fires immediately to the BLM Ely Field Office Manager or Authorized Officer. The BLM Fire Dispatch telephone number is (775) 289-1925 or 1-800-633-6092. After working hours, call 911 or the White Pine County Sheriff's Office at (775) 289-8801, the Lincoln County Sheriff's Office at (775) 962 5151, or the Nye County Sheriff's Office at (775) 482-8101.

## **1.18 Noxious and Invasive Weed Management**

1.18.1 Control or restrict the timing of livestock movement to minimize the transport of livestock-borne noxious weed seeds, roots, or rhizomes between weed-infested and weed-free areas.

1.18.2 When maintaining unpaved roads on BLM-administered lands, avoid the unnecessary disturbance of adjacent native vegetation and the spread of weeds. Grade road shoulders or barrow ditches only when necessary to provide for adequate drainage. Minimize the width of grading operations. The BLM Authorized Officer will meet with equipment operators to ensure that they understand this objective.

## **1.19 Health and Safety**

1.19.1 Consider nozzle type, nozzle size, boom pressure, and adjuvant use and take appropriate measures for each herbicide application project to reduce the chance of chemical drift.

1.19.2 All applications of approved pesticides will be conducted only by certified pesticide applicators or by personnel under the direct supervision of a certified applicator.

1.19.3 Prior to commencing any chemical control program, and on a daily basis for the duration of the project, the certified applicator will provide a suitable safety briefing to all personnel working with or in the vicinity of the herbicide application. This briefing will include safe handling, spill prevention, cleanup, and first aid procedures.

1.19.4 Store all pesticides in areas where access can be controlled to prevent unauthorized/untrained people from gaining access to the chemicals.

1.19.5 Do not apply pesticides within 440 yards (0.25 mile) of residences without prior notification of the resident.

1.19.6 Areas treated with pesticides will be adequately posted to notify the public of the activity and of safe re-entry dates, if a public notification requirement is specified on the label of the product applied.

The public notice signs will be at least 8 1/2" x 11" in size and will contain the date of application and the date of safe re-entry.

1.19.7 The recreation permittee will post warning signs at all known mine shafts and other hazardous areas that occur within 100 feet of a race course or pit/spectator area and will verbally inform race participants of all hazards at the pre-race meeting.

1.19.8 The recreation permittee will assume liability for and cleanup of any and all releases of hazardous substances or oil (more than one quart) disposed on public land as defined in the National Oil and Hazardous Substances Contingency Plan (Title 40 Code of Federal Regulations Subpart 300). The permittee will immediately notify the BLM Authorized Officer of any and all releases of hazardous substances or oil (more than one quart) on public land.

1.19.9 Properly dispose of all tailings, dumps, and deleterious materials or substances. Take measures to isolate, control, and properly dispose of toxic and hazardous materials.

1.19.10 Remove and properly dispose of all trash, garbage, debris, and foreign matter. Maintain the disposal site and leave it in a clean and safe condition. Do not allow burning at the site.

1.19.11 Do not drain oil or lubricants onto the ground surface. Immediately clean up any spills under 25 gallons; clean up spills over 25 gallons as soon as possible and report the incident to the BLM Authorized Officer and Nevada Division of Environmental Protection.

1.19.12 The operator will work with the BLM Authorized Officer on the containment of drilling fluids and drill hole cuttings. Adequately fence, post, or cover mud and separation pits, and hazardous material storage areas.

1.19.13 Locate powder magazines at least 0.25 mile from traveled roads. Attend loaded shot holes and charges at all times. Use explosives according to applicable federal and state regulations.

1.19.14 Containerize petroleum products such as gasoline, diesel fuel, helicopter fuel, and lubricants in approved containers. Properly store hazardous materials in separate containers to prevent mixing, drainage, or accidents.